SAFETY DATA SHEET: Plant Hi-C Kit

10X Chromatin Rinse Buffer (CRB)

Section 1: Chemical Information
Product Name: Bead Wash Buffer 1
Supplier: Phase Genomics, 1617 8th Ave N, Seattle, WA 98109, 1-833-742-7436
Recommended use: Reagent

Section 2: Composition and Information on Ingredients
Hazard Classification
Health Hazards: No known OSHA hazards
GHS Label Element
Hazard Symbol: N/A
Hazard Statements: Not a hazardous substance or mixture.

Section 3: Hazard Identification
Substance or Mixture: Mixture of non-hazardous substances.

Section 4: First Aid Measures
General Advice: Wear protective gloves/protective clothing/eye protection/face protection.
In Case of Skin Contact: Wash with soap and water. Generally doesn't irritate.
In Case of Eye Contact: Remove contact lenses, if present and easy to do. Continue rinsing.
In Case of Inhalation: If not breathing, give artificial respiration. Consult doctor in case of complaints.

Section 5: Fire and Explosion Data
Conditions of Flammability: Not flammable or combustible.
Suitable Extinguishing Media: Dry powder, CO2, water spray or regular foam.
Special Protective Equipment for Firefighters: Wear self-contained breathing apparatus, if necessary.
Hazardous Combustion Products: Further Information: N/A
Further information: N/A

Section 6: Accidental Release Measures
Personal Precautions: Not required.
Environmental Precautions: Do not allow undiluted product to enter sewer/surface or ground water.
Emergency Procedures: Evacuate personnel to safe areas and follow emergency response protocols.
Methods and Materials for Containment and Cleaning Up: Use inert absorbent material to soak up spill.
See section 7 for information on safe handling.
See section 8 for information on PPE.
See section 13 for disposal information.

Section 7: Handling and Storage
Precautions for Safe Handling: Provide appropriate exhaust ventilation at places where dust is formed. Conditions for Safe Storage: Store at 2-8°C. Keep container tightly closed in a dry, well-ventilated place.
Incompatible Products: N/A

Section 8: Exposure Controls and Personal Protection
Appropriate Engineering Controls: General industrial hygiene practice.
Recommendations for Personal Protective Measures:
Hand Protection: The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture. Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
Material of gloves: The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material cannot be calculated in advance and has therefore to be checked prior to the application.
Eye Protection: N/A
Skin and Body Protection: Wear appropriate laboratory attire when handling this product, such as gloves, long pants, closed-toe shoes and a laboratory coat.
Respiratory Protection: N/A
Hygiene Measures: Avoid contact with eyes, skin and clothing. Wash hands thoroughly after using this product.
Special Requirements for Personal Protective Equipment, Protective Clothing, Respirators, etc: N/A
Components with Workplace Control Parameters: N/A

Section 9: Physical and Chemical Properties

Appearance:
- **Form**: Liquid
- **Color**: Clear
- **Odor**: Odorless
- **Odor Threshold**: No data available
- **pH**: No data available

Melting Point/Freezing Point: No data available
Initial Boiling Point/Boiling Range: No data available
Flash Point: No data available
Evaporation Rate: No data available

Flammability (Solid, Gas): No data available
  - **Upper/Lower Limits on Flammability and Explosive Limits**:
    - Flammability Limit (Upper): No data available
    - Flammability Limit (Lower): No data available

Explosive Limit (Upper): No data available
Explosive Limit (Lower): No data available

Vapor Pressure: No data available
Vapor Density: No data available
Relative Density: No data available

**Solubility**:
- Solubility in Water: Not miscible or difficult to mix.
- Solubility (Other): No data available
- Partition Coefficient (n-octanol/ water): No data available

Auto-Ignition Temperature: No data available
Decomposition Temperature: No data available
Viscosity: No data available

Section 10: Stability and Reactivity Data

Reactivity: No data available
Chemical Stability: No data available
Possibility of Hazardous Reactions: Conditions to Avoid: No data available
Materials to Avoid: No data available
Hazardous Decomposition Products: No data available

Section 11: Toxicological Information

Information on Likely Routes of Exposure:
- Inhalation: No data available
- Ingestion: No data available
- Skin: No irritant effect.
- Eyes: No irritant effect.

Information on Toxicological Effects:

**Acute Toxicity**:
- Oral LD50: No data available
- Inhalation LC50: No data available
- Dermal LD50: No data available

Other Information: No data available
Skin Corrosion/Irritation: No data available
Serious Eye Damage/Irritation: No data available
Respiratory or Skin Sensitization: No data available
Germ Cell Mutagenicity: No data available

Additional information:

The product is not subject to classification according to internally approved calculation methods for preparations: When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.

Carcinogenicity:
- **IARC**: No component of this product that is present at 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
- **ACGIH**: No component of this product that is present at 0.1% is identified as probable, possible or confirmed human carcinogen by ACGIH.
- **NTP**: No component of this product that is present at 0.1% is identified as probable, possible or confirmed human carcinogen by NTP.
- **OSHA**: No component of this product that is present at 0.1% is identified as probable, possible or confirmed human carcinogen by OSHA.

Reproductive Toxicity: No data available
SAFETY DATA SHEET: Plant Hi-C Kit

Teratogenicity: No data available
Specific Target Organ Toxicity – Single Exposure: No data available
Specific Target Organ Toxicity – Repeated Exposures: No data available
Aspiration Hazard: No data available
Signs and Symptoms of Exposure: No data available
Synergistic Effects: No data available
Additional Information: No data available

Section 12: Ecological Information
Toxicity: No known significant effects or critical hazards.
Persistence and Degradability: No data available
Bioaccumulative Potential: No data available
Mobility in Soil: No data available
PBT and vPvB Assessment: No data available
Other Adverse Effects: N/A
General notes: Water hazard class 1 (Self-assessment): slightly hazardous for water. Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

Section 13: Disposal Considerations
Recommendation: Smaller quantities can be disposed of with household waste.

Section 14: Transport Information
DOT: Not regulated.
IMDG: Not regulated.
IATA: Not regulated.

Section 15: Other Regulatory Information
SARA 302 Components
No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.
SARA 313 Components
This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.
SARA 311/312 Hazards
No SARA Hazards
Massachusetts Right To Know Components: N/A
Pennsylvania Right To Know Components: N/A
New Jersey Right To Know Components: N/A
California Prop. 65 Components
This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

Section 16: Other Information
References: Not available. Other Special Considerations: Not available.
Last Updated: 07/06/2018 12:00 PM
The information in this SDS is provided in good faith based on our knowledge as of the issue date (or subsequent revision date, if any), and is to be used only as a guide. This SDS does not constitute a guarantee (express or implied) of any kind and we make no warranties or merchantability or fitness for a particular purpose. This information relates only to the designated product as shipped and may not be valid if the product is used in combination with any other materials or is not used in accordance with our instructions. It is the responsibility of the buyer/user to ensure that its activities comply with all applicable governmental requirements. Since conditions of use of the product are not under the control of Phase Genomics, it is the duty of the buyer/user to determine the necessary conditions for the safe use of the product. Phase Genomics will not be liable for any damages resulting from handling or contact with the product.
Bead Binding Buffer

Section 1: Chemical Information
Product Name: Bead Bind Buffer
Supplier: Phase Genomics, 1617 8th Ave N, Seattle, WA 98109, 1-833-742-7436
Recommended Use: reagent

Section 2: Composition and Information on Ingredients
Hazard Classification
Health Hazards: No known OSHA hazards
GHS Label Element
GHS Symbol: N/A
Hazard Statements: Not a hazardous substance or mixture.

Section 3: Hazard Identification
Substance or Mixture: Mixture of non-hazardous substances.

Section 4: First Aid Measures
General Advice: Wear protective gloves/protective clothing/eye protection/face protection.
If Inhaled: If not breathing, give artificial respiration. Consult doctor in case of complaints.
In Case of Skin Contact: Wash with soap and water. Generally doesn’t irritate.
In Case of Eye Contact: Remove contact lenses, if present and easy to do. Continue rinsing.
If Swallowed: N/A
Most Important Symptoms and Effects, Acute and Delayed: N/A
Recommendations for Immediate Medical Attention and Special Treatment: Treat symptomatically.

Section 5: Fire and Explosion Data
Conditions of Flammability: Not flammable or combustible.
Suitable Extinguishing Media: Dry powder, CO2, water spray or regular foam.
Special Protective Equipment for Firefighters: Wear self-contained breathing apparatus, if necessary.
Hazardous Combustion Products: Further Information: N/A
Further information: N/A

Section 6: Accidental Release Measures
Personal Precautions: Not required.
Environmental Precautions: Do not allow undiluted product to enter sewer/surface or ground water.
Emergency Procedures: Evacuate personnel to safe areas and follow emergency response protocols.
Methods and Materials for Containment and Cleaning Up: Use inert absorbent material to soak up spill.
See section 7 for information on safe handling.
See section 8 for information on PPE.
See section 13 for disposal information.

Section 7: Handling and Storage
Precautions for Safe Handling: Provide appropriate exhaust ventilation at places where dust is formed. Conditions for Safe Storage: Store at 2-8°C. Keep container tightly closed in a dry, well-ventilated place.
Incompatible Products: N/A

Section 8: Exposure Controls and Personal Protection
Appropriate Engineering Controls: General industrial hygiene practice.
Recommendations for Personal Protective Measures:
Hand Protection: The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture. Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
Material of gloves: The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material cannot be calculated in advance and has therefore to be checked prior to the application.
Eye Protection: N/A
Skin and Body Protection: Wear appropriate laboratory attire when handling this product, such as gloves, long pants, closed-toe shoes and a laboratory coat.
Respiratory Protection: N/A
Hygiene Measures: Avoid contact with eyes, skin and clothing. Wash hands thoroughly after using this product.
Special Requirements for Personal Protective Equipment, Protective Clothing, Respirators, etc: N/A
Components with Workplace Control Parameters: N/A
Section 9: Physical and Chemical Properties

Appearance:
- Form: Liquid
- Color: Clear
- Odor: Odorless
- Odor Threshold: No data available
- pH: No data available

Melting Point/Freezing Point: No data available
Initial Boiling Point/Boiling Range: No data available
Flash Point: No data available
Evaporation Rate: No data available

Flammability (Solid, Gas):
- Upper/Lower Limits on Flammability and Explosive Limits:
  - Flammability Limit (Upper): No data available
  - Flammability Limit (Lower): No data available

Explosive Limit (Upper): No data available
Explosive Limit (Lower): No data available

Vapor Pressure: No data available
Vapor Density: No data available
Relative Density: No data available
Solubility:
- Solubility in Water: Not miscible or difficult to mix.
- Solubility (Other): No data available
- Partition Coefficient (n-octanol/water): No data available

Auto-Ignition Temperature: No data available
Decomposition Temperature: No data available
Viscosity: No data available

Section 10: Stability and Reactivity Data

Reactivity: No data available
Chemical Stability: No data available
Possibility of Hazardous Reactions: Conditions to Avoid: No data available
Materials to Avoid: No data available
Hazardous Decomposition Products: No data available

Section 11: Toxicological Information

Information on Likely Routes of Exposure:
- Inhalation: No data available
- Ingestion: No data available
- Skin: No irritant effect.
- Eyes: No irritant effect.

Information on Toxicological Effects:
- Acute Toxicity:
  - Oral LD50: No data available
  - Inhalation LC50: No data available
  - Dermal LD50: No data available

Other Information: No data available
Skin Corrosion/Irritation: No data available
Serious Eye Damage/Irritation: No data available
Respiratory or Skin Sensitization: No data available
Germ Cell Mutagenicity: No data available
Additional information:
- The product is not subject to classification according to internally approved calculation methods for preparations: When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.
- Carcinogenicity:
  - IARC: No component of this product that is present at 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
  - ACGIH: No component of this product that is present at 0.1% is identified as probable, possible or confirmed human carcinogen by ACGIH.
  - NTP: No component of this product that is present at 0.1% is identified as probable, possible or confirmed human carcinogen by NTP.
  - OSHA: No component of this product that is present at 0.1% is identified as probable, possible or confirmed human carcinogen by OSHA.
- Reproductive Toxicity: No data available
- Teratogenicity: No data available
Specific Target Organ Toxicity –  
Single Exposure: No data available  
Specific Target Organ Toxicity –  
Repeated Exposures: No data available  
Aspiration Hazard: No data available  
Signs and Symptoms of Exposure: No data available  
Synergistic Effects: No data available  
Additional Information: No data available  

Section 12: Ecological Information  
Toxicity: No known significant effects or critical hazards.  
Persistence and Degradability: No data available  
Bioaccumulative Potential: No data available  
Mobility in Soil: No data available  
PBT and vPvB Assessment: No data available  
Other Adverse Effects: N/A  
General notes: Water hazard class 1 (Self-assessment): slightly hazardous for water. Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.  

Section 13: Disposal Considerations  
Recommendation: Smaller quantities can be disposed of with household waste.  

Section 14: Transport Information  
DOT: Not regulated.  
IMDG: Not regulated.  
IATA: Not regulated.  

Section 15: Other Regulatory Information  
SARA 302 Components  
No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.  
SARA 313 Components  
This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.  
SARA 311/312 Hazards  
No SARA Hazards  
Massachusetts Right To Know Components: N/A  
Pennsylvania Right To Know Components: N/A  
New Jersey Right To Know Components: N/A  
California Prop. 65 Components  
This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.  

Section 16: Other Information  
References: Not available.  
Other Special Considerations: Not available.  
Last Updated: 07/06/2018 12:00 PM  
The information in this SDS is provided in good faith based on our knowledge as of the issue date (or subsequent revision date, if any), and is to be used only as a guide. This SDS does not constitute a guarantee (express or implied) of any kind and we make no warranties or merchantability or fitness for a particular purpose. This information relates only to the designated product as shipped and may not be valid if the product is used in combination with any other materials or is not used in accordance with our instructions. It is the responsibility of the buyer/user to ensure that its activities comply with all applicable governmental requirements. Since conditions of use of the product are not under the control of Phase Genomics, it is the duty of the buyer/user to determine the necessary conditions for the safe use of the product. Phase Genomics will not be liable for any damages resulting from handling or contact with the product.
Bead Reagent

Section 1: Chemical Information
Product Name: Bead Reagent
Supplier: Phase Genomics, 1617 8th Ave N, Seattle, WA 98109, 1-833-742-7436
Recommended use: reagent

Section 2: Composition and Information on Ingredients
There are no substances at their given concentration, are considered to be hazardous to health.
Label Elements:
The product does not need to be labelled in accordance with EC directives or respective national laws.
Other hazards: None

Section 3: Hazard Identification
Not a dangerous substance or mixture according to the Globally Harmonized System (GHS)

Section 4: First Aid Measures
General advice
The product contains no substances which at their given concentration, are considered to be hazardous to health.
Eye contact
Not determined
Skin contact
Not determined
Inhalation
Not determined
Ingestion
Not determined
Most important symptoms and effects, both acute and delayed
To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.
Indication of any immediate medical attention and special treatment needed
No data available

Section 5: Fire and Explosion Data
Suitable extinguishing media
Water, Water spray (fog), Foam, Dry chemical, Carbon dioxide (CO2)
Unsuitable extinguishing media
N/A
Specific hazards arising from the chemical
N/A
Protective equipment and precautions for firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

Section 6: Accidental Release Measures
Personal precautions
No known health hazards
Personal protective equipment [PPE]
Use personal protection recommended in Section 8.
Environmental precautions
See Section 12 for additional Ecological Information.
Methods and material for containment and cleaning up Methods for containment Prevent further leakage or spillage if safe to do so.
Methods for cleaning up
Soak up with inert absorbent material. Pick up and transfer to properly labeled containers.

Section 7: Handling and Storage
Precautions for safe handling
Handle in accordance with good industrial hygiene and safety practice.
Conditions for safe storage, including any incompatibilities
Storage temperature
Keep container tightly closed in a dry and well-ventilated place. Keep/store only in original container. Store away from incompatible materials.
Storage Conditions
Store in a cool, dry and airiness place. Keep storage container tightly closed. Recommended storage temperature -20°C.
Incompatible materials
None known

Section 8: Exposure Controls and Personal Protection
Exposure Guidelines
Other information
N/A
Appropriate engineering controls
Showers, Eyewash stations.
Individual protection measures, such as personal protective equipment Eye/face protection
Wear safety glasses with side shields (or goggles).
Skin and body protection
Wear suitable protective clothing and gloves.
Respiratory protection
If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.
General hygiene considerations
Handle in accordance with good industrial hygiene and safety practice.

Section 9: Physical and Chemical Properties
Physical State: Form: Liquid
Color: Clear or colorless
Odor: None

Section 10: Stability and Reactivity Data
Reactivity: The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical Stability: Stable under normal conditions
Possibility of Hazardous Reactions: N/A
Conditions to Avoid: High temp and frequent exposure.
Incompatible Materials: None known
Hazardous Decomposition Products: None known based on information supplied.

Section 11: Toxicological Information
Low hazard for usual industrial or commercial handling by trained personnel
Information on likely routes of exposure Inhalation
Under normal conditions of intended use, this material is not expected to be an inhalation hazard.
Eye contact
Direct contact with eyes may cause temporary irritation.
Skin contact
Prolonged contact may cause redness and irritation.
Ingestion
No harmful effects expected in amounts likely to be ingested by accident.
Skin corrosion/irritation Not Classified
Serious eye damage/eye irritation Not Classified
Sensitization Not Classified
Germ cell mutagenicity Not Classified
Carcinogenicity: This product does not contain any carcinogens or potential carcinogens as listed by OSHA, IARC or NTP.
Reproductive toxicity
STOT – single exposure Not Classified
STOT - repeated exposure Not Classified
Target Organ Effects: N/A
Aspiration hazard Not Classified
Other adverse effects N/A
Numerical measures of toxicity: Product Info
Unknown acute toxicity N/A

Section 12: Ecological Information
Ecotoxicity
No data available

Section 13: Disposal Considerations
Waste treatment methods
SAFETY DATA SHEET: Plant Hi-C Kit

Relevant Information
Disposal should be in accordance with applicable regional, national and local laws and regulations.

Section 14: Transport Information
This product is not dangerous and no special precautions are needed according to DOT, ADR/RID (cross border), IMDG and IATA/ICAO.

Section 15: Other Regulatory Information
This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.
No known chemical safety assessment has been performed.
No data available for safety, health and environmental regulations/legislation for the substance or mixture.

Section 16: Other Information
References: Not available. Other Special Considerations: Not available.
Last Updated: 07/06/2018 12:00 PM
The information in this SDS is provided in good faith based on our knowledge as of the issue date (or subsequent revision date, if any), and is to be used only as a guide. This SDS does not constitute a guarantee (express or implied) of any kind and we make no warranties or merchantability or fitness for a particular purpose. This information relates only to the designated product as shipped and may not be valid if the product is used in combination with any other materials or is not used in accordance with our instructions. It is the responsibility of the buyer/user to ensure that its activities comply with all applicable governmental requirements. Since conditions of use of the product are not under the control of Phase Genomics, it is the duty of the buyer/user to determine the necessary conditions for the safe use of the product. Phase Genomics will not be liable for any damages resulting from handling or contact with the product.

Bead Wash Buffer 1

Section 1: Chemical Information
Product Name: Bead Wash Buffer 1
Supplier: Phase Genomics, 1617 8th Ave N, Seattle, WA 98109, 1-833-742-7436
Recommended use: Reagent

Section 2: Composition and Information on Ingredients
Hazard Classification
Health Hazards: No known OSHA hazards
Not a dangerous substance according to GHS

GHS Label Element
Hazard Symbol: N/A
Hazard Statement: Not a hazardous substance or mixture.

Section 3: Hazard Identification
Substance or Mixture: Mixture of non-hazardous substances.

Section 4: First Aid Measures
General Advice: Wear protective gloves/protective clothing/eye protection/face protection.
If Inhaled: If not breathing, give artificial respiration. Consult doctor in case of complaints.
In Case of Skin Contact: Wash with soap and water. Generally doesn’t irritate.
In Case of Eye Contact: Remove contact lenses, if present and easy to do. Continue rinsing.
If Swallowed: N/A
Most Important Symptoms and Effects, Acute and Delayed: N/A
Recommendations for Immediate Medical Attention and Special Treatment: Treat symptomatically.

Section 5: Fire and Explosion Data
Conditions of Flammability: Not flammable or combustible.
Suitable Extinguishing Media: Dry powder, CO2, water spray or regular foam.
Special Protective Equipment for Firefighters: Wear self-contained breathing apparatus, if necessary.
Hazardous Combustion Products: Further Information: N/A
Further information: N/A

Section 6: Accidental Release Measures
Personal Precautions: Not required.
Environmental Precautions: Do not allow undiluted product to enter sewer/surface or ground water.
Emergency Procedures: Evacuate personnel to safe areas and follow emergency response protocols.
Methods and Materials for Containment and Cleaning Up: Use inert absorbent material to soak up spill.
See section 7 for information on safe handling.
See section 8 for information on PPE.
See section 13 for disposal information.
Section 7: Handling and Storage
Precautions for Safe Handling: Provide appropriate exhaust ventilation at places where dust is formed. Conditions for Safe Storage: Store at 2-8°C. Keep container tightly closed in a dry, well-ventilated place.
Incompatible Products: N/A

Section 8: Exposure Controls and Personal Protection
Appropriate Engineering Controls: General industrial hygiene practice.
Recommendations for Personal Protective Measures:
Hand Protection: The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture. Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
Material of gloves: The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material cannot be calculated in advance and has therefore to be checked prior to the application.
Eye Protection: N/A
Skin and Body Protection: Wear appropriate laboratory attire when handling this product, such as gloves, long pants, closed-toe shoes and a laboratory coat.
Respiratory Protection: N/A
Hygiene Measures: Avoid contact with eyes, skin and clothing. Wash hands thoroughly after using this product.
Special Requirements for Personal Protective Equipment, Protective Clothing, Respirators, etc: N/A
Components with Workplace Control Parameters: N/A

Section 9: Physical and Chemical Properties
Appearance:
Form: Liquid
Color: Clear
Odor: Odorless
Odor Threshold: No data available
pH: No data available
Melting Point/Freezing Point: No data available
Initial Boiling Point/Boiling Range: No data available
Flash Point: No data available
Evaporation Rate: No data available
Flammability (Solid, Gas): No data available
Upper/Lower Limits on Flammability and Explosive Limits:
Flammability Limit (Upper): No data available
Flammability Limit (Lower): No data available
Explosive Limit (Upper): No data available
Explosive Limit (Lower): No data available
Vapor Pressure: No data available
Vapor Density: No data available
Relative Density: No data available
Solubility:
Solubility in Water: Not miscible or difficult to mix.
Solubility (Other): No data available
Partition Coefficient (n-octanol/ water): No data available
Auto-Ignition Temperature: No data available
Decomposition Temperature: No data available
Viscosity: No data available

Section 10: Stability and Reactivity Data
Reactivity: No data available
Chemical Stability: No data available
Possibility of Hazardous Reactions: Conditions to Avoid: No data available
Materials to Avoid: No data available
Hazardous Decomposition Products: No data available

Section 11: Toxicological Information
Information on Likely Routes of Exposure:
Inhalation: No data available
Ingestion: No data available
Skin: No irritant effect.
Eyes: No irritant effect.

Information on Toxicological Effects:

Acute Toxicity:
- Oral LD50: No data available
- Inhalation LC50: No data available
- Dermal LD50: No data available

Other Information: No data available

Skin Corrosion/Irritation: No data available
Serious Eye Damage/Irritation: No data available
Respiratory or Skin Sensitization: No data available
Germ Cell Mutagenicity: No data available

Additional information:
- The product is not subject to classification according to internally approved calculation methods for preparations: When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.

Carcinogenicity:
- IARC: No component of this product that is present at 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
- ACGIH: No component of this product that is present at 0.1% is identified as probable, possible or confirmed human carcinogen by ACGIH.
- NTP: No component of this product that is present at 0.1% is identified as probable, possible or confirmed human carcinogen by NTP.
- OSHA: No component of this product that is present at 0.1% is identified as probable, possible or confirmed human carcinogen by OSHA.

Reproductive Toxicity: No data available
Teratogenicity: No data available
Specific Target Organ Toxicity – Single Exposure: No data available
Specific Target Organ Toxicity – Repeated Exposures: No data available
Aspiration Hazard: No data available
Signs and Symptoms of Exposure: No data available
Synergistic Effects: No data available

Additional Information: No data available

Section 12: Ecological Information

Toxicity: No known significant effects or critical hazards.
Persistence and Degradability: No data available
Bioaccumulative Potential: No data available
Mobility in Soil: No data available
PBT and vPvB Assessment: No data available
Other Adverse Effects: N/A

General notes: Water hazard class 1 (Self-assessment): slightly hazardous for water. Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

Section 13: Disposal Considerations

Recommendation: Smaller quantities can be disposed of with household waste.

Section 14: Transport Information

DOT: Not regulated.
IMDG: Not regulated.
IATA: Not regulated.

Section 15: Other Regulatory Information

SARA 302 Components
- No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components
- This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

SARA 311/312 Hazards
- No SARA Hazards

Massachusetts Right To Know Components: N/A
Pennsylvania Right To Know Components: N/A
New Jersey Right To Know Components: N/A
California Prop. 65 Components
- This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.
Section 16: Other Information

References: Not available. Other Special Considerations: Not available.

Last Updated: 07/06/2018 12:00 PM

The information in this SDS is provided in good faith based on our knowledge as of the issue date (or subsequent revision date, if any), and is to be used only as a guide. This SDS does not constitute a guarantee (express or implied) of any kind and we make no warranties or merchantability or fitness for a particular purpose. This information relates only to the designated product as shipped and may not be valid if the product is used in combination with any other materials or is not used in accordance with our instructions. It is the responsibility of the buyer/user to ensure that its activities comply with all applicable governmental requirements. Since conditions of use of the product are not under the control of Phase Genomics, it is the duty of the buyer/user to determine the necessary conditions for the safe use of the product. Phase Genomics will not be liable for any damages resulting from handling or contact with the product.

Bead Wash Buffer 2

Section 1: Chemical Information

Product Name: Bead Wash Buffer 2
Supplier: Phase Genomics, 1617 8th Ave N, Seattle, WA 98109, 1-833-742-7436
Recommended Use: reagent

Section 2: Composition and Information on Ingredients

Hazard Classification
Health Hazards: No known OSHA hazards
Not a dangerous substance according to GHS

GHS Label Element
Hazard Symbol: N/A
Hazard Statements: Not a hazardous substance or mixture.

Section 3: Hazard Identification

Substance or Mixture: Mixture of non-hazardous substances.

Section 4: First Aid Measures

General Advice: Wear protective gloves/protective clothing/eye protection/face protection.
If Inhaled: If not breathing, give artificial respiration. Consult doctor in case of complaints.
In Case of Skin Contact: Wash with soap and water. Generally doesn’t irritate.
In Case of Eye Contact: Remove contact lenses, if present and easy to do. Continue rinsing.
If Swallowed: N/A
Most Important Symptoms and Effects, Acute and Delayed: N/A
Recommendations for Immediate Medical Attention and Special Treatment: Treat symptomatically.

Section 5: Fire and Explosion Data

Conditions of Flammability: Not flammable or combustible.
Suitable Extinguishing Media: Dry powder, CO2, water spray or regular foam.
Special Protective Equipment for Firefighters: Wear self-contained breathing apparatus, if necessary.
Hazardous Combustion Products: Further Information: N/A
Further information: N/A

Section 6: Accidental Release Measures

Personal Precautions: Not required.
Environmental Precautions: Do not allow undiluted product to enter sewer/surface or ground water.
Emergency Procedures: Evacuate personnel to safe areas and follow emergency response protocols.
Methods and Materials for Containment and Cleaning Up: Use inert absorbent material to soak up spill.
See section 7 for information on safe handling.
See section 8 for information on PPE.
See section 13 for disposal information.

Section 7: Handling and Storage

Precautions for Safe Handling: Provide appropriate exhaust ventilation at places where dust is formed. Conditions for Safe Storage: Store at 2-8°C. Keep container tightly closed in a dry, well-ventilated place.
Incompatible Products: N/A

Section 8: Exposure Controls and Personal Protection

Appropriate Engineering Controls: General industrial hygiene practice.
Recommendations for Personal Protective Measures:
SAFETY DATA SHEET: Plant Hi-C Kit

Hand Protection: The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture. Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation of the glove has to be done by the user.

Material of gloves: The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material cannot be calculated in advance and has therefore to be checked prior to the application.

Eye Protection: N/A
Skin and Body Protection: Wear appropriate laboratory attire when handling this product, such as gloves, long pants, closed-toe shoes and a laboratory coat.
Respiratory Protection: N/A
Hygiene Measures: Avoid contact with eyes, skin and clothing. Wash hands thoroughly after using this product.
Special Requirements for Personal Protective Equipment, Protective Clothing, Respirators, etc: N/A
Components with Workplace Control Parameters: N/A

Section 9: Physical and Chemical Properties

Appearance:
Form: Liquid
Color: Clear
Odor: Odorless
Odor Threshold: No data available
pH: No data available
Melting Point/Freezing Point: No data available
Initial Boiling Point/Boiling Range: No data available
Flash Point: No data available
Evaporation Rate: No data available
Flammability (Solid, Gas): No data available
Upper/Lower Limits on Flammability and Explosive Limits:
Flammability Limit (Upper): No data available
Flammability Limit (Lower): No data available
Explosive Limit (Upper): No data available
Explosive Limit (Lower): No data available
Vapor Pressure: No data available
Vapor Density: No data available
Relative Density: No data available
Solubility:
Solubility in Water: Not miscible or difficult to mix.
Solubility (Other): No data available
Partition Coefficient (n-octanol/ water): No data available
Auto-Ignition Temperature: No data available
Decomposition Temperature: No data available
Viscosity: No data available

Section 10: Stability and Reactivity Data

Reactivity: No data available
Chemical Stability: No data available
Possibility of Hazardous Reactions: Conditions to Avoid: No data available
Materials to Avoid: No data available
Hazardous Decomposition Products: No data available

Section 11: Toxicological Information

Information on Likely Routes of Exposure:
Inhalation: No data available
Ingestion: No data available
Skin: No irritant effect.
Eyes: No irritant effect.

Information on Toxicological Effects:
Acute Toxicity:
Oral LD50: No data available
Inhalation LC50: No data available
Dermal LD50: No data available

Other Information: No data available
Skin Corrosion/Irritation: No data available
Serious Eye Damage/Irritation: No data available
Respiratory or Skin Sensitization: No data available
Germ Cell Mutagenicity: No data available
Additional information:
The product is not subject to classification according to internally approved calculation methods for preparations: When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.

Carcinogenicity:
IARC: No component of this product that is present at 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
ACGIH: No component of this product that is present at 0.1% is identified as probable, possible or confirmed human carcinogen by ACGIH.
NTP: No component of this product that is present at 0.1% is identified as probable, possible or confirmed human carcinogen by NTP.
OSHA: No component of this product that is present at 0.1% is identified as probable, possible or confirmed human carcinogen by OSHA.
Reproductive Toxicity: No data available
Teratogenicity: No data available
Specific Target Organ Toxicity –
Single Exposure: No data available
Specific Target Organ Toxicity –
Repeated Exposures: No data available
Aspiration Hazard: No data available
Synergistic Effects: No data available
Additional Information: No data available

Section 12: Ecological Information
Toxicity: No known significant effects or critical hazards.
Persistence and Degradability: No data available
Bioaccumulative Potential: No data available
Mobility in Soil: No data available
PBT and vPvB Assessment: No data available
Other Adverse Effects: N/A
General notes: Water hazard class 1 (Self-assessment): slightly hazardous for water. Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

Section 13: Disposal Considerations
Recommendation: Smaller quantities can be disposed of with household waste.

Section 14: Transport Information
DOT: Not regulated.
IMDG: Not regulated.
IATA: Not regulated.

Section 15: Other Regulatory Information
SARA 302 Components
No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.
SARA 313 Components
This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.
SARA 311/312 Hazards
No SARA Hazards
Massachusetts Right To Know Components: N/A
Pennsylvania Right To Know Components: N/A
New Jersey Right To Know Components: N/A
California Prop. 65 Components
This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

Section 16: Other Information
References: Not available. Other Special Considerations: Not available.
Last Updated: 07/06/2018 12:00 PM
The information in this SDS is provided in good faith based on our knowledge as of the issue date (or subsequent revision date, if any), and is to be used only as a guide. This SDS does not constitute a guarantee (express or implied) of any kind and we make no warranties or merchantability or fitness for a particular purpose. This information relates only to the designated product as shipped and may not be valid if the product is used in combination with any other materials or is not used in accordance with our instructions. It is the responsibility of the buyer/user to ensure that its activities comply with all applicable governmental requirements. Since conditions of use of the product are not under the control of Phase Genomics, it is the duty of the buyer/user to determine the necessary conditions for the safe use of the product. Phase Genomics will not be liable for any damages resulting from handling or contact with the product.
SAFETY DATA SHEET: Plant Hi-C Kit

Crosslinking Solution

Section 1: Chemical Information
Product Name: Crosslinking Solution
RTECS: LP8925000
TSCA: TSCA 8(b) inventory: Formaldehyde; Water
CI#: Not applicable.
Synonym: Formalin
Chemical Name: Formaldehyde
Chemical Formula: HCHO
Supplier: Phase Genomics, 1617 8th Ave N, Seattle, WA 98109, 1-833-742-7436
Recommended use: reagent

Section 2: Composition and Information on Ingredients
Composition:
1% Formaldehyde, CAS# 50-00-0
99% Water, CAS#7732-18-5

Toxicological Data on Ingredients: Formaldehyde: ORAL (LD50): Acute: 100 mg/kg [Rat]. 42 mg/kg [Mouse]. 260 mg/kg [Guinea pig]. MIST (LC50): Acute: 454000 mg/m 4 hours [Mouse].

Section 3: Hazard Identification
Potential Acute Health Effects:
Very hazardous in case of eye contact (irritant), of ingestion. Hazardous in case of skin contact (irritant, sensitizer, permeator), of eye contact (corrosive). Slightly hazardous in case of skin contact (corrosive). Severe over-exposure can result in death. Inflammation of the eye is characterized by redness, watering, and itching.

Potential Chronic Health Effects:
Hazardous in case of skin contact (sensitizer). CARCINOGENIC EFFECTS: Classified A2 (Suspected for human.) by ACGIH, 2A (Probable for human.) by IARC [Formaldehyde], MUTAGENIC EFFECTS: Mutagenic for mammalian somatic cells. [Formaldehyde]. Mutagenic for bacteria and/or yeast. [Formaldehyde]. Mutagenic alcohol. TERATOGENIC EFFECTS: Classified POSSIBLE for human [Methyl alcohol]. DEVELOPMENTAL TOXICITY: Not available The substance may be toxic to kidneys, liver, skin, central nervous system (CNS). Repeated or prolonged exposure to the substance can produce target organs damage. Repeated exposure to a highly toxic material may produce general deterioration of health by an accumulation in one or many human organs.

Section 4: First Aid Measures
Eye Contact:
Check for and remove any contact lenses. Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. Cold water may be used. Get medical attention immediately.

Skin Contact:
In case of contact, immediately flush skin with plenty of water. Cover the irritated skin with an emollient. Remove contaminated clothing and shoes. Cold water may be used. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention.

Serious Skin Contact:
Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek immediate medical attention.

Inhalation:
If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.

Serious Inhalation:
Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. WARNING: It may be hazardous to the person providing aid to give mouth-to-mouth resuscitation when the inhaled material is toxic, infectious or corrosive. Seek immediate medical attention.

Ingestion:
If swallowed, do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.

Serious Ingestion:
Not available.

Section 5: Fire and Explosion Data
Flammability of the Product:
Flammable. Auto-Ignition Temperature: 430°C (806°F) Flash Points: CLOSED CUP: 50°C (122°F), OPEN CUP: 60°C (140°F). Flammable Limits: The greatest known range is LOWER: 6% UPPER: 36.5% (Methyl alcohol) Products of Combustion: These products are carbon oxides (CO, CO2).

Fire Hazards in Presence of Various Substances:

Explosion Hazards in Presence of Various Substances: Non-explosive in presence of open flames and sparks, of shocks.

Fire Fighting Media and Instructions:
Flammable liquid, soluble or dispersed in water. SMALL FIRE: Use DRY chemical powder. LARGE FIRE: Use alcohol foam, water spray or fog. Cool containing vessels with water jet in order to prevent pressure build-up, autoignition or explosion.

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1-833-PHAS-GEN
Special Remarks on Fire Hazards:
Explosive in the form of vapor when exposed to heat or flame. Vapor may travel considerable distance to source of ignition and flash back. When heated to decomposition, it emits acrid smoke and irritating fumes. CAUTION: MAY BURN WITH MAY BURN WITH NEAR INVISIBLE FLAME (Methyl alcohol)

Special Remarks on Explosion Hazards:
Reaction with peroxide, nitrogen dioxide, and permformic acid can cause an explosion. (Formaldehyde gas)

Section 6: Accidental Release Measures
Small Spill:
Dilute with water and mop up, or absorb with an inert dry material and place in an appropriate waste disposal container. If necessary: Neutralize the residue with a dilute solution of sodium carbonate.

Large Spill:
Flammable liquid. Poisonous liquid. Keep away from heat. Keep away from sources of ignition. Stop leak if without risk. Absorb with DRY earth, sand or other non-combustible material. Do not get water inside container. Do not touch spilled material. Use water spray to reduce vapors. Prevent entry into sewers, basements or confined areas; dike if needed. Call for assistance on disposal. Neutralize the residue with a dilute solution of sodium carbonate. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

Section 7: Handling and Storage
Precautions:
Keep away from heat. Keep away from sources of ignition. Ground all equipment containing material. Do not ingest. Do not breathe gas/fumes/vapor/spray. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes. Keep away from incompatibles such as oxidizing agents, reducing agents, acids, alkalis, moisture.

Storage:
Store in a segregated and approved area. Keep container in a cool, well-ventilated area. Keep container tightly closed and sealed until ready for use. Avoid all possible sources of ignition (spark or flame).

Section 8: Exposure Controls and Personal Protection
Engineering Controls:
Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to the work-station location.

Personal Protection:
Safety glasses. Lab coat. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Gloves (impervious).

Personal Protection in Case of a Large Spill:
Splash goggles. Full suit. Vapor respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Exposure Limits:
Formaldehyde gas STEL: 0.3 (ppm) from ACGIH (TLV) [United States] STEL: 0.37 (mg/m3) from ACGIH (TLV) [United States] TWA: 0.75 STEL: 2 (ppm) from OSHA (PEL) [United States] TWA: 2 STEL: 2 (ppm) [United Kingdom (UK)] TWA: 2.5 STEL: 2.5 (mg/m3) [United Kingdom (UK)] Methyl alcohol TWA: 200 from OSHA (PEL) [United States] TWA: 200 STEL: 250 (ppm) from ACGIH (TLV) [United States] [1999] STEL: 250 from NIOSH [United States] TWA: 200 STEL: 250 (ppm) from NIOSH SKIN TWA: 200 STEL: 250 (ppm) [Canada] Consult local authorities for acceptable exposure limits.

Section 9: Physical and Chemical Properties
Physical state and appearance: Liquid.
Molecular Weight: 30.02
Color: Clear Colorless.
PH (1% soln/water): 3 [Acidic.] pH of the solution as is.
Boiling Point: 98°C (208.4°F)
Melting Point: -15°C (5°F)
Critical Temperature: The lowest known value is 240°C (464°F) (Methyl alcohol).
Specific Gravity: 1.08 (Water = 1)
Vapor Pressure: 2.4 kPa (@ 20°C)
Vapor Density: 1.03 (Air = 1)
Volatility: 100% (w/w).
Odor Threshold: The highest known value is 100 ppm (Methyl alcohol)
Water/Oil Dist. Coeff.: Not available.
Dispersion Properties: See solubility in water, diethyl ether, acetone.
Solubility: Easily soluble in cold water, hot water. Soluble in diethyl ether, acetone, alcohol

Section 10: Stability and Reactivity Data
Stability: The product is stable.
Instability Temperature: Not available.
Section 11: Toxicological Information

Routes of Entry: Absorbed through skin. Dermal contact. Eye contact. Inhalation.

Toxicity to Animals:

Acute oral toxicity (LD50): 42 mg/kg [Mouse]. (Formaldehyde) Acute dermal toxicity (LD50): 15800 mg/kg [Rabbit]. (Methyl alcohol). Acute toxicity of the mist(LC50): 454000 mg/m 4 hours [Mouse]. (Formaldehyde) 3

Chronic Effects on Humans:


Other Toxic Effects on Humans:

Very hazardous in case of ingestion. Hazardous in case of skin contact (irritant, sensitizer, permeator), of eye contact (corrosive), of inhalation (lung corrosive). Slightly hazardous in case of skin contact (corrosive).

Special Remarks on Toxicity to Animals:

Formaldehyde: LD50 [Rabbit] - Route: Skin; Dose: 270 ul/kg

Special Remarks on Chronic Effects on Humans:

Exposure to Formaldehyde and Methanol may affect genetic material (mutagenic). Exposure to Formaldehyde and Methanol may cause adverse reproductive effects and birth defects(teratogenic). Adverse reproductive effects of Formaldehyde as well as Methanol are primarily based on animal studies. Very few human studies have been done on the adverse reproductive effects from exposure to Formaldehyde. Studies produced a weak association (limited evidence) between adverse human female reproductive effects and occupational exposure. Furthermore, no human data could be found on adverse reproductive effects from occupational exposure to Methanol. Exposure to Formaldehyde may cause cancer.

Special Remarks on Other Toxic Effects on Humans:

Acute Potential Health Effects: Skin: Corrosive. Causes skin irritation which may range from mild to severe with possible burns depending on the extent of exposure and concentration of solution. Other symptoms may include brownish discoloration of the skin, urticaria, and pustulovesicular eruptions. May be absorbed through skin with symptoms paralleling those of ingestion. Eyes: Corrosive. Contact with liquid causes severe eye irritation and burns. It may cause irreversible eye damage (severe corneal Solutions containing low formaldehyde concentrations may produce transient discomfort and irritation. Inhalation: Causes irritation of the respiratory tract (nose, throat, airways). Symptoms may include dry and sore mouth and throat, thirst, and sleep disturbances, difficulty breathing, shortness of breath, coughing, sneezing, wheezing rhinitis, chest tightness, pulmonary edema, bronchitis, tracheitis, laryngospasm, pneumonia, palpitations. It may also affect metabolism weight loss, metabolic acidosis), behavior/central nervous system (excitement, central nervous system depression, somnolence, convulsions, stupor, aggression, headache, weakness, dizziness, drowsiness, coma), peripheral nervous system, and blood. Ingestion: Harmful if swallowed. May be fatal. Causes gastrointestinal irritation with nausea, vomiting (possibly with blood), diarrhea, severe pain in mouth, throat and stomach, and possible corrosive injury to the gastrointestinal mucosa/ulceration or bleeding from stomach. May also affect the liver(jaundice), urinary system/kidneys (difficulty urinating, albuminuria, hematuria, anuria), blood, endocrine system, respiration (respiratory obstruction, pulmonary edema, bronchial obstruction), cardiovascular system (hypotension), metabolism (metabolic acidosis), eyes (retinal changes, visual field changes), and behavior/central nervous system (symptoms similar to those for inhalation). Contains Methanol which may cause blindness if swallowed. Chronic Potential Health Effects: Skin: Prolonged or repeated exposure may cause contact dermatitis both irritant and allergic. It may also cause skin discoloration. Inhalation: Although there is no clear evidence, prolonged or repeated exposure may induce allergic asthma. Other effects are similar to that of acute exposure. Ingestion: Prolonged or repeated ingestion may cause gastrointestinal tract irritation and ulceration or bleeding from the stomach. Other effects may be similar to that of acute ingestion.

Section 12: Ecological Information

Ecotoxicity: Not available. BOD5 and COD: Not available.

Products of Biodegradation:

Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise. Toxicity of the Products of Biodegradation: The products of degradation are less toxic than the product itself.
Section 14: Transport Information

**DOT Classification:**
- CLASS 3: Flammable liquid. Class 8: Corrosive material

**Identification:** Formaldehyde Solution, flammable (Methyl alcohol) UNNA: 1198 PG: III

**Special Provisions for Transport:** Not available.

Section 15: Other Regulatory Information

**Federal and State Regulations:**
- California prop. 65: This product contains the following ingredients for which the State of California has found to cause cancer, birth defects or other reproductive harm, which would require a warning under the statute: Formaldehyde California prop. 65 (no significant risk level): Formaldehyde 0.04 mg/day (inhalation) California prop. 65: This product contains the following ingredients for which the State of California has found to cause cancer which would require a warning under the statute: Formaldehyde Solution Connecticut hazardous material survey.: Formaldehyde; Methyl alcohol Illinois toxic substances disclosure to employee act: Formaldehyde; Methyl alcohol Illinois chemical safety act: Formaldehyde; Methyl alcohol New York release reporting list: Formaldehyde; Methyl alcohol Pennsylvania RTK: Formaldehyde; Methyl alcohol Minnesota: Formaldehyde gas; Methyl alcohol Massachusetts RTK: Formaldehyde; Methyl alcohol Massachusetts spill list: Formaldehyde; Methyl alcohol New Jersey: Formaldehyde; Methyl alcohol New Jersey spill list: Formaldehyde; Methyl alcohol Louisiana RTK reporting list: Formaldehyde Louisiana spill reporting: Formaldehyde; Methyl alcohol California Director's List of Hazardous Substances: Formaldehyde; Methyl alcohol TSCA 8(b) inventory: Formaldehyde gas; Methyl alcohol; Water TSCA 40; priority risk review: Formaldehyde, Reagent, ACS SARA 302/304/311/312 extremely hazardous substances: Formaldehyde SARA 313 toxic chemical notification and release reporting: Formaldehyde; Methyl alcohol CERCLA: Hazardous substances.: Formaldehyde: 100 lbs. (45.36 kg); Methyl alcohol: 5000 lbs. (2268 kg);
- Other Regulations:
  - EINECS: This product is on the European Inventory of Existing Commercial Chemical Substances.
- Other Classifications:
  - WHMIS (Canada):
    - CLASS B-3: Combustible liquid with a flash point between 37.8°C (100°F) and 93.3°C (200°F). CLASS D-1A: Material causing immediate and serious toxic effects (VERY TOXIC). CLASS D-2A: Material causing other toxic effects (VERY TOXIC).
  - DSCL (EEC): HMIS (U.S.A.):
    - Health Hazard: 3 Fire Hazard: 2 Reactivity: 0 Personal Protection: G
    - National Fire Protection Association (U.S.A.): Health: 3 Flammability: 2 Reactivity: 0 Specific hazard:
  - Protective Equipment:
    - Gloves (impervious). Lab coat. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate. Safety glasses.

Section 16: Other Information

**References:** Not available. **Other Special Considerations:** Not available.

**Last Updated:** 07/06/2018 12:00 PM

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**Elution Buffer**

**Section 1: Chemical Information**

Product Name: DNA Elution Buffer

Supplier: Phase Genomics, 1617 8th Ave N, Seattle, WA 98109, 1-833-742-7436

Recommended Use: reagent

**Section 2: Composition and Information on Ingredients**

**Hazard Classification**
- Health Hazards: No known OSHA hazards
- Not a dangerous substance according to GHS

**GHS Label Element**
- Hazard Symbol: N/A
- Hazard Statements: Not a hazardous substance or mixture.

**Section 3: Hazard Identification**

Substance or Mixture: Mixture of non-hazardous substances.
Section 4: First Aid Measures
General Advice: Wear protective gloves/protective clothing/eye protection-face protection.
If Inhaled: If not breathing, give artificial respiration. Consult doctor in case of complaints.
In Case of Skin Contact: Wash with soap and water. Generally doesn't irritate.
In Case of Eye Contact: Remove contact lenses, if present and easy to do. Continue rinsing.
If Swallowed: N/A
Most Important Symptoms and Effects, Acute and Delayed: N/A
Recommendations for Immediate Medical Attention and Special Treatment: Treat symptomatically.

Section 5: Fire and Explosion Data
Conditions of Flammability: Not flammable or combustible.
Suitable Extinguishing Media: Dry powder, CO2, water spray or regular foam.
Special Protective Equipment for Firefighters: Wear self-contained breathing apparatus, if necessary.
Hazardous Combustion Products: Further Information: N/A
Further information: N/A

Section 6: Accidental Release Measures
Personal Precautions: Not required.
Environmental Precautions: Do not allow undiluted product to enter sewer/surface or ground water.
Emergency Procedures: Evacuate personnel to safe areas and follow emergency response protocols.
Methods and Materials for Containment and Cleaning Up: Use inert absorbent material to soak up spill.

See section 7 for information on safe handling.
See section 8 for information on PPE.
See section 13 for disposal information.

Section 7: Handling and Storage
Precautions for Safe Handling: Provide appropriate exhaust ventilation at places where dust is formed. Conditions for Safe Storage: Store at 2-8°C. Keep container tightly closed in a dry, well-ventilated place.
Incompatible Products: N/A

Section 8: Exposure Controls and Personal Protection
Appropriate Engineering Controls: General industrial hygiene practice.
Recommendations for Personal Protective Measures:
Hand Protection: The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture. Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
Material of gloves: The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material cannot be calculated in advance and has therefore to be checked prior to the application.
Eye Protection: N/A
Skin and Body Protection: Wear appropriate laboratory attire when handling this product, such as gloves, long pants, closed-toe shoes and a laboratory coat.
Respiratory Protection: N/A
Hygiene Measures: Avoid contact with eyes, skin and clothing. Wash hands thoroughly after using this product.
Special Requirements for Personal Protective Equipment, Protective Clothing, Respirators, etc: N/A
Components with Workplace Control Parameters: N/A

Section 9: Physical and Chemical Properties
Appearance:
Form: Liquid
Color: Clear
Odor: Odorless
Odor Threshold: No data available
pH: No data available
Melting Point/Freezing Point: No data available
Initial Boiling Point/Boiling Range: No data available
Flash Point: No data available
Evaporation Rate: No data available
Flammability (Solid, Gas): No data available
Upper/Lower Limits on Flammability and Explosive Limits:
Flammability Limit (Upper): No data available
Flammability Limit (Lower): No data available
Explosive Limit (Upper): No data available
Explosive Limit (Lower): No data available
Vapor Pressure: No data available
Vapor Density: No data available
Relative Density: No data available
Solubility:
   Solubility in Water: Not miscible or difficult to mix.
   Solubility (Other): No data available
   Partition Coefficient (n-octanol/ water): No data available
Auto-Ignition Temperature: No data available
Decomposition Temperature: No data available
Viscosity: No data available

Section 10: Stability and Reactivity Data
Reactivity: No data available
Chemical Stability: No data available
Possibility of Hazardous Reactions: Conditions to Avoid: No data available
Materials to Avoid: No data available
Hazardous Decomposition Products: No data available

Section 11: Toxicological Information
Information on Likely Routes of Exposure:
   Inhalation: No data available
   Ingestion: No data available
   Skin: No irritant effect.
   Eyes: No irritant effect.
Information on Toxicological Effects:
   Acute Toxicity:
      Oral LD50: No data available
      Inhalation LC50: No data available
      Dermal LD50: No data available
      Other Information: No data available
   Skin Corrosion/Irritation: No data available
   Serious Eye Damage/Irritation: No data available
   Respiratory or Skin Sensitization: No data available
   Germ Cell Mutagenicity: No data available
Additional information:
The product is not subject to classification according to internally approved calculation methods for preparations: When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.
Carcinogenicity:
   IARC: No component of this product that is present at 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
   ACGIH: No component of this product that is present at 0.1% is identified as probable, possible or confirmed human carcinogen by ACGIH.
   NTP: No component of this product that is present at 0.1% is identified as probable, possible or confirmed human carcinogen by NTP.
   OSHA: No component of this product that is present at 0.1% is identified as probable, possible or confirmed human carcinogen by OSHA.
Reproductive Toxicity: No data available
Teratogenicity: No data available
Specific Target Organ Toxicity –
   Single Exposure: No data available
   Specific Target Organ Toxicity –
   Repeated Exposures: No data available
   Aspiration Hazard: No data available
   Signs and Symptoms of Exposure: No data available
   Synergistic Effects: No data available
   Additional Information: No data available

Section 12: Ecological Information
Toxicity: No known significant effects or critical hazards.
Persistence and Degradability: No data available
Bioaccumulative Potential: No data available
Mobility in Soil: No data available
PBT and vPvB Assessment: No data available
Other Adverse Effects: N/A

General notes: Water hazard class 1 (Self-assessment): slightly hazardous for water. Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

Section 13: Disposal Considerations
Recommendation: Smaller quantities can be disposed of with household waste.

Section 14: Transport Information
DOT: Not regulated.
IMDG: Not regulated.
IATA: Not regulated.

Section 15: Other Regulatory Information
SARA 302 Components
No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components
This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

SARA 311/312 Hazards
No SARA Hazards

Massachusetts Right To Know Components: N/A
Pennsylvania Right To Know Components: N/A
New Jersey Right To Know Components: N/A
California Prop. 65 Components
This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

Section 16: Other Information
References: Not available. Other Special Considerations: Not available.

Last Updated: 07/06/2018 12:00 PM
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Finishing Enzyme

Section 1: Chemical Information
Product Name: Finishing Enzyme
Supplier: Phase Genomics, 1617 8th Ave N, Seattle, WA 98109, 1-833-742-7436
Recommended Use: reagent

Section 2: Composition and Information on Ingredients
There are no substances at their given concentration, are considered to be hazardous to health.

Section 3: Hazard Identification
Not a dangerous substance or mixture according to the Globally Harmonized System (GHS)
HNOC: No Data available

Label Elements:
Appearance: Colorless
Physical State: Liquid
Odor: Mild

Other information
1.75723 % of the mixture consists of ingredient(s) of unknown toxicity

Section 4: First Aid Measures
General advice
The product contains no substances which at their given concentration, are considered to be hazardous to health. Immediate medical attention is required. In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible). Remove from exposure, lie down. Do not breathe dust/fume/gas/mist/vapors/spray.

Eye contact
Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.

**Skin contact**
- Wash skin with soap and water.

**Inhalation**
- Remove to fresh air.

**Ingestion**
- Clean mouth with water and drink afterwards plenty of water.

**Most important symptoms and effects, both acute and delayed**
- No information available.

**Indication of any immediate medical attention and special treatment needed**
- Note to physicians: Treat symptomatically.

### Section 5: Fire and Explosion Data

**Suitable extinguishing media**
- Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

**Unsuitable extinguishing media**
- CAUTION: Use of water spray when fighting fire may be inefficient.

**Specific hazards arising from the chemical**
- No information available.

**Protective equipment and precautions for firefighters**
- As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

### Section 6: Accidental Release Measures

**Personal precautions**
- Ensure adequate ventilation, especially in confined areas.

**Personal protective equipment [PPE]**
- Use personal protection recommended in Section 8.

**Environmental precautions**
- See Section 12 for additional Ecological Information.

**Methods and material for containment and cleaning up**
- Methods for containment
  - Prevent further leakage or spillage if safe to do so.

**Methods for cleaning up**
- Soak up with inert absorbent material. Pick up and transfer to properly labeled containers. This material and its container must be disposed of as hazardous waste.

### Section 7: Handling and Storage

**Precautions for safe handling**
- Handle in accordance with good industrial hygiene and safety practice.

**Conditions for safe storage, including any incompatibilities**
- **Storage temperature**
  - Keep at -20 degrees Celsius.

**Storage Conditions**
- Keep/store only in original container.

**Incompatible materials**
- None known based on information supplied.

### Section 8: Exposure Controls and Personal Protection

**Exposure Guidelines**
- This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

**Other information**
- Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962 (11th Cir., 1992).

**Appropriate engineering controls**
- Showers. Eyewash stations.

**Individual protection measures, such as personal protective equipment**
- **Eye/face protection**
  - Wear safety glasses with side shields (or goggles).

**Skin and body protection**
- Wear suitable protective clothing and gloves.

**Respiratory protection**
- Use in well ventilated areas.

**General hygiene considerations**
- Handle in accordance with good industrial hygiene and safety practice.
Section 9: Physical and Chemical Properties
Physical State: Form: Liquid
Color: Clear or colorless
Odor: None
Property: No information available

Section 10: Stability and Reactivity Data
Reactivity: No data available.
Chemical Stability: Stable under normal conditions
Possibility of Hazardous Reactions: Can react briskly with oxidizers - danger of explosion.
Conditions to Avoid: Incompatible materials, ignition sources, heat.
Incompatible Materials: Strong oxidizing agents
Hazardous Decomposition Products: Thermal decomposition can lead to release of irritating and toxic gases and vapors. Carbon monoxide. Carbon dioxide (CO2).

Section 11: Toxicological Information
Information on likely routes of exposure
Inhalation
Avoid breathing vapors or mists. May cause irritation of respiratory tract.
Eye contact
Redness. May cause slight irritation.
Skin contact
Prolonged contact may cause redness and irritation. Repeated exposure may cause skin dryness or cracking.
Ingestion
May cause drowsiness or dizziness. Ingestion causes burns of the upper digestive and respiratory tracts. Symptoms include burning sensation, coughing, wheezing, shortness of breath, headache, nausea, and vomiting.

Section 12: Ecological Information
Ecotoxicity
No information available.
1.75723 % of the mixture consists of component(s) of unknown hazards to the aquatic environment.

Section 13: Disposal Considerations
Waste treatment methods
Relevant Information
Keep out of drains, sewers, ditches and waterways.
Disposal considerations
Use a licensed professional waste disposal service to dispose of this product. Product may be dissolved in a combustible solvent or absorbed onto a combustible material and burned by a chemical incinerator.
Contaminated packaging
Empty containers must be tripled rinsed prior to disposal.

Section 14: Transport Information
This product is not dangerous and no special precautions are needed according to DOT, ADR/RID (cross border), IMDG and IATA/ICAO.

Section 15: Other Regulatory Information
International Inventories
TSCA: Complies
Legend:
TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
US Federal Regulations
CWA (Clean Water Act)
This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).
CERCLA
This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.
US State Regulations
California Proposition 65
This product does not contain any Proposition 65 chemicals.
U.S. State Right-to-Know Regulations
U.S. EPA Label Information

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SAFETY DATA SHEET: Plant Hi-C Kit

EPA Pesticide Registration Number: Not applicable

Section 16: Other Information

References: Not available. Other Special Considerations: Not available.

Last Updated: 07/06/2018 12:00 PM

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Hot Start Mix

Section 1: Chemical Information

Product Name: PCR Hot Start Mix
Recommended Use: reagent
Supplier: Phase Genomics, 1617 8th Ave N, Seattle, WA 98109, 1-833-742-7436

Section 2: Composition and Information on Ingredients

There are no substances at their given concentration, are considered to be hazardous to health.

Label Elements:
- Appearance: Colorless
- Physical State: Liquid
- Odor: odorless

Section 3: Hazard Identification

The mixture is classified according to: SANS 10234:2008, Regulation EC 1272/2008 [EU-GHS/CLP]

Hazard classes/Hazard categories:
- Acute Toxicity, oral (Category 3) STOT SE (Category 1)

Hazard statement:
- H301 H370

Signal Words: Danger

Hazard Statements: P264 Wash thoroughly after handling. P270 Do not eat, drink or smoke when using this product. P301+P312 IF SWALLOWED: Call a POISON CENTRE/doctor if you feel unwell. P330 Rinse mouth.

Special labelling of certain mixtures: None known.

Other hazards: None known.

Section 4: First Aid Measures

General advice

The product contains no substances which at their given concentration, are considered to be hazardous to health. Immediate medical attention is required. In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible). Remove from exposure, lie down. Do not breathe dust/fume/gas/mist/vapors/spray.

Eye contact

Flush eyes thoroughly with water for 15 minutes. Remove contact lenses after the initial 1-2 minutes and continue flushing. In case of discomfort seek medical attention.

Skin contact

May be harmful in contact with skin. Wash skin with soap and water.

Inhalation

If breathed in, move person into fresh air. If not breathing, give artificial respiration. In case of discomfort seek medical attention.

Ingestion

Toxic if swallowed. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. In case of discomfort seek medical attention.

Most important symptoms and effects, both acute and delayed

No information available.

Indication of any immediate medical attention and special treatment needed

Note to physicians: Treat symptomatically.

Section 5: Fire and Explosion Data

Suitable extinguishing media

Water, Water spray (fog), Foam, Dry chemical, Carbon dioxide (CO2)
SAFETY DATA SHEET: Plant Hi-C Kit

Unsuitable extinguishing media
N/A

Specific hazards arising from the chemical
N/A

Protective equipment and precautions for firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

Section 6: Accidental Release Measures

Personal precautions
Ensure adequate ventilation, especially in confined areas.

Personal protective equipment [PPE]
Use personal protection recommended in Section 8.

Environmental precautions
See Section 12 for additional Ecological Information.

Methods and material for containment and cleaning up
Methods for containment
Prevent further leakage or spillage if safe to do so.

Methods for cleaning up
Soak up with inert absorbent material. Pick up and transfer to properly labeled containers. This material and its container must be disposed of as hazardous waste.

Section 7: Handling and Storage

Precautions for safe handling
Handle in accordance with good industrial hygiene and safety practice.

Conditions for safe storage, including any incompatibilities
Storage temperature
Keep container tightly closed in a dry and well-ventilated place. Keep/store only in original container. Store away from incompatible materials.

Storage Conditions
Keep/store only in original container.

Incompatible materials
Strong oxidizing agents.

Section 8: Exposure Controls and Personal Protection

Exposure Guidelines
This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

Other information
N/A

Appropriate engineering controls
Showers. Eyewash stations.

Individual protection measures, such as personal protective equipment
Eye/face protection
Wear safety glasses with side shields (or goggles).

Skin and body protection
Wear suitable protective clothing and gloves.

Respiratory protection
If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

General hygiene considerations
Handle in accordance with good industrial hygiene and safety practice.

Section 9: Physical and Chemical Properties

Physical State: Form: Liquid
Color: Clear or colorless
Odor: None
Property: No information available

Section 10: Stability and Reactivity Data

Reactivity: The product is stable and non-reactive under normal conditions of use, storage and transport.

Chemical Stability: Stable under normal conditions

Possibility of Hazardous Reactions: None under normal processing.

Conditions to Avoid: N/A

Incompatible Materials: Strong oxidizing agents

Hazardous Decomposition Products: None known based on information supplied.

Section 11: Toxicological Information
Low hazard for usual industrial or commercial handling by trained professional.

**Information on likely routes of exposure Inhalation**
Under normal conditions of intended use, this material is not expected to be an inhalation hazard.

**Eye contact**
- Redness. May cause slight irritation.

**Skin contact**
- Prolonged contact may cause redness and irritation.

**Ingestion**
- No harmful effects expected in amounts likely to be ingested by accident.

**Section 12: Ecological Information**

**Ecotoxicity**
- No data available

**Bioaccumulation**
- No data available

**Mobility**
- No data available

**Other adverse effects**
- No data available

**Section 13: Disposal Considerations**

**Waste treatment methods**
- Relevant Information
  - Disposal should be in accordance with applicable regional, national and local laws and regulations.

**Contaminated packaging**
- Do not reuse container. Disposal should be in accordance with applicable regional, national and local laws and regulations.

**Section 14: Transport Information**
- This product is not dangerous and no special precautions are needed according to DOT, ADR/RID (cross border), IMDG and IATA/ICAO.

**Section 15: Other Regulatory Information**

**International Inventories**
- **TSCA**: Does not comply
- **DSL/NDSL**: Does not comply
- **EINECS/ELINCS**: Does not comply
- **ENCS**: Does not comply
- **IECSC**: Does not comply
- **KECL**: Does not comply
- **PICCS**: Does not comply
- **AICS**: Does not comply

**US Federal Regulations**

**SARA 313**
- Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

**SARA 311/312 Hazard Categories**
- **Acute health hazard**: No
- **Chronic Health Hazard**: No
- **Fire hazard**: No
- **Sudden release of pressure hazard**: No
- **Reactive Hazard**: No

**CWA (Clean Water Act)**
- This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

**CERCLA**
- This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

**US State Regulations**

**California Proposition 65**
- This product does not contain any Proposition 65 chemicals.

**U.S. State Right-to-Know Regulations**
- This product does not contain any substances regulated by state right-to-know regulations

**U.S. EPA Label Information**
- **EPA Pesticide Registration Number**: Not applicable
Section 16: Other Information

References: Not available. Other Special Considerations: Not available.

Last Updated: 07/06/2018 12:00 PM

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Index Mix

Section 1: Chemical Information

Product Name: PCR Index Mix
Recommended Use: reagent
Supplier: Phase Genomics, 1617 8th Ave N, Seattle, WA 98109, 1-833-742-7436

Section 2: Composition and Information on Ingredients

There are no substances at their given concentration, are considered to be hazardous to health.
Label Elements:
- Appearance: Colorless
- Physical State: Liquid
- Odor: odorless

Section 3: Hazard Identification

Not a dangerous substance or mixture according to the Globally Harmonized System (GHS)
HNOC: No Data available

Section 4: First Aid Measures

General advice
The product contains no substances which at their given concentration, are considered to be hazardous to health.
Immediate medical attention is required. In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible). Remove from exposure, lie down. Do not breathe dust/fume/gas/mist/vapors/spray.

Eye contact
Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.

Skin contact
Wash skin with soap and water.

Inhalation
Move to fresh air.

Ingestion
Get medical attention.

Most important symptoms and effects, both acute and delayed
No information available.

Indication of any immediate medical attention and special treatment needed
Note to physicians: Treat symptomatically.

Section 5: Fire and Explosion Data

Suitable extinguishing media
Water, Water spray (fog), Foam, Dry chemical, Carbon dioxide (CO2)

Unsuitable extinguishing media
N/A

Specific hazards arising from the chemical
N/A

Protective equipment and precautions for firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

Section 6: Accidental Release Measures

Personal precautions
Ensure adequate ventilation, especially in confined areas.

Personal protective equipment [PPE]
Use personal protection recommended in Section 8.

Environmental precautions

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1-833-PHAS-GEN support@phasegenomics.com
See Section 12 for additional Ecological Information.

Methods and material for containment and cleaning up
Methods for containment Prevent further leakage or spillage if safe to do so.
Methods for cleaning up
Soak up with inert absorbent material. Pick up and transfer to properly labeled containers. This material and its container must be disposed of as hazardous waste.

Section 7: Handling and Storage
Precautions for safe handling
Handle in accordance with good industrial hygiene and safety practice.
Conditions for safe storage, including any incompatibilities
Storage temperature
Keep container tightly closed in a dry and well-ventilated place. Keep/store only in original container. Store away from incompatible materials.
Storage Conditions
Keep/store only in original container.
Incompatible materials
Strong oxidizing agents.

Section 8: Exposure Controls and Personal Protection
Exposure Guidelines
This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.
Other information
N/A
Appropriate engineering controls
Showers, Eyewash stations.
Individual protection measures, such as personal protective equipment
Eye/face protection
Wear safety glasses with side shields (or goggles).
Skin and body protection
Wear suitable protective clothing and gloves.
Respiratory protection
If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.
General hygiene considerations
Handle in accordance with good industrial hygiene and safety practice.

Section 9: Physical and Chemical Properties
Physical State: Form: Liquid
Color: Clear or colorless
Odor: None
Property: No information available

Section 10: Stability and Reactivity Data
Reactivity: The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical Stability: Stable under normal conditions
Possibility of Hazardous Reactions: None under normal processing.
Conditions to Avoid: N/A
Incompatible Materials: Strong oxidizing agents
Hazardous Decomposition Products: None known based on information supplied.

Section 11: Toxicological Information
Low hazard for usual industrial or commercial handling by trained professional.
Information on likely routes of exposure Inhalation
Under normal conditions of intended use, this material is not expected to be an inhalation hazard.
Eye contact
Redness. May cause slight irritation.
Skin contact
Prolonged contact may cause redness and irritation.
Ingestion
No harmful effects expected in amounts likely to be ingested by accident.

Section 12: Ecological Information
Ecotoxicity
0 % of the mixture consists of components(s) of unknown hazards to the aquatic environment
Persistence and degradability
Not a PBT or vPvB substance or mixture.

Bioaccumulation
No data available

Mobility
No data available

Other adverse effects
No data available

Section 13: Disposal Considerations

Waste treatment methods

Relevant Information
Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated packaging
Do not reuse container. Disposal should be in accordance with applicable regional, national and local laws and regulations.

Section 14: Transport Information

This product is not dangerous and no special precautions are needed according to DOT, ADR/RID (cross border), IMDG and IATA/ICAO.

Section 15: Other Regulatory Information

International Inventories

TSCA  Does not comply
DSL/NDSL  Does not comply
EINECS/ELINCS  Does not comply
ENCS  Does not comply
IECS  Does not comply
KECL  Does not comply
PICCS  Does not comply
AICS  Does not comply

US Federal Regulations

SARA 313
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

SARA 311/312 Hazard Categories
Acute health hazard  No
Chronic Health Hazard  No
Fire hazard  No
Sudden release of pressure hazard  No
Reactive Hazard  No

CWA (Clean Water Act)
This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

CERCLA
This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

US State Regulations

California Proposition 65
This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations
This product does not contain any substances regulated by state right-to-know regulations

U.S. EPA Label Information
EPA Pesticide Registration Number: Not applicable

Section 16: Other Information

References:  Not available. Other Special Considerations:  Not available.
Last Updated: 07/06/2018 12:00 PM

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SAFETY DATA SHEET: Plant Hi-C Kit

Library Buffer

Section 1: Chemical Information

Product Name: Library Buffer
Supplier: Phase Genomics, 1617 8th Ave N, Seattle, WA 98109, 1-833-742-7436
Recommended use: reagent

Section 2: Composition and Information on Ingredients

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
10-30% Weight of N,N-Dimethylformamide, CAS# 68-12-2

Section 3: Hazard Identification

GHS Classification OSHA Regulatory Status

<table>
<thead>
<tr>
<th>Hazard Class</th>
<th>OSHA Class</th>
</tr>
</thead>
<tbody>
<tr>
<td>Serious eye damage/eye irritation</td>
<td>Category 2A</td>
</tr>
<tr>
<td>Reproductive toxicity</td>
<td>Category 1B</td>
</tr>
</tbody>
</table>

Signal Word:
Danger

Hazard statements
Causes serious eye irritation  May damage fertility or the unborn child

Appearance:
Colorless liquid

Physical state:
Liquid

Odor:
N/A

Precautionary Statements - Prevention
Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required. Wash face, hands and any exposed skin thoroughly after handling.

Precautionary Statements - Response
If exposed or concerned: Get medical advice/attention. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

Precautionary Statements - Storage
Store locked up.

Precautionary Statements - Disposal
Dispose of in accordance with federal, state and local regulations. Not applicable.

Other Information
Unknown acute toxicity. 20% of the mixture consists of ingredient(s) of unknown toxicity.

Section 4: First Aid Measures

General advice
The product contains no substances which at their given concentration, are considered to be hazardous to health. Immediate medical attention is required. In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible). Remove from exposure, lie down. Do not breathe dust/fume/gas/mist/vapors/spray.

Eye contact
Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.

Skin contact
Wash skin with soap and water.

Inhalation
Remove victim to fresh air. Get medical attention if symptoms persist.

Ingestion
Get medical advice and attention.

Most important symptoms and effects, both acute and delayed
May cause redness and tearing of the eyes. Vapors may cause drowsiness and dizziness.

Indication of any immediate medical attention and special treatment needed
Note to physicians: Treat symptomatically.
Section 5: Fire and Explosion Data

Suitable extinguishing media
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media
CAUTION: Use of water spray when fighting fire may be inefficient.

Specific hazards arising from the chemical
No information available.

Protective equipment and precautions for firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

Section 6: Accidental Release Measures

Personal precautions
Ensure adequate ventilation, especially in confined areas.

Personal protective equipment [PPE]
Use personal protection recommended in Section 8.

Environmental precautions
See Section 12 for additional Ecological Information.

Methods and material for containment and cleaning up
Methods for containment
Prevent further leakage or spillage if safe to do so.

Methods for cleaning up
Soak up with inert absorbent material. Pick up and transfer to properly labeled containers. This material and its container must be disposed of as hazardous waste.

Section 7: Handling and Storage

Precautions for safe handling
Handle in accordance with good industrial hygiene and safety practice.

Conditions for safe storage, including any incompatibilities
Storage temperature
Keep at -20 degrees Celsius.

Storage Conditions
Keep/store only in original container.

Incompatible materials
Strong Oxidizing Reagents

Section 8: Exposure Controls and Personal Protection

Control parameters
Exposure Guidelines
NIOSH IDLH Immediately Dangerous to Life or Health

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>ACGIH TLV</th>
<th>OSHA PEL</th>
<th>NIOSH IDLH</th>
</tr>
</thead>
<tbody>
<tr>
<td>N,N-Dimethylformamide 68-12-2</td>
<td>TWA: 10 ppm Skin</td>
<td>TWA: 10 ppm TWA: 30 mg/m3 (vacated) TWA: 10 ppm (vacated) TWA: 30 mg/m3 (vacated) S*</td>
<td>IDLH: 500 ppm TWA: 10 ppm TWA: 30 mg/m3</td>
</tr>
</tbody>
</table>

Other Information
Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962 (11th Cir., 1992).

Appropriate engineering controls
Engineering Controls
Showers Eyewash stations Ventilation systems.

Individual protection measures, such as personal protective equipment
Eye and Face Protection
Wear safety glasses with side shields (or goggles).

Skin and Body Protection
Wear chemical-resistant gloves, footwear and protective clothing appropriate for risk of exposure. Contact glove manufacturer for specific information.

Respiratory Protection
If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

General Hygiene Considerations
Handle in accordance with good industrial hygiene and safety practice. Wash after handling this material and before eating, drinking and/or smoking. Regular cleaning of equipment, work area and clothing is recommended.
Section 9: Physical and Chemical Properties
- Physical State: Form: Liquid
- Color: Clear or colorless
- Odor: None
- Property: No information available

Section 10: Stability and Reactivity Data
- Reactivity: No data available.
- Chemical Stability: Stable under normal conditions
- Possibility of Hazardous Reactions: Can react briskly with oxidizers- danger of explosion.
- Conditions to Avoid: Incompatible materials, ignition sources, heat.
- Incompatible Materials: Strong oxidizing agents, nitrate compounds, halogens
- Hazardous Decomposition Products: Thermal decomposition can lead to release of irritating and toxic gases and vapors. Nitrogen oxides (NOx), Carbon monoxide. Carbon dioxide (CO2).

Section 11: Toxicological Information
Information on likely routes of exposure
- Inhalation
  - Avoid breathing vapors or mists. May cause irritation of respiratory tract.
- Eye contact
  - Redness. May cause slight irritation.
- Skin contact
  - Prolonged contact may cause redness and irritation. Repeated exposure may cause skin dryness or cracking.
- Ingestion
  - May cause drowsiness or dizziness. Ingestion causes burns of the upper digestive and respiratory tracts. Symptoms include burning sensation, coughing, wheezing, shortness of breath, headache, nausea, and vomiting.

Information on toxicological effects
- Symptoms
  - May cause redness and tearing of the eyes. Vapors may cause drowsiness and dizziness.

Delayed and immediate effects as well as chronic effects from short and long-term exposure
- Skin corrosion/irritation
  - Not classified
- Serious eye damage/eye irritation
  - Irritating to Eyes
- Sensitization
  - Not Classified
- Germ cell mutagenicity
  - Not Classified
- Carcinogenicity
  - This product does not contain any carcinogens or potential carcinogens as listed by OSHA, IARC or NTP.
- Target organ effects
  - Central Vascular System (CVS), Eyes, kidney, liver, Respiratory system, Skin.
- Aspiration Hazard
  - Not classified

Other adverse effects
- No information available

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>ACGIH</th>
<th>IARC</th>
<th>NTP</th>
<th>OSHA</th>
</tr>
</thead>
<tbody>
<tr>
<td>N,N-Dimethylformamide 68-12-2</td>
<td>-</td>
<td>Group 2A</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

Numerical measures of toxicity - Product Information
- Unknown Acute toxicity: 20% of the mixture consists of ingredient(s) of unknown toxicity

Section 12: Ecological Information
Ecotoxicity
- 0.5 % of the mixture consists of component(s) of unknown hazards to the aquatic environment.
SAFETY DATA SHEET: Plant Hi-C Kit

| N,N-Dimethylformamide 68-12-2 | 96h-EC50(Desmodesmus subspicatus):500 mg/L | 96h-LC50(Oncorhynchus mykiss):9800 mg/L, 96h-LC50(Pimephales promelas):10410 mg/L, 96h-LC50(Lepomis macrochirus):6300 mg/L | 48h-EC50(Daphnia magna):7500 mg/L, 48h-EC50(Daphnia magna):6800 - 13900 mg/L, 48h-EC50(Daphnia magna):8485 mg/L |

**Persistence and degradability**
Not a PBT or PVB substance or mixture

**Bioaccumulation**
N,N-Dimethylformamide 68-12-2: Partition Coefficient -1.028

**Mobility**
No data available

**Other adverse effects**
No data available

**Section 13: Disposal Considerations**

**Waste treatment methods**

**Relevant Information**
Keep out of drains, sewers, ditches and waterways.

**Disposal considerations**
Use a licensed professional waste disposal service to dispose of this product.

**Contaminated packaging**
Empty containers must be tripled rinsed prior to disposal.

**Section 14: Transport Information**
This product is not dangerous and no special precautions are needed according to DOT, ADR/RID (cross border), IMDG and IATA/ICAO.

**Section 15: Other Regulatory Information**

**International Inventories**
- DSL/NDSL: Complies
- PICCS: Complies

**Legend:**
- DSL/NDSL: Canadian Domestic Substances List/Non-Domestic Substances List
- PICCS: Philippines Inventory of Chemicals and Chemical Substances

**US Federal Regulations**

**SARA 313**
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

N,N-Dimethylformamide 68-12-2: 1% SARA 313- Threshold Value

**SARA 311/312 Hazard Categories**
- Acute health hazard: Yes
- Chronic Health Hazard: Yes
- Fire hazard: No
- Sudden release of pressure hazard: No

**CWA (Clean Water Act)**
This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

**CERCLA**
This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)
SAFETY DATA SHEET: Plant Hi-C Kit

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>New Jersey</th>
<th>Massachusetts</th>
<th>Pennsylvania</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water 7732-18-5</td>
<td>-</td>
<td>-</td>
<td>X</td>
</tr>
<tr>
<td>N,N-Dimethylformamide 68-12-2</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

US State Regulations
California Proposition 65
This product does not contain any Proposition 65 chemicals.

Chemical name     | New Jersey | Massachusetts | Pennsylvania
Water 7732-18-5   | -          | -             | X            |
N,N-Dimethylformamide 68-12-2 | X          | X             | X            |

U.S. State Right-to-Know Regulations

U.S. EPA Label Information

EPA Pesticide Registration Number: Not applicable

Section 16: Other Information

References: Not available. Other Special Considerations: Not available.

Last Updated: 07/06/2018 12:00 PM

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Library Reagent 1

Section 1: Chemical Information

Product Name: Library Reagent 1
Recommended Use: reagent
Supplier: Phase Genomics, 1617 8th Ave N, Seattle, WA 98109, 1-833-742-7436

Section 2: Composition and Information on Ingredients

There are no substances at their given concentration, are considered to be hazardous to health.
Label Elements:
Appearance: Colorless
Physical State: Liquid
Odor: odorless

Section 3: Hazard Identification

Not a dangerous substance or mixture according to the Globally Harmonized System (GHS)
Glycerol, CAS No. 56-81-5, 30-60% by weight

Section 4: First Aid Measures

General advice
The product contains no substances which at their given concentration, are considered to be hazardous to health. Immediate medical attention is required. In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible). Remove from exposure, lie down. Do not breathe dust/fume/gas/mist/vapors/spray.

Eye contact
Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists. Consult a physician.

Skin contact
Wash skin with soap and water.

Inhalation
Move to fresh air.

Ingestion
Get medical attention.

Most important symptoms and effects, both acute and delayed
No information available.
SAFETY DATA SHEET: Plant Hi-C Kit

Section 5: Fire and Explosion Data

Suitable extinguishing media
Water, Water spray (fog), Foam, Dry chemical, Carbon dioxide (CO2)

Unsuitable extinguishing media
N/A

Specific hazards arising from the chemical
N/A

Protective equipment and precautions for firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

Section 6: Accidental Release Measures

Personal precautions
Ensure adequate ventilation, especially in confined areas. Use personal protective equipment as required.

Personal protective equipment [PPE]
Use personal protection recommended in Section 8.

Environmental precautions
See Section 12 for additional Ecological Information.

Methods and material for containment and cleaning up
Prevent further leakage or spillage if safe to do so.

Methods for cleaning up
Soak up with inert absorbent material. Pick up and transfer to properly labeled containers. This material and its container must be disposed of as hazardous waste.

Section 7: Handling and Storage

Precautions for safe handling
Handle in accordance with good industrial hygiene and safety practice.

Conditions for safe storage, including any incompatibilities
Storage temperature
Keep container tightly closed in a dry and well-ventilated place. Keep/store only in original container. Store away from incompatible materials.

Storage Conditions
Keep container tightly closed. Keep/store only in original container. Store away from incompatible materials. Store at -15° C to -25° C (5° F to -13° F).

Incompatible materials
Strong oxidizing agents.

Section 8: Exposure Controls and Personal Protection

Exposure Guidelines
Glycerol, 56081-5
OSHA PEL:
TWA: 15 mg/m3 mist, total particulate
TWA: 5 mg/m3 mist, respirable fraction
(vacated) TWA: 10 mg/m3 mist, total particulate
(vacated) TWA: 5 mg/m3 mist, respirable fraction

Other information: N/A

Appropriate engineering controls
Showers. Eyewash stations.

Individual protection measures, such as personal protective equipment
Eye/face protection
Wear safety glasses with side shields (or goggles).

Skin and body protection
Wear suitable protective clothing and gloves.

Respiratory protection
If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

General hygiene considerations
Handle in accordance with good industrial hygiene and safety practice.

Section 9: Physical and Chemical Properties

Physical State: Form: Liquid
Color: Clear or colorless
Odor: None
Property: No information available
Section 10: Stability and Reactivity Data

Reactivity: The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical Stability: Stable under normal conditions
Possibility of Hazardous Reactions: N/A
Conditions to Avoid: N/A
Incompatible Materials: Strong oxidizing agents
Hazardous Decomposition Products: None known based on information supplied.

Section 11: Toxicological Information

Low hazard for usual industrial or commercial handling by trained personnel

Information on likely routes of exposure

Inhalation
Under normal conditions of intended use, this material is not expected to be an inhalation hazard.

Eye contact
Direct contact with eyes may cause temporary irritation.

Skin contact
Prolonged contact may cause redness and irritation.

Ingestion
No harmful effects expected in amounts likely to be ingested by accident.

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>Oral LD50</th>
<th>Dermal LD50</th>
<th>Inhalation LC50</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glycerol (56-81-5)</td>
<td>12,600 mg/kg (Rat)</td>
<td>&gt;10 g/kg (Rabbit)</td>
<td>&gt;570 mg/m³ (Rat) 1h</td>
</tr>
</tbody>
</table>

Skin corrosion/irritation: Not Classified
Serious eye damage/eye irritation: Not Classified
Sensitization: Not Classified
Germ cell mutagenicity: Not Classified
Carcinogenicity: This product does not contain any carcinogens or potential carcinogens as listed by OSHA, IARC or NTP.

Reproductive toxicity
STOT – single exposure: Not Classified
STOT - repeated exposure: Not Classified
Target Organ Effects: Eyes, kidney, respiratory system, skim.
Aspiration hazard: Not Classified
Other adverse effects: N/A
Numerical measures of toxicity: Product Info
Unknown acute toxicity: 51% of the mixture consists of ingredients of unknown toxicity

Section 12: Ecological Information

Ecotoxicity
2.3% of the mixture consists of component(s) of unknown hazards to the aquatic environment

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Algae/aquatic plants</th>
<th>Fish</th>
<th>Crustacea</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glycerol 56-81-5</td>
<td>-</td>
<td>51 - 57 mL/L: LC50 96 h Oncorhynchus mykiss static</td>
<td>500 mg/L: EC50 24 h Daphnia magna</td>
</tr>
</tbody>
</table>
### Sodium chloride 7647-14-5

<table>
<thead>
<tr>
<th>Persistence and degradability</th>
<th>Sodium chloride 7647-14-5</th>
<th>12946 mg/L: LC50 96 h Lepomis macrochirus static 6020 - 7070 mg/L: LC50 96 h Pimephales promelas static 5560 - 6080 mg/L: LC50 96 h Lepomis macrochirus flow-through 6420 - 6700 mg/L: LC50 96 h Pimephales promelas static 4747 - 7824 mg/L: LC50 96 h Oncorhynchus mykiss flow-through 7050 mg/L: LC50 96 h Pimephales promelas semi-static</th>
<th>1000 mg/L: EC50 48 h Daphnia magna 340.7 - 469.2 mg/L: EC50 48 h Daphnia magna Static</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bioaccumulation</td>
<td>Glycerol (S8-81-5) partition coefficient -1/76</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mobility</td>
<td>No data available</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other adverse effects</td>
<td>No data available</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Section 13: Disposal Considerations

**Waste treatment methods**

Relevant Information

Disposal should be in accordance with applicable regional, national and local laws and regulations.

**Contaminated packaging**

Do not reuse container. Disposal should be in accordance with applicable regional, national and local laws and regulations.

### Section 14: Transport Information

This product is not dangerous and no special precautions are needed according to DOT, ADR/RID (cross border), IMDG and IATA/ICAO.

### Section 15: Other Regulatory Information

#### International Inventories

<table>
<thead>
<tr>
<th>TSCA</th>
<th>Does not comply</th>
</tr>
</thead>
<tbody>
<tr>
<td>DSL/NDSL</td>
<td>Does not comply</td>
</tr>
<tr>
<td>EINECS/ELINCS</td>
<td>Does not comply</td>
</tr>
<tr>
<td>ENCS</td>
<td>Does not comply</td>
</tr>
<tr>
<td>IECSC</td>
<td>Does not comply</td>
</tr>
<tr>
<td>KECL</td>
<td>Does not comply</td>
</tr>
<tr>
<td>PICCS</td>
<td>Does not comply</td>
</tr>
<tr>
<td>AICS</td>
<td>Does not comply</td>
</tr>
</tbody>
</table>

#### US Federal Regulations

**CWA (Clean Water Act)**

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

**CERCLA**

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

#### US State Regulations

**California Proposition 65**

This product does not contain any Proposition 65 chemicals.

**U.S. State Right-to-Know Regulations**

Glycerol (S6-81-5)

**U.S. EPA Label Information**

**EPA Pesticide Registration Number**: Not applicable

### Section 16: Other Information

**References**: Not available. **Other Special Considerations**: Not available.

**Last Updated**: 07/06/2018 12:00 PM

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Library Reagent 2
Section 1: Chemical Information
Product Name: Library Reagent 2
Supplier: Phase Genomics, 1617 8th Ave N, Seattle, WA 98109, 1-833-742-7436
Recommended Use: reagent

Section 2: Composition and Information on Ingredients
Mixture: There are no substances at their given concentration, are considered to be hazardous to health.

Section 3: Hazard Identification
Sodium dodecyl sulfate solution Cas # 151-21-3

Section 4: First Aid Measures
General Advice: Wear protective gloves/protective clothing/eye protection/face protection.
If Inhaled: If not breathing, give artificial respiration. Consult doctor in case of complaints.
In Case of Skin Contact: Wash with soap and water. Generally doesn’t irritate.
In Case of Eye Contact: Remove contact lenses, if present and easy to do. Continue rinsing.
If Swallowed: N/A
Most Important Symptoms and Effects, Acute and Delayed: N/A
Recommendations for Immediate Medical Attention and Special Treatment: Treat symptomatically.

Section 5: Fire and Explosion Data
Conditions of Flammability: Not flammable or combustible.
Suitable Extinguishing Media: Dry powder, CO2, water spray or regular foam.
Special Protective Equipment for Firefighters: Wear self-contained breathing apparatus, if necessary.
Hazardous Combustion Products: Further Information: N/A
Further information: N/A

Section 6: Accidental Release Measures
Personal Precautions: Not required.
Environmental Precautions: Do not allow undiluted product to enter sewer/surface or ground water.
Emergency Procedures: Evacuate personnel to safe areas and follow emergency response protocols.
Methods and Materials for Containment and Cleaning Up: Use inert absorbent material to soak up spill.
See section 7 for information on safe handling.
See section 8 for information on PPE.
See section 13 for disposal information.

Section 7: Handling and Storage
Precautions for Safe Handling: Provide appropriate exhaust ventilation at places where dust is formed. Conditions for Safe Storage: Store at 2-8°C. Keep container tightly closed in a dry, well-ventilated place.
Incompatible Products: N/A

Section 8: Exposure Controls and Personal Protection
Appropriate Engineering Controls: General industrial hygiene practice.
Recommendations for Personal Protective Measures:
Hand Protection: The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture. Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
Material of gloves: The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material cannot be calculated in advance and has therefore to be checked prior to the application.
Eye Protection: N/A
Skin and Body Protection: Wear appropriate laboratory attire when handling this product, such as gloves, long pants, closed-toe shoes and a laboratory coat.
Respiratory Protection: N/A
Hygiene Measures: Avoid contact with eyes, skin and clothing. Wash hands thoroughly after using this product.
Special Requirements for Personal Protective Equipment, Protective Clothing, Respirators, etc: N/A
Components with Workplace Control Parameters: N/A

Section 9: Physical and Chemical Properties
Appearance:
SAFETY DATA SHEET: Plant Hi-C Kit

Form: Liquid
Color: Clear
Odor: Odorless
Odor Threshold: No data available
pH: No data available
Melting Point/Freezing Point: No data available
Initial Boiling Point/Boiling Range: No data available
Flash Point: No data available
Evaporation Rate: No data available
Flammability (Solid, Gas): No data available
Upper/Lower Limits on Flammability and Explosive Limits:
Flammability Limit (Upper): No data available
Flammability Limit (Lower): No data available
Explosive Limit (Upper): No data available
Explosive Limit (Lower): No data available
Vapor Pressure: No data available
Vapor Density: No data available
Relative Density: No data available
Solubility:
Solubility in Water: Not miscible or difficult to mix.
Solubility (Other): No data available
Partition Coefficient (n-octanol/ water): No data available
Auto-Ignition Temperature: No data available
Decomposition Temperature: No data available
Viscosity: No data available

Section 10: Stability and Reactivity Data
Reactivity: No data available
Chemical Stability: No data available
Possibility of Hazardous Reactions: Conditions to Avoid: No data available
Materials to Avoid: No data available
Hazardous Decomposition Products: Carbon monoxide, Carbon dioxide, Sulfur oxides, Sodium oxides.

Section 11: Toxicological Information
Information on Likely Routes of Exposure:
Inhalation: No data available
Ingestion: No data available
Skin: No irritant effect.
Eyes: No irritant effect.
Information on Toxicological Effects:
Acute Toxicity:
Oral LD50: No data available
Inhalation LC50: No data available
Dermal LD50: No data available
Other Information: No data available
Skin Corrosion/Irritation: No data available
Serious Eye Damage/Irritation: No data available
Respiratory or Skin Sensitization: No data available
Germ Cell Mutagenicity: No data available
Carcinogenicity:
IARC: No component of this product that is present at 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
ACGIH: No component of this product that is present at 0.1% is identified as probable, possible or confirmed human carcinogen by ACGIH.
NTP: No component of this product that is present at 0.1% is identified as probable, possible or confirmed human carcinogen by NTP.
OSHA: No component of this product that is present at 0.1% is identified as probable, possible or confirmed human carcinogen by OSHA.
Reproductive Toxicity: No data available
Teratogenicity: No data available
Specific Target Organ Toxicity –
Single Exposure: No data available
Specific Target Organ Toxicity –
Repeated Exposures: No data available
Aspiration Hazard: No data available
Signs and Symptoms of Exposure: The sodium salt of dodecyl sulfate has been reported to cause pulmonary sensitization resulting in hyperactive airway. Dysfunction and pulmonary allergy accompanied by fatigue, malaise, and aching. Significant symptoms of exposure can persist for more than two years and can be activated by a variety of nonspecific environmental stimuli such as automobile, Exhaust, perfumes, and passive smoking. To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated. 
Synergistic Effects: No data available
Additional Information: No data available

Section 12: Ecological Information
Toxicity: No known significant effects or critical hazards.
Persistence and Degradability: No data available
Bioaccumulative Potential: No data available
Mobility in Soil: No data available
PBT and vPvB Assessment: No data available
Other Adverse Effects: N/A
General notes: N/A

Section 13: Disposal Considerations
Dispose unused material. Observe regulations.

Section 14: Transport Information
DOT: Not regulated.
IMDG: Not regulated.
IATA: Not regulated.

Section 15: Other Regulatory Information
SARA 302 Components
No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.
SARA 313 Components
This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.
SARA 311/312 Hazards
No SARA Hazards
Massachusetts Right To Know Components: N/A
Pennsylvania Right To Know Components: N/A
New Jersey Right To Know Components: N/A
California Prop. 65 Components
This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

Section 16: Other Information
References: Not available. Other Special Considerations: Not available.
Last Updated: 07/06/2018 12:00 PM
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Ligation Buffer

Section 1: Chemical Information
Product Name: Ligation Buffer
Supplier: Phase Genomics, 1617 8th Ave N, Seattle, WA 98109, 1-833-742-7436
Recommended Use: reagent

Section 2: Composition and Information on Ingredients
Composition: The product contains no substances which at their given concentration, are considered to be hazardous to health.

Section 3: Hazard Identification
Potential Acute Health Effects: none
Potential Chronic Health Effects: None

Page 40 of 75 1-833-PHAS-GEN support@phasegenomics.com
Section 4: First Aid Measures
Eye Contact: Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.

Skin Contact: Wash skin with soap and water.

Inhalation: Remove to fresh air.
Ingestion: Clean mouth with water and drink afterwards plenty of water.

Section 5: Fire and Explosion Data
Flammability of the Product: Non-flammable

Flammable in Presence of Various Substances: Non-flammable

Explosion Hazards in Presence of Various Substances: No information available

Fire Fighting Media and Instructions: Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Special Remarks on Fire Hazards:
No information available

Special Remarks on Explosion Hazards:
None

Section 6: Accidental Release Measures
Small Spill:
Dilute with water and mop up or absorb and place in an appropriate waste disposal container.

Large Spill:
Dilute with water and mop up or absorb and place in an appropriate waste disposal container.

Section 7: Handling and Storage
Precautions: Handle in accordance with good industrial hygiene and safety practice.

Storage: Keep/store only in original container.

Section 8: Exposure Controls and Personal Protection
Engineering Controls:
Ensure that eyewash stations and safety showers are proximal to the work-station location.

Personal Protection:
Safety glasses. Lab coat. Gloves

Personal Protection in Case of a Large Spill:
Safety glasses. Lab coat. Gloves

Exposure Limits:
No information available.

Section 9: Physical and Chemical Properties
Physical state and appearance: Liquid.
Odor: Mild Taste Not available.
Molecular Weight: No information available
Color: Clear Colorless.

pH (1% soln/water): No information available
Boiling Point: No information available
Melting Point: No information available

Critical Temperature: No information available
Specific Gravity: No information available

Vapor Pressure: No information available
Vapor Density: No information available
Volatility: 100% (w/w).

Odor Threshold: No information available
Water/Oil Dist. Coeff.: Not available.
Ionicity (in Water): No information available
Dispersion Properties: No information available
Solubility: No information available

Section 10: Stability and Reactivity Data
Stability: The product is stable.
Instability Temperature: Not available.
Conditions of Instability: No information available
Incompatibility with various substances: Strong oxidizing agents
Corrosivity: No information available
Special Remarks on Reactivity: Thermal decomposition can lead to release of irritating and toxic gases and vapors. Carbon monoxide. Carbon dioxide (CO2).
Special Remarks on Corrosivity: Not available.
Polymerization: Will not occur.

Section 11: Toxicological Information
Routes of Entry: Absorbed through skin. Dermal contact. Eye contact. Inhalation.
Toxicity to Animals:
None
Chronic Effects on Humans: None
Other Toxic Effects on Humans: May cause drowsiness or dizziness. Ingestion causes burns of the upper digestive and respiratory tracts. Symptoms include burning sensation, coughing, wheezing, shortness of breath, headache, nausea, and vomiting.

Section 12: Ecological Information
Ecotoxicity: 8.16 % of the mixture consists of component(s) of unknown hazards to the aquatic environment.

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Algae/aquatic plants</th>
<th>Fish</th>
<th>Toxicity to microorganisms</th>
<th>Crustacea</th>
</tr>
</thead>
<tbody>
<tr>
<td>Magnesium Chloride</td>
<td>2200: 72 h Desmodesmus subspicatus mg/L EC50</td>
<td>4210: 96 h Gambusia affinis mg/L LC50 static 1970 - 3880: 96 h Pimephales promelas mg/L LC50 static</td>
<td>-</td>
<td>140: 48 h Daphnia magna mg/L EC50 Static 1400: 24 h Daphnia magna mg/L EC50</td>
</tr>
</tbody>
</table>

Products of Biodegradation: No information available.

Section 13: Disposal Considerations
Waste Disposal: Use a licensed professional waste disposal service to dispose of this product. Product may be dissolved in a combustible solvent or absorbed onto a combustible material and burned by a chemical incinerator.

Section 14: Transport Information
DOT Classification:
Not regulated
Special Provisions for Transport: Not available.

Section 15: Other Regulatory Information
Federal and State Regulations: CWA (Clean Water Act)
This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).
Other Regulations:
CERCLA: This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level

Section 16: Other Information
References: Not available. Other Special Considerations: Not available.
Last Updated: 07/06/2018 12:00 PM
The information in this SDS is provided in good faith based on our knowledge as of the issue date (or subsequent revision date, if any), and is to be used only as a guide. This SDS does not constitute a guarantee (express or implied) of any kind and we make no warranties or merchantability or fitness for a particular purpose. This information relates only to the designated product as shipped and may not be valid if the product is used in combination with any other materials or is not used in accordance with our instructions. It is the responsibility of the buyer/user to ensure that its activities comply with all applicable governmental requirements. Since conditions of use of the product are not under the control of Phase Genomics, it is the duty of the buyer/user to determine the necessary conditions for the safe use of the product. Phase Genomics will not be liable for any damages resulting from handling or contact with the product.

Ligation Enzyme
Section 1: Chemical Information
Product Name: Ligation Enzyme
Supplier: Phase Genomics, 1617 8th Ave N, Seattle, WA 98109, 1-833-742-7436
Page 42 of 75

1-833-PHAS-GEN

support@phasegenomics.com
Recommended Use: reagent

Section 2: Composition and Information on Ingredients
There are no substances at their given concentration, are considered to be hazardous to health.

Section 3: Hazard Identification
Not a dangerous substance or mixture according to the Globally Harmonized System (GHS)
HNOC: No Data available
Label Elements:
Appearance: Colorless
Physical State: Liquid
Odor: Mild

Section 4: First Aid Measures
General advice
The product contains no substances which at their given concentration, are considered to be hazardous to health. Immediate medical attention is required. In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible). Remove from exposure, lie down. Do not breathe dust/fume/gas/mist/vapors/spray.

Eye contact
Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.

Skin contact
Wash skin with soap and water.

Inhalation
Remove to fresh air.

Ingestion
Clean mouth with water and drink afterwards plenty of water.

Most important symptoms and effects, both acute and delayed
No information available.

Indication of any immediate medical attention and special treatment needed
Note to physicians: Treat symptomatically.

Section 5: Fire and Explosion Data
Suitable extinguishing media
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media
CAUTION: Use of water spray when fighting fire may be inefficient.

Specific hazards arising from the chemical
No information available.

Protective equipment and precautions for firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOH (approved or equivalent) and full protective gear.

Section 6: Accidental Release Measures
Personal precautions
Ensure adequate ventilation, especially in confined areas.

Personal protective equipment [PPE]
Use personal protection recommended in Section 8.

Environmental precautions
See Section 12 for additional Ecological Information.

Methods and material for containment and cleaning up
Methods for containment
Prevent further leakage or spillage if safe to do so.

Methods for cleaning up
Soak up with inert absorbent material. Pick up and transfer to properly labeled containers. This material and its container must be disposed of as hazardous waste.

Section 7: Handling and Storage
Precautions for safe handling
Handle in accordance with good industrial hygiene and safety practice.

Conditions for safe storage, including any incompatibilities

Storage temperature
Keep at -20 degrees Celsius.

Storage Conditions
Keep/store only in original container.

Incompatible materials
SAFETY DATA SHEET: Plant Hi-C Kit

Section 8: Exposure Controls and Personal Protection

Exposure Guidelines
This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

Other information
Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962 (11th Cir., 1992).

Appropriate engineering controls
Showers. Eyewash stations.

Individual protection measures, such as personal protective equipment
Eye/face protection
Wear safety glasses with side shields (or goggles).

Skin and body protection
Wear suitable protective clothing and gloves.

Respiratory protection
Use in well ventilated areas.

General hygiene considerations
Handle in accordance with good industrial hygiene and safety practice.

Section 9: Physical and Chemical Properties

Physical State: Form: Liquid
Color: Clear or colorless
Odor: None
Property: No information available

Section 10: Stability and Reactivity Data

Reactivity: No data available.
Chemical Stability: Stable under normal conditions.
Possibility of Hazardous Reactions: Can react briskly with oxidizers- danger of explosion.
Conditions to Avoid: Incompatible materials, ignition sources, heat.
Incompatible Materials: Strong oxidizing agents
Hazardous Decomposition Products: Thermal decomposition can lead to release of irritating and toxic gases and vapors. Carbon monoxide. Carbon dioxide (CO2).

Section 11: Toxicological Information

Information on likely routes of exposure
Inhalation
Avoid breathing vapors or mists. May cause irritation of respiratory tract.

Eye contact
Redness. May cause slight irritation.

Skin contact
Prolonged contact may cause redness and irritation. Repeated exposure may cause skin dryness or cracking.

Ingestion
May cause drowsiness or dizziness. Ingestion causes burns of the upper digestive and respiratory tracts. Symptoms include burning sensation, coughing, wheezing, shortness of breath, headache, nausea, and vomiting.

Section 12: Ecological Information

Ecotoxicity
0.18 % of the mixture consists of component(s) of unknown hazards to the aquatic environment.

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Algae/aquatic plants</th>
<th>Fish</th>
<th>Crustacea</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glycerol 56-81-5</td>
<td>-</td>
<td>51 - 57: 96 h Oncorhynchus mykiss mL/L LC50 static</td>
<td>500: 24 h Daphnia magna mg/L EC50</td>
</tr>
<tr>
<td>Potassium Chloride 7447-40-7</td>
<td>2500: 72 h Desmodesmus subspicatus mg/L EC50</td>
<td>1060: 96 h Lepomis macrochirus mg/L LC50 static 750 - 1020: 96 h Pimephales promelas mg/L LC50 static</td>
<td>825: 48 h Daphnia magna mg/L EC50 83: 48 h Daphnia magna mg/L EC50 Static</td>
</tr>
<tr>
<td>Ethylenediamine tetraacetic acid 60-00-4</td>
<td>1.01: 72 h Desmodesmus subspicatus mg/L EC50</td>
<td>44.2 - 76.5: 96 h Pimephales promelas mg/L LC50 static 34 - 62: 96 h Lepomis macrochirus mg/L LC50 static</td>
<td>113: 48 h Daphnia magna mg/L EC50 Static</td>
</tr>
</tbody>
</table>
SAFETY DATA SHEET: Plant Hi-C Kit

All other data unavailable

Section 13: Disposal Considerations
Waste treatment methods
Relevant Information
Keep out of drains, sewers, ditches and waterways.

Disposal considerations
Use a licensed professional waste disposal service to dispose of this product. Product may be dissolved in a combustible solvent or absorbed onto a combustible material and burned by a chemical incinerator.

Contaminated packaging
Empty containers must be tripled rinsed prior to disposal.

Section 14: Transport Information
This product is not dangerous and no special precautions are needed according to DOT, ADR/RID (cross border), IMDG and IATA/ICAO.

Section 15: Other Regulatory Information
International Inventories
TSCA: Complies

Legend:
TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

US Federal Regulations
CWA (Clean Water Act)
This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

CERCLA
This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

US State Regulations
California Proposition 65
This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations
U.S. EPA Label Information
EPA Pesticide Registration Number: Not applicable

Section 16: Other Information
References: Not available. Other Special Considerations: Not available.

Last Updated: 07/06/2018 12:00 PM
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Lysis Buffer 1

Section 1: Chemical Information
Product Name: Lysis Buffer
Supplier: Phase Genomics, 1617 8th Ave N, Seattle, WA 98109, 1-833-742-7436
Recommended Use: Reagent

Section 2: Hazard Identification
GHS – Classification:
Signal Word: WARNING
Hazard statements
H319 - Causes serious eye irritation
H402 - Harmful to aquatic life

Precautionary statements
P264 - Wash hands thoroughly after handling
P280 - Wear protective gloves/protective clothing/eye protection/face protection
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P337 + P313 - If eye irritation persists: Get medical advice/attention
P273 - Avoid release to the environment

Label Elements:
Appearance: Colorless
Physical State: Liquid
Odor: Mild

Potential Effects of a Single Acute Exposure
Inhalation: May be harmful by inhalation.
Eye Contact: May cause eye irritation with susceptible persons.
Skin Contact: May cause skin irritation in susceptible persons.
Skin Absorption: No evidence of harmful effects from available information.
Ingestion: May be harmful if swallowed.

HMIS:

<table>
<thead>
<tr>
<th></th>
<th>Health</th>
<th>Flammability</th>
<th>Reactivity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cas</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

Section 3: Composition and Information on Ingredients
Component | CAS #     | %W/W |
Triton X-100 | 9036-19-5 | 1%   |

Section 4: First Aid Measures
Eye contact
Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If symptoms persist, call a physician.

Skin contact
Rinse with plenty of water. If symptoms arise, call a physician

Inhalation
Move to fresh air. If symptoms persist, call a physician. If not breathing, give artificial respiration.

Ingestion
Never give anything by mouth to an unconscious person. If symptoms persist, call
Notes to Physician

Treat symptomatically.

Section 5: Fire and Explosion Data

Suitable extinguishing media


Specific hazards arising from the chemical

No information available.

Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

Section 6: Accidental Release Measures

Personal precautions

Ensure adequate ventilation, especially in confined areas.

Personal protective equipment [PPE]

Use personal protection recommended in Section 8.

Environmental precautions

See Section 12 for additional Ecological Information.

Methods and material for containment and cleaning up Methods for containment

Prevent further leakage or spillage if safe to do so.

Methods for cleaning up

Soak up with inert absorbent material. Pick up and transfer to properly labeled containers. This material and its container must be disposed of as hazardous waste.

Section 7: Handling and Storage

Precautions for safe handling

Handle in accordance with good industrial hygiene and safety practice.

Conditions for safe storage, including any incompatibilities

Storage temperature

Keep at -20 degrees Celsius.

Storage Conditions

Keep/store only in original container.

Incompatible materials

None known based on information supplied.

Section 8: Exposure Controls and Personal Protection

Exposure Guidelines

This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>ACGIH TLV</th>
<th>OSHA PEL</th>
<th>NIOSH IDLH</th>
</tr>
</thead>
<tbody>
<tr>
<td>Triton X-100</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

Appropriate engineering controls

Showers. Eyewash stations. Ensure adequate ventilation, especially in confined areas.

Individual protection measures, such as personal protective equipment Eye/face protection

Wear safety glasses with side shields (or goggles).

Skin and body protection

Wear suitable protective clothing and gloves.

Respiratory protection

Use in well ventilated areas. In case of insufficient ventilation wear suitable respiratory equipment.

General hygiene considerations

Handle in accordance with good industrial hygiene and safety practice.

Section 9: Physical and Chemical Properties

Physical State: Form: Liquid

Color: Clear or colorless

Odor: None

Property: No information available

Section 10: Stability and Reactivity Data
SAFETY DATA SHEET: Plant Hi-C Kit

Reactivity: No data available.
Chemical Stability: Stable under normal conditions
Possibility of Hazardous Reactions: Can react briskly with oxidizers- danger of explosion.
Conditions to Avoid: Incompatible materials, ignition sources, heat.
Incompatible Materials: Strong oxidizing agents
Hazardous Decomposition Products: None under normal use

Section 11: Toxicological Information

Acute Toxicity

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>LD50 (oral,rat/mouse)</th>
<th>LD50 (dermal,rat/rabbit)</th>
<th>LC50 (inhalation,rat/mouse)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Triton X-100</td>
<td>= 1800 mg/kg (Rat)</td>
<td>no data available</td>
<td>no data available</td>
</tr>
</tbody>
</table>

Information on likely routes of exposure Inhalation
Avoid breathing vapors or mists. May cause irritation of respiratory tract.

Eye contact
May cause eye irritation with susceptible persons.

Skin contact
May cause skin irritation in susceptible persons.

Inhalation
May be harmful by inhalation.

Ingestion
May be harmful if swallowed.

Section 12: Ecological Information

Ecotoxicity
No information available.
Acute aquatic toxicity
Category 3
Chronic aquatic toxicity
Not classified chronic

Mobility
No information available.

Biodegradation
Inherently biodegradable

Hazardous decomposition products
None under normal use

Bioaccumulation
Does not bioaccumulate.

Section 13: Disposal Considerations

Waste treatment methods
Relevant Information
Keep out of drains, sewers, ditches and waterways.

Disposal considerations
Use a licensed professional waste disposal service to dispose of this product. Product may be dissolved in a combustible solvent or absorbed onto a combustible material and burned by a chemical incinerator.

Contaminated packaging
Empty containers must be tripled rinsed prior to disposal.

Section 14: Transport Information
This product is not dangerous and no special precautions are needed according to DOT, ADR/RID (cross border), IMDG and IATA/ICAO.

Section 15: Other Regulatory Information

International Inventories
TSCA Listed: Triton X-100 9002-93-1 (1)

Legend:
TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

US Federal Regulations
SARA 313
This product is not regulated by SARA.
Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)
This product does not contain HAPs.

US State Regulations
California Proposition 65
This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations
U.S. EPA Label Information
EPA Pesticide Registration Number: Not applicable

WHMIS Hazard Class
D2B Toxic materials
This product has been classified according to the hazard criteria of the CPR and the MSDS contains all of the information required by the CPR

Section 16: Other Information
References: Not available. Other Special Considerations: Not available.

Last Updated: 07/06/2018 12:00 PM
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Lysis Buffer 2

Section 1: Chemical Information
Product Name: Lysis Buffer 2
Supplier: Phase Genomics, 1617 8th Ave N, Seattle, WA 98109, 1-833-742-7436
Recommended Use: reagent

Section 2: Composition and Information on Ingredients
There are no substances at their given concentration, are considered to be hazardous to health.

Section 3: Hazard Identification
Sodium dodecyl sulfate solution Cas # 151-21-3

Section 4: First Aid Measures
General Advice: Wear protective gloves/protective clothing/eye protection/face protection.
If Inhaled: If not breathing, give artificial respiration. Consult doctor in case of complaints.
In Case of Skin Contact: Wash with soap and water. Generally doesn’t irritate.
In Case of Eye Contact: Remove contact lenses, if present and easy to do. Continue rinsing.
If Swallowed: N/A
Most Important Symptoms and Effects, Acute and Delayed: N/A
Recommendations for Immediate Medical Attention and Special Treatment: Treat symptomatically.

Section 5: Fire and Explosion Data
Conditions of Flammability: Not flammable or combustible.
Suitable Extinguishing Media: Dry powder, CO2, water spray or regular foam.
Special Protective Equipment for Firefighters: Wear self-contained breathing apparatus, if necessary.
Hazardous Combustion Products: Further Information: N/A
Further information: N/A

Section 6: Accidental Release Measures
Personal Precautions: Not required.
Environmental Precautions: Do not allow undiluted product to enter sewer/surface or ground water.
Emergency Procedures: Evacuate personnel to safe areas and follow emergency response protocols.
Methods and Materials for Containment and Cleaning Up: Use inert absorbent material to soak up spill.
See section 7 for information on safe handling.
See section 8 for information on PPE.
See section 13 for disposal information.

Section 7: Handling and Storage
Precautions for Safe Handling: Provide appropriate exhaust ventilation at places where dust is formed. Conditions for Safe Storage: Store at 2-8°C. Keep container tightly closed in a dry, well-ventilated place.

Incompatible Products: N/A

Section 8: Exposure Controls and Personal Protection

Appropriate Engineering Controls: General industrial hygiene practice.

Recommendations for Personal Protective Measures:

Hand Protection: The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture. Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation.

Material of gloves: The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material cannot be calculated in advance and has therefore to be checked prior to the application.

Eye Protection: N/A

Skin and Body Protection: Wear appropriate laboratory attire when handling this product, such as gloves, long pants, closed-toe shoes and a laboratory coat.

Respiratory Protection: N/A

Hygiene Measures: Avoid contact with eyes, skin and clothing. Wash hands thoroughly after using this product.

Special Requirements for Personal Protective Equipment, Protective Clothing, Respirators, etc: N/A

Components with Workplace Control Parameters: N/A

Section 9: Physical and Chemical Properties

Appearance:
- Form: Liquid
- Color: Clear
- Odor: Odorless
- Odor Threshold: No data available
- pH: No data available

Melting Point/Freezing Point: No data available

Initial Boiling Point/Boiling Range: No data available

Flash Point: No data available

Evaporation Rate: No data available

Flammability (Solid, Gas): No data available

Upper/Lower Limits on Flammability and Explosive Limits:
- Flammability Limit (Upper): No data available
- Flammability Limit (Lower): No data available
- Explosive Limit (Upper): No data available
- Explosive Limit (Lower): No data available

Vapor Pressure: No data available

Vapor Density: No data available

Relative Density: No data available

Solubility:
- Solubility in Water: Not miscible or difficult to mix.
- Solubility (Other): No data available

Partition Coefficient (n-octanol/ water): No data available

Auto-Ignition Temperature: No data available

Decomposition Temperature: No data available

Viscosity: No data available

Section 10: Stability and Reactivity Data

Reactivity: No data available

Chemical Stability: No data available

Possibility of Hazardous Reactions: Conditions to Avoid: No data available

Materials to Avoid: No data available

Hazardous Decomposition Products: Carbon monoxide, Carbon dioxide, Sulfur oxides, Sodium oxides.

Section 11: Toxicological Information

Information on Likely Routes of Exposure:
- Inhalation: No data available
- Ingestion: No data available
- Skin: No irritant effect.
- Eyes: No irritant effect.

Information on Toxicological Effects:
SAFETY DATA SHEET: Plant Hi-C Kit

Acute Toxicity:
- Oral LD50: No data available
- Inhalation LC50: No data available
- Dermal LD50: No data available

Other Information: No data available
- Skin Corrosion/Irritation: No data available
- Serious Eye Damage/Irritation: No data available
- Respiratory or Skin Sensitization: No data available
- Germ Cell Mutagenicity: No data available

Carcinogenicity:
- IARC: No component of this product that is present at 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
- ACGIH: No component of this product that is present at 0.1% is identified as probable, possible or confirmed human carcinogen by ACGIH.
- NTP: No component of this product that is present at 0.1% is identified as probable, possible or confirmed human carcinogen by NTP.
- OSHA: No component of this product that is present at 0.1% is identified as probable, possible or confirmed human carcinogen by OSHA.

Reproductive Toxicity: No data available
- Teratogenicity: No data available
- Specific Target Organ Toxicity – Single Exposure: No data available
- Specific Target Organ Toxicity – Repeated Exposures: No data available
- Aspiration Hazard: No data available

Signs and Symptoms of Exposure: The sodium salt of dodecyl sulfate has been reported to cause pulmonary sensitization resulting in hyperactive airway. Dysfunction and pulmonary allergy accompanied by fatigue, malaise, and aching. Significant symptoms of exposure can persist for more than two years and can be activated by a variety of nonspecific environmental stimuli such as automobile. Exhaust, perfumes, and passive smoking. To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Synergistic Effects: No data available
- Additional Information: No data available

Section 12: Ecological Information
- Toxicity: No known significant effects or critical hazards.
- Persistence and Degradability: No data available
- Bioaccumulative Potential: No data available
- Mobility in Soil: No data available
- PBT and vPvB Assessment: No data available
- Other Adverse Effects: N/A
- General notes: N/A

Section 13: Disposal Considerations
- Dispose unused material. Observe regulations.

Section 14: Transport Information
- DOT: Not regulated.
- IMDG: Not regulated.
- IATA: Not regulated.

Section 15: Other Regulatory Information
- SARA 302 Components
  - No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.
- SARA 313 Components
  - This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.
- SARA 311/312 Hazards
  - No SARA Hazards
- Massachusetts Right To Know Components: N/A
- Pennsylvania Right To Know Components: N/A
- New Jersey Right To Know Components: N/A
- California Prop. 65 Components
  - This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

Section 16: Other Information
- References: Not available.
- Other Special Considerations: Not available.
Proximo Fragmentation Buffer

Section 1: Chemical Information
Product Name: Proximo Fragmentation Buffer
Supplier: Phase Genomics, 1617 8th Ave N, Seattle, WA 98109, 1-833-742-7436
Recommended Use: Reagent

Section 2: Hazard Identification
Not a dangerous substance or mixture according to the Globally Harmonized System (GHS)
HNOC: No Data available
Label Elements:
Appearance: Colorless
Physical State: Liquid
Odor: Mild

Section 3: Composition and Information on Ingredients
Mixture
There are no substances at their given concentration, are considered to be hazardous to health.

Section 4: First Aid Measures
General advice
The product contains no substances which at their given concentration, are considered to be hazardous to health.
Immediate medical attention is required. In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible). Remove from exposure, lie down. Do not breathe dust/fume/gas/mist/vapors/spray.

Eye contact
Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.

Skin contact
Wash skin with soap and water.

Inhalation
Remove to fresh air.

Ingestion
Clean mouth with water and drink afterwards plenty of water.

Most important symptoms and effects, both acute and delayed
No information available.

Indication of any immediate medical attention and special treatment needed
Note to physicians: Treat symptomatically.

Section 5: Fire and Explosion Data
Suitable extinguishing media
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media
CAUTION: Use of water spray when fighting fire may be inefficient.

Specific hazards arising from the chemical
No information available.

Protective equipment and precautions for firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

Section 6: Accidental Release Measures
Personal precautions
Ensure adequate ventilation, especially in confined areas.

Personal protective equipment [PPE]
Use personal protection recommended in Section 8.

Environmental precautions
See Section 12 for additional Ecological Information.

Methods and material for containment and cleaning up
Prevent further leakage or spillage if safe to do so.

Page 52 of 75 1-833-PHAS-GEN  support@phasegenomics.com
Methods for cleaning up
Soak up with inert absorbent material. Pick up and transfer to properly labeled containers. This material and its container must be disposed of as hazardous waste.

Section 7: Handling and Storage
Precautions for safe handling
Handle in accordance with good industrial hygiene and safety practice.
Conditions for safe storage, including any incompatibilities:
Storage temperature
Keep at -20 degrees Celsius.
Storage Conditions
Keep/store only in original container.
Incompatible materials
None known based on information supplied.

Section 8: Exposure Controls and Personal Protection
Exposure Guidelines
This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.
Appropriate engineering controls
Showers. Eyewash stations.
Individual protection measures, such as personal protective equipment Eye/face protection
Wear safety glasses with side shields (or goggles).
Skin and body protection
Wear suitable protective clothing and gloves.
Respiratory protection
Use in well ventilated areas.
General hygiene considerations
Handle in accordance with good industrial hygiene and safety practice.

Section 9: Physical and Chemical Properties
Physical State: Form: Liquid
Color: Clear or colorless
Odor: None
Property: No information available

Section 10: Stability and Reactivity Data
Reactivity: No data available.
Chemical Stability: Stable under normal conditions
Possibility of Hazardous Reactions: Can react briskly with oxidizers- danger of explosion.
Conditions to Avoid: Incompatible materials, ignition sources, heat.
Incompatible Materials: Strong oxidizing agents
Hazardous Decomposition Products: Thermal decomposition can lead to release of irritating and toxic gases and vapors. Carbon monoxide. Carbon dioxide (CO2).

Section 11: Toxicological Information
Information on likely routes of exposure Inhalation
Inhalation
Avoid breathing vapors or mists. May cause irritation of respiratory tract.
Eye contact
Redness. May cause slight irritation.
Skin contact
Prolonged contact may cause redness and irritation. Repeated exposure may cause skin dryness or cracking.
Ingestion
May cause drowsiness or dizziness. Ingestion causes burns of the upper digestive and respiratory tracts. Symptoms include burning sensation, coughing, wheezing, shortness of breath, headache, nausea, and vomiting.

Section 12: Ecological Information
Ecotoxicity
99 % of the mixture consists of component(s) of unknown hazards to the aquatic environment.

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Algae/aquatic plants</th>
<th>Fish</th>
<th>Crustacea</th>
</tr>
</thead>
</table>

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Magnesium Chloride 7786-30-3

| 2200: 72 h Desmodesmus subspicatus mg/L EC50 |
| 4210: 96 h Gambusia affinis mg/L LC50 Static 1970 - 3880: 96 h Pimephales |
| 140: 48 h Daphnia magna mg/L EC50 Static 1400: 24 h Daphnia magna mg/L EC50 |

All other data unavailable

Section 13: Disposal Considerations
Waste treatment methods
Relevant Information
Keep out of drains, sewers, ditches and waterways.

Disposal considerations
Use a licensed professional waste disposal service to dispose of this product. Product may be dissolved in a combustible solvent or absorbed onto a combustible material and burned by a chemical incinerator.

Contaminated packaging
Empty containers must be tripled rinsed prior to disposal.

Section 14: Transport Information
This product is not dangerous and no special precautions are needed according to DOT, ADR/RID (cross border), IMDG and IATA/ICAO.

Section 15: Other Regulatory Information
International Inventories
TSCA: Complies
Legend:
TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
US Federal Regulations
CWA (Clean Water Act)
This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

CERCLA
This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

US State Regulations
California Proposition 65
This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations
U.S. EPA Label Information
EPA Pesticide Registration Number: Not applicable

Section 16: Other Information
References: Not available. Other Special Considerations: Not available.
Last Updated: 07/06/2018 12:00 PM
The information in this SDS is provided in good faith based on our knowledge as of the issue date (or subsequent revision date, if any), and is to be used only as a guide. This SDS does not constitute a guarantee (express or implied) of any kind and we make no warranties or merchantability or fitness for a particular purpose. This information relates only to the designated product as shipped and may not be valid if the product is used in combination with any other materials or is not used in accordance with our instructions. It is the responsibility of the buyer/user to ensure that its activities comply with all applicable governmental requirements. Since conditions of use of the product are not under our control, Phase Genomics, it is the duty of the buyer/user to determine the necessary conditions for the safe use of the product. Phase Genomics will not be liable for any damages resulting from handling or contact with the product.

Proximo Fragmentation Enzyme

Section 1: Chemical Information
Product Name: Proximo Fragmentation Enzyme
Supplier: Phase Genomics, 1617 8th Ave N, Seattle, WA 98109, 1-833-742-7436
Recommended Use: Reagent
Section 2: Hazard Identification
Not a dangerous substance or mixture according to the Globally Harmonized System (GHS)
HNOC: No Data available
Label Elements:
Appearance: Colorless
Physical State: Liquid
Odor: Mild

Section 3: Composition and Information on Ingredients
There are no substances at their given concentration, are considered to be hazardous to health.

Section 4: First Aid Measures
General advice
The product contains no substances which at their given concentration, are considered to be hazardous to health. Immediate medical attention is required. In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible). Remove from exposure, lie down. Do not breathe dust/fume/gas/mist/vapors/spray.

Eye contact
Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.

Skin contact
Wash skin with soap and water.

Inhalation
Remove to fresh air.

Ingestion
Clean mouth with water and drink afterwards plenty of water.

Most important symptoms and effects, both acute and delayed

Indication of any immediate medical attention and special treatment needed
Note to physicians: Treat symptomatically.

Section 5: Fire and Explosion Data
Suitable extinguishing media
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media
CAUTION: Use of water spray when fighting fire may be inefficient.

Specific hazards arising from the chemical
No information available.

Protective equipment and precautions for firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

Section 6: Accidental Release Measures
Personal precautions
Ensure adequate ventilation, especially in confined areas.

Personal protective equipment [PPE]
Use personal protection recommended in Section 8.

Environmental precautions
See Section 12 for additional Ecological Information.

Methods and material for containment and cleaning up
Methods for containment Prevent further leakage or spillage if safe to do so.
Methods for cleaning up
Soak up with inert absorbent material. Pick up and transfer to properly labeled containers. This material and its container must be disposed of as hazardous waste.

Section 7: Handling and Storage
Precautions for safe handling
Handle in accordance with good industrial hygiene and safety practice.

Conditions for safe storage, including any incompatibilities
Storage temperature
Keep at -20 degrees Celsius.

Storage Conditions
Keep/store only in original container.

Incompatible materials
None known based on information supplied.
SAFETY DATA SHEET: Plant Hi-C Kit

Section 8: Exposure Controls and Personal Protection

Exposure Guidelines
This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

### Exposure Guidelines

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>ACGIH TLV</th>
<th>OSHA PEL</th>
<th>NIOSH IDLH</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glycerol 56-81-5</td>
<td>-</td>
<td>TWA: 15 mg/m³ mist, total particulate</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA: 5 mg/m³ mist, respirable fraction</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>(vacated) TWA: 10 mg/m³ mist, total particulate</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>(vacated) TWA: 5 mg/m³ mist, respirable fraction</td>
<td></td>
</tr>
</tbody>
</table>

Other information
Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962 (11th Cir., 1992).

Appropriate engineering controls
Showers. Eyewash stations.

Individual protection measures, such as personal protective equipment
Eye/face protection
Wear safety glasses with side shields (or goggles).

Skin and body protection
Wear suitable protective clothing and gloves.

Respiratory protection
Use in well ventilated areas.

General hygiene considerations
Handle in accordance with good industrial hygiene and safety practice.

Section 9: Physical and Chemical Properties

Physical State: Form: Liquid
Color: Clear or colorless
Odor: None

Section 10: Stability and Reactivity Data

Reactivity: No data available.
Chemical Stability: Stable under normal conditions
Possibility of Hazardous Reactions: Can react briskly with oxidizers- danger of explosion.
Conditions to Avoid: Incompatible materials, ignition sources, heat.
Incompatible Materials: Strong oxidizing agents

Hazardous Decomposition Products: Thermal decomposition can lead to release of irritating and toxic gases and vapors. Carbon monoxide. Carbon dioxide (CO2).

Section 11: Toxicological Information

Information on likely routes of exposure Inhalation
Avoid breathing vapors or mists. May cause irritation of respiratory tract.
Eye contact
Redness. May cause slight irritation.
Skin contact
Prolonged contact may cause redness and irritation. Repeated exposure may cause skin dryness or cracking.
Ingestion
May cause drowsiness or dizziness. Ingestion causes burns of the upper digestive and respiratory tracts. Symptoms include burning sensation, coughing, wheezing, shortness of breath, headache, nausea, and vomiting.

Section 12: Ecological Information

Ecotoxicity
0.26 % of the mixture consists of component(s) of unknown hazards to the aquatic environment.

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Algae/aquatic plants</th>
<th>Fish</th>
<th>Crustacea</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glycerol 56-81-5</td>
<td>-</td>
<td>51 - 57: 96 h Oncorhynchus mykiss mL/L LC50 static</td>
<td>500: 24 h Daphnia magna mg/L EC50</td>
</tr>
<tr>
<td>Ethylenediamine tetraacetic acid 60-00-4</td>
<td>1.01: 72 h Desmodesmus</td>
<td>44.2 - 76.5: 96 h Pimephales promelas mg/L LC50 static</td>
<td>113: 48 h Daphnia magna mg/L EC50</td>
</tr>
<tr>
<td></td>
<td></td>
<td>34 - 62: 96 h Lepomis</td>
<td>Static</td>
</tr>
</tbody>
</table>
Section 13: Disposal Considerations

Waste treatment methods

Relevant Information

Keep out of drains, sewers, ditches and waterways.

Disposal considerations

Use a licensed professional waste disposal service to dispose of this product. Product may be dissolved in a combustible solvent or absorbed onto a combustible material and burned by a chemical incinerator.

Contaminated packaging

Empty containers must be tripled rinsed prior to disposal.

Section 14: Transport Information

This product is not dangerous and no special precautions are needed according to DOT, ADR/RID (cross border), IMDG and IATA/ICAO.

Section 15: Other Regulatory Information

International Inventories

TSCA: Complies

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

US Federal Regulations

CWA (Clean Water Act)

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

US State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

U.S. EPA Label Information

EPA Pesticide Registration Number: Not applicable

Section 16: Other Information

References: Not available. Other Special Considerations: Not available.

Last Updated: 07/06/2018 12:00 PM

The information in this SDS is provided in good faith based on our knowledge as of the issue date (or subsequent revision date, if any), and is to be used only as a guide. This SDS does not constitute a guarantee (express or implied) of any kind and we make no warranties or merchantability or fitness for a particular purpose. This information relates only to the designated product as shipped and may not be valid if the product is used in combination with any other materials or is not used in accordance with our instructions. It is the responsibility of the buyer/user to ensure that its activities comply with all applicable governmental requirements. Since conditions of use of the product are not under the control of Phase Genomics, it is the duty of the buyer/user to determine the necessary conditions for the safe use of the product. Phase Genomics will not be liable for any damages resulting from handling or contact with the product.
Not a dangerous substance according to GHS

GHS Label Element
Hazard Symbol: N/A
Hazard Statements: Not a hazardous substance or mixture.

Section 3: Hazard Identification
Substance or Mixture: Mixture of non-hazardous substances.

Section 4: First Aid Measures
General Advice: Wear protective gloves/protective clothing/eye protection/face protection.
If Inhaled: If not breathing, give artificial respiration.
In Case of Skin Contact: Wash with soap and water.
In Case of Eye Contact: Remove contact lenses, if present and easy to do. Continue rinsing.
If Swallowed: N/A
Most Important Symptoms and Effects, Acute and Delayed: N/A
Recommendations for Immediate Medical Attention and Special Treatment: Treat symptomatically. Symptoms may be delayed.

Section 5: Fire and Explosion Data
Conditions of Flammability: Not flammable or combustible.
Suitable Extinguishing Media: Dry powder, CO2, water spray or regular foam.
Special Protective Equipment for Firefighters: Wear self-contained breathing apparatus, if necessary.
Hazardous Combustion Products: Further Information: N/A
Further information: N/A

Section 6: Accidental Release Measures
Personal Precautions: Avoid dust formation. Avoid breathing vapors. See Section 8: Exposure Controls/ Personal Protection for more information.
Environmental Precautions: Do not allow undiluted product to enter sewer/surface or ground water.
Emergency Procedures: Evacuate personnel to safe areas and follow emergency response protocols.
Methods and Materials for Containment and Cleaning Up: Use inert absorbent material to soak up spill.

Section 7: Handling and Storage
Precautions for Safe Handling: Provide appropriate exhaust ventilation at places where dust is formed. Conditions for Safe Storage: Store at 2-8°C. Keep container tightly closed in a dry, well-ventilated place.
Incompatible Products: N/A

Section 8: Exposure Controls and Personal Protection
Appropriate Engineering Controls: General industrial hygiene practice.
Recommendations for Personal Protective Measures:
   Hand Protection: Use gloves when handling this product. Inspect gloves prior to use for any visible damage. Use proper glove removal technique to prevent contact with skin. Dispose of gloves in accordance with applicable laws. Wash and dry hands after use.
   Eye Protection: N/A
   Skin and Body Protection: Wear appropriate laboratory attire when handling this product, such as gloves, long pants, closed-toe shoes and a laboratory coat.
   Respiratory Protection: N/A
   Hygiene Measures: Avoid contact with eyes, skin and clothing. Wash hands thoroughly after using this product.
   Special Requirements for Personal Protective Equipment, Protective Clothing, Respirators, etc: N/A
   Components with Workplace Control Parameters: N/A

Section 9: Physical and Chemical Properties
Appearance:
   Form: Liquid
   Color: Clear
   Odor: No data available
   Odor Threshold: No data available
   pH: No data available
   Melting Point/Freezing Point: No data available
   Initial Boiling Point/Boiling Range: No data available
   Flash Point: No data available
   Evaporation Rate: No data available
   Flammability (Solid, Gas): No data available
   Upper/Lower Limits on Flammability and Explosive Limits:
      Flammability Limit (Upper): No data available
      Flammability Limit (Lower): No data available
Explosive Limit (Upper): No data available
Explosive Limit (Lower): No data available
**Vapor Pressure:** No data available
**Vapor Density:** No data available
**Relative Density:** No data available
**Solubility:**
  - Solubility in Water: No data available
  - Solubility (Other): No data available
  - Partition Coefficient (n-octanol/ water): No data available
**Auto-Ignition Temperature:** No data available
**Decomposition Temperature:** No data available
**Viscosity:** No data available

**Section 10: Stability and Reactivity Data**
- Reactivity: No data available
- Chemical Stability: No data available
- Possibility of Hazardous Reactions: Conditions to Avoid: No data available
- Materials to Avoid: No data available
- Hazardous Decomposition Products: No data available

**Section 11: Toxicological Information**
**Information on Likely Routes of Exposure:**
  - Inhalation: No data available
  - Ingestion: No data available
  - Skin: No data available
  - Eyes: No data available

**Information on Toxicological Effects:**
- **Acute Toxicity:**
  - Oral LD50: No data available
  - Inhalation LC50: No data available
  - Dermal LD50: No data available
- Other Information: No data available
- **Skin Corrosion/Irritation:** No data available
- **Serious Eye Damage/Irritation:** No data available
- **Respiratory or Skin Sensitization:** No data available
- **Germ Cell Mutagenicity:** No data available
- **Carcinogenicity:**
  - IARC: No component of this product that is present at 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
  - ACGIH: No component of this product that is present at 0.1% is identified as probable, possible or confirmed human carcinogen by ACGIH.
  - NTP: No component of this product that is present at 0.1% is identified as probable, possible or confirmed human carcinogen by NTP.
  - OSHA: No component of this product that is present at 0.1% is identified as probable, possible or confirmed human carcinogen by OSHA.
- **Reproductive Toxicity:** No data available
- **Teratogenicity:** No data available
- **Specific Target Organ Toxicity – Single Exposure:** No data available
- **Specific Target Organ Toxicity – Repeated Exposures:** No data available
- **Aspiration Hazard:** No data available
- **Signs and Symptoms of Exposure:** No data available
- **Synergistic Effects:** No data available
- **Additional Information:** No data available

**Section 12: Ecological Information**
- **Toxicity:** No known significant effects or critical hazards.
- **Persistence and Degradability:** No data available
- **Bioaccumulative Potential:** No data available
- **Mobility in Soil:** No data available
- **PBT and vPvB Assessment:** No data available
- **Other Adverse Effects:** N/A

**Section 13: Disposal Considerations**
**Contaminated Packaging:**
Disposal must be made according to official regulations.

Section 14: Transport Information
DOT: Not regulated.
IMDG: Not regulated.
IATA: Not regulated.

Section 15: Other Regulatory Information
SARA 302 Components
No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.
SARA 313 Components
This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.
SARA 311/312 Hazards
No SARA Hazards
Massachusetts Right To Know Components
No components are subject to the Massachusetts Right to Know Act.
Pennsylvania Right To Know Components
Glycine CAS-No. 56-40-6
New Jersey Right To Know Components
Glycine CAS-No. 56-40-6
California Prop. 65 Components
This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

Section 16: Other Information
References: Not available. Other Special Considerations: Not available.
Last Updated: 07/06/2018 12:00 PM
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RX Enzyme

Section 1: Chemical Information
Product Name: RX Enzyme
Supplier: Phase Genomics, 1617 8th Ave N, Seattle, WA 98109, 1-833-742-7436
Recommended Use: reagent

Section 2: Composition and Information on Ingredients
There are no substances at their given concentration, are considered to be hazardous to health.

Section 3: Hazard Identification
Not a dangerous substance or mixture according to the Globally Harmonized System (GHS)
HNOC: No Data available
Label Elements:
- Appearance: Colorless
- Physical State: Liquid
- Odor: Mild
Other information
2.19 % of the mixture consists of ingredient(s) of unknown toxicity

Section 4: First Aid Measures
General advice
The product contains no substances which at their given concentration, are considered to be hazardous to health. Immediate medical attention is required. In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible). Remove from exposure, lie down. Do not breathe dust/fume/gas/mist/vapors/spray.
Eye contact
Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.
Skin contact
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SAFETY DATA SHEET: Plant Hi-C Kit

Wash skin with soap and water.

**Inhalation**
Remove to fresh air.

**Ingestion**
Clean mouth with water and drink afterwards plenty of water.

**Most important symptoms and effects, both acute and delayed**
No information available.

**Indication of any immediate medical attention and special treatment needed**
Note to physicians: Treat symptomatically.

**Section 5: Fire and Explosion Data**

**Suitable extinguishing media**
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

**Unsuitable extinguishing media**
CAUTION: Use of water spray when fighting fire may be inefficient.

**Specific hazards arising from the chemical**
No information available.

**Protective equipment and precautions for firefighters**
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

**Section 6: Accidental Release Measures**

**Personal precautions**
Ensure adequate ventilation, especially in confined areas.

**Personal protective equipment [PPE]**
Use personal protection recommended in Section 8.

**Environmental precautions**
See Section 12 for additional Ecological Information.

**Methods and material for containment and cleaning up**
Methods for containment
Prevent further leakage or spillage if safe to do so.

**Methods for cleaning up**
Soak up with inert absorbent material. Pick up and transfer to properly labeled containers. This material and its container must be disposed of as hazardous waste.

**Section 7: Handling and Storage**

**Precautions for safe handling**
Handle in accordance with good industrial hygiene and safety practice.

**Conditions for safe storage, including any incompatibilities**

**Storage temperature**
Keep at -20 degrees Celsius.

**Storage Conditions**
Keep/store only in original container.

**Incompatible materials**
None known based on information supplied.

**Section 8: Exposure Controls and Personal Protection**

**Exposure Guidelines**
This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

**Other information**
Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962 (11th Cir., 1992).

**Appropriate engineering controls**
Showers, Eyewash stations.

**Individual protection measures, such as personal protective equipment**
Eye/face protection
Wear safety glasses with side shields (or goggles).

**Skin and body protection**
Wear suitable protective clothing and gloves.

**Respiratory protection**
Use in well ventilated areas.

**General hygiene considerations**
Handle in accordance with good industrial hygiene and safety practice.

**Section 9: Physical and Chemical Properties**

**Physical State: Form:** Liquid

**Color:** Clear or colorless
Odor: None
Property: No information available

Section 10: Stability and Reactivity Data
Reactivity: No data available.
Chemical Stability: Stable under normal conditions
Possibility of Hazardous Reactions: Can react briskly with oxidizers- danger of explosion.
Conditions to Avoid: Incompatible materials, ignition sources, heat.
Incompatible Materials: Strong oxidizing agents
Hazardous Decomposition Products: Thermal decomposition can lead to release of irritating and toxic gases and vapors. Carbon monoxide. Carbon dioxide (CO2).

Section 11: Toxicological Information
Information on likely routes of exposure
Inhalation
Avoid breathing vapors or mists. May cause irritation of respiratory tract.

Eye contact
Redness. May cause slight irritation.

Skin contact
Prolonged contact may cause redness and irritation. Repeated exposure may cause skin dryness or cracking.

Ingestion
May cause drowsiness or dizziness. Ingestion causes burns of the upper digestive and respiratory tracts. Symptoms include burning sensation, coughing, wheezing, shortness of breath, headache, nausea, and vomiting.

Section 12: Ecological Information
Ecotoxicity
2.19 % of the mixture consists of component(s) of unknown hazards to the aquatic environment.

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Algae/aquatic plants</th>
<th>Fish</th>
<th>Crustacea</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glycerol 56-81-5</td>
<td>-</td>
<td>51 - 57: 96 h Oncorhynchus mykiss mL/L LC50 static</td>
<td>500: 24 h Daphnia magna mg/L EC50</td>
</tr>
<tr>
<td>Calcium Chloride</td>
<td>10650: 96 h Lepomis macrochirus mg/L LC50 static</td>
<td>2400: 48 h Daphnia magna mg/L LC50</td>
<td></td>
</tr>
</tbody>
</table>

All other data unavailable

Section 13: Disposal Considerations
Waste treatment methods
Relevant Information
Keep out of drains, sewers, ditches and waterways.

Disposal considerations
Use a licensed professional waste disposal service to dispose of this product. Product may be dissolved in a combustible solvent or absorbed onto a combustible material and burned by a chemical incinerator.

Contaminated packaging
Empty containers must be tripled rinsed prior to disposal.

Section 14: Transport Information
This product is not dangerous and no special precautions are needed according to DOT, ADR/RID (cross border), IMDG and IATA/ICAO.

Section 15: Other Regulatory Information
International Inventories
TSCA: Complies

Legend:
TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

US Federal Regulations
CWA (Clean Water Act)
This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

CERCLA
This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

US State Regulations

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California Proposition 65
This product does not contain any Proposition 65 chemicals.
U.S. State Right-to-Know Regulations
U.S. EPA Label Information
EPA Pesticide Registration Number: Not applicable

Section 16: Other Information
References: Not available. Other Special Considerations: Not available.
Last Updated: 07/06/2018 12:00 PM
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Recovery Beads

Section 1: Chemical Information
Product Name: Recovery Beads
Supplier: Phase Genomics, 1617 8th Ave N, Seattle, WA 98109, 1-833-742-7436

Section 2: Composition and Information on Ingredients
Chemical characterization: Mixtures
Description: The product is a mixture of the hazardous substances listed below along with unlisted nonhazardous substances.
Dangerous components: Void
Additional information: For the wording of the listed risk phrases refer to section 15.

Section 2: Hazard Identification
Substance or Mixture: The product is not classified as hazardous according to the Globally Harmonized System (GHS).
Synonyms/Common Names: N/A
GHS label elements Void
Hazard pictograms Void
Signal word Void
Hazard statements Void
Classification system:
NFPA ratings (scale 0 - 4)
Health = 0
Fire = 0
Reactivity = 0
HMIS-ratings (scale 0 - 4)
Health = 0
Fire = 0
Reactivity = 0
OSHA Hazard Overview (Criteria according to 29CFR1910.1200): Not applicable
Target Organ(s): Not applicable or unknown
Other hazards
This mixture has not been tested to determine the overall health hazard; therefore in accordance with 29CFR1910.1200, the data reported above pertains to the hazardous ingredients of this mixture.
Results of PBT and vPvB assessment
PBT: Not applicable.
vPvB: Not applicable.

Section 4: First Aid Measures
Description of first aid measures
General information: No special measures required.
After inhalation: If the patient feels unwell or is concerned, obtain medical advice.
After skin contact: Generally the product does not irritate the skin.
After eye contact: Rinse opened eye for several minutes under running water.
After swallowing: If the patient feels unwell or is concerned, obtain medical advice.
Information for doctor:
Most important symptoms and effects, both acute and delayed: Dizziness
Indication of any immediate medical attention and special treatment needed:
Section 5: Fire and Explosion Data
Conditions of Flammability: Not flammable or combustible.
Suitable Extinguishing Media: Dry powder, CO2, water spray or regular foam.
Special Protective Equipment for Firefighters: No special measures required.
Hazardous Combustion Products: N/A

Section 6: Accidental Release Measures
Personal precautions, protective equipment and emergency procedures: not required.
Environmental precautions: Do not allow to enter sewers/ surface or ground water.
Methods and material for containment and cleaning up: Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Reference to other sections
See Section 7 for information on safe handling.
See Section 13 for disposal information.

Section 7: Handling and Storage
Handling:
Precautions for safe handling: No special measures required.
Information about protection against explosions and fires: The product is not flammable.
Conditions for safe storage, including any incompatibilities
Storage:
Requirements to be met by storerooms and receptacles: No special requirements.
Information about storage in one common storage facility: Not required.
Further information about storage conditions: None.
Specific end use(s): No further relevant information available.

Section 8: Exposure Controls and Personal Protection
Control parameters
Components with limit values that require monitoring at the workplace: The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
Additional information: The lists that were valid during the creation were used as basis.
Exposure controls
Personal protective equipment:
General protective and hygienic measures: The usual precautionary measures for handling chemicals should be followed.
Breathing equipment: Not required.
Protection of hands: Not required.
Material of gloves: The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.
Eye protection: Not required.

Section 9: Physical and Chemical Properties
Appearance:
Form: Liquid, with precipitates
Color: Brown
Odor: No data available
Odor Threshold: No data available
pH: No data available
Melting Point/Freezing Point: No data available
Initial Boiling Point/Boiling Range: 100 °C (212 °F)
Flash Point: No data available
Evaporation Rate: No data available
Flammability (Solid, Gas): No data available
Upper/Lower Limits on Flammability and Explosive Limits:
Flammability Limit (Upper): No data available
Flammability Limit (Lower): No data available
Explosive Limit (Upper): No data available
Explosive Limit (Lower): No data available
Vapor Pressure: No data available
Vapor Density: No data available
Relative Density: No data available
SAFETY DATA SHEET: Plant Hi-C Kit

Solubility:
- Solubility in Water: Not miscible or difficult to mix.
- Solubility (Other): No data available
- Partition Coefficient (n-octanol/ water): No data available

Auto-Ignition Temperature: No data available
Decomposition Temperature: No data available

Viscosity:
- Dynamic: Not determined.
- Kinematic: Not determined.
- Water: 90.6 %
- VOC content: 0.00 %

Solids content: 34.1 %

Other information: No further relevant information available.

Section 10: Stability and Reactivity Data
Reactivity: No data available
Chemical Stability: No data available
Possibility of Hazardous Reactions: No dangerous reactions known.
Conditions to Avoid: No data available
Materials to Avoid: No data available
Hazardous Decomposition Products: No data available

Section 11: Toxicological Information
Information on Likely Routes of Exposure:
- Inhalation: No data available
- Ingestion: No data available
- Skin: No data available
- Eyes: No data available

Information on Toxicological Effects:
- Acute Toxicity:
  - Oral LD50: No data available
  - Inhalation LC50: No data available
  - Dermal LD50: No data available

Other Information: No data available
Skin Corrosion/Irritation: No irritant effect.
Serious Eye Damage/Irritation: Irritating effect.
Respiratory or Skin Sensitization: No data available
Germ Cell Mutagenicity: No data available
Carcinogenicity:
- IARC: None of the ingredients are listed.
- NTP: None of the ingredients are listed.
- OSHA: None of the ingredients are listed.
- Reproductive Toxicity: No data available

Additional Information: The product is not subject to classification according to internally approved calculation methods for preparations: When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.

Section 12: Ecological Information
Toxicity
Aquatic toxicity: Not harmful to the aquatic environment
Persistence and degradability: Not available
Behavior in environmental systems:
Bioaccumulative potential: Not known
Mobility in soil: No further relevant information available.
Ecotoxicological effects:
Remark: Not available
Additional ecological information:
General notes:
Water hazard class 1 (Self-assessment): slightly hazardous for water
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
Results of PBT and vPvB assessment
PBT: Not applicable.
vPvB: Not applicable.
Other adverse effects: No further relevant information available.

Section 13: Disposal Considerations
Product:
Disposal should be in accordance with applicable regional, national and local laws and regulations.
Refer to Section 7: Handling and Storage and Section 8: Exposure Control/Personal Protection for additional handling information and protection of employees.
Contaminated Packaging:
Disposal must be made according to official regulations.

Section 14: Transport Information
DOT: Not regulated.
IMDG: Not regulated.
IATA: Not regulated.

Section 15: Other Regulatory Information
Safety, health and environmental regulations/legislation specific for the substance or mixture
Sara
Section 355 (extremely hazardous substances): None of the ingredients are listed.
Section 313 (Specific toxic chemical listings): None of the ingredients are listed.
TSCA (Toxic Substances Control Act):
7647-14-5 sodium chloride
1185-53-1 2-Amino-2-(hydroxymethyl)-1,3-propanediol hydrochloride
7732-18-5 water
Proposition 65
Chemicals known to cause cancer: None of the ingredients are listed.
Chemicals known to cause reproductive toxicity for females: None of the ingredients are listed.
Chemicals known to cause reproductive toxicity for males: None of the ingredients are listed.
Chemicals known to cause developmental toxicity: None of the ingredients are listed.
Cancerogenity categories
EPA (Environmental Protection Agency): None of the ingredients are listed.
TLV (Threshold Limit Value established by ACGIH)
26628-22-8 sodium azide A4
NIOSH-Ca (National Institute for Occupational Safety and Health)
None of the ingredients are listed.
GHS label elements Void
Signal word: Void
Hazard statements: Void
National regulations:
Water hazard class: Water hazard class 1 (Self-assessment); slightly hazardous for water.
Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

Section 16: Other Information
References: Not available. Other Special Considerations: Not available.
Last Updated: 02/07/2020 4:00 PM
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Recovery Wash Concentrate
Section 1: Chemical Information
Product Name: Recovery Wash Concentrate
Supplier: Phase Genomics, 1617 8th Ave N, Seattle, WA 98109, 1-833-742-7436
Recommended use: reagent

Section 2: Composition and Information on Ingredients
Chemical characterization: Mixtures
Description:
SAFETY DATA SHEET: Plant Hi-C Kit

The product is a mixture of the hazardous substances listed below along with unlisted nonhazardous substances. The exact concentration percentages of the hazardous substances may be withheld as a Promega Corp. trade secret.

Dangerous components: Void
Additional information: For the wording of the listed risk phrases refer to section 15.

Section 3: Hazard Identification
Not a dangerous substance or mixture according to the Globally Harmonized System (GHS)

Section 4: First Aid Measures
General advice
The product contains no substances which at their given concentration, are considered to be hazardous to health. In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible). Remove from exposure, lie down. Do not breathe dust/fume/gas/mist/vapors/spray.
Eye contact
Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.
Skin contact
Wash skin with soap and water.
Inhalation
If the patient feels unwell or is concerned, obtain medical advice.
Ingestion
If the patient feels unwell or is concerned, obtain medical advice.
Most important symptoms and effects, both acute and delayed
Dizziness
Indication of any immediate medical attention and special treatment needed.
Note to physicians: Treat symptomatically.

Section 5: Fire and Explosion Data
Conditions of Flammability: Not flammable or combustible.
Suitable Extinguishing Media: Dry powder, CO2, or water spray.
Special Protective Equipment for Firefighters: No special advice
Hazardous Combustion Products: None known
Further Information: N/A
Further information: N/A

Section 6: Accidental Release Measures
Personal precautions
No known health hazards
Personal protective equipment [PPE]
Use personal protection recommended in Section 8.
Environmental precautions
See Section 12 for additional Ecological Information.
Methods and material for containment and cleaning up
Methods for containment: Dilute with plenty of water.
Methods for cleaning up
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Reference to other sections
No dangerous substances are released.
See Section 7 for information on safe handling.
See Section 13 for disposal information.

Section 7: Handling and Storage
Precautions for safe handling
Handle in accordance with good industrial hygiene and safety practice.
Information about protection against explosions and fires: The product is not flammable.
Conditions for safe storage, including any incompatibilities
Storage: Requirements to be met by storerooms and receptacles: No special requirements.
Information about storage in one common storage facility: Not required.
Further information about storage conditions: None.

Section 8: Exposure Controls and Personal Protection
Control parameters
Components with limit values that require monitoring at the workplace:
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

Additional information: The lists that were valid during the creation were used as basis.

Exposure controls

Personal protective equipment:

General protective and hygienic measures: The usual precautionary measures for handling chemicals should be followed.

Breathing equipment: Not required.

Protection of hands: Not required.

Material of gloves:
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

Eye protection: Not required.

Section 9: Physical and Chemical Properties

Physical State: Form: Liquid
Color: Clear or colorless
Odor: None
pH-value at 20 °C (68 °F): 5
Melting point/Melting range: 0 °C (32 °F)
Boiling point/Boiling range: 100 °C (212 °F)
Flash point: Not applicable.
Flammability (solid, gaseous): Not applicable.
Ignition temperature:
Decomposition temperature: Not determined.
Auto igniting: Product is not selfigniting.
Danger of explosion: Product does not present an explosion hazard
Explosion limits:
   Lower: Not determined.
   Upper: Not determined.
Vapor pressure: Not determined.
Density: Not determined.
Relative density Not determined.
Vapor density Not determined.
Evaporation rate Not determined.
Solubility in / Miscibility with
   Water: Fully miscible.
Partition coefficient (n-octanol/water): Not determined.
Viscosity:
   Dynamic: Not determined.
   Kinematic: Not determined.
Organic solvents: 0.1 %
Water: 99.5 %
VOC content: 0.11 %
Solids content: 0.5 %
Other information No further relevant information available.

Section 10: Stability and Reactivity Data

Reactivity No further relevant information available.
Chemical stability
Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
Possibility of hazardous reactions No dangerous reactions known.
Conditions to avoid No further relevant information available.
Incompatible materials: No further relevant information available.
Hazardous decomposition products: No dangerous decomposition products known.

Section 11: Toxicological Information

Low hazard for usual industrial or commercial handling by trained personnel
LD/LC50 values that are relevant for classification: No data available

Eye contact
Irritating effect.
Skin contact
No irritant effect.

Ingestion
No harmful effects expected in amounts likely to be ingested by accident.

Skin corrosion/irritation Not Classified
Serious eye damage/eye irritation Not Classified
Sensitization Not Classified
Germ cell mutagenicity Not Classified

Carcinogenicity: This product does not contain any carcinogens or potential carcinogens as listed by OSHA, IARC or NTP.

Section 12: Ecological Information
Toxicity
Aquatic toxicity: Not harmful to the aquatic environment
Persistence and degradability Not available
Behavior in environmental systems:
Bioaccumulative potential Not known
Mobility in soil: No further relevant information available.
Ecotoxicological effects:
Remark: Not available

Additional ecological information:
General notes: Generally not hazardous for water.
Results of PBT and vPvB assessment
PBT: Not applicable.
vPvB: Not applicable.
Other adverse effects No further relevant information available.

Section 13: Disposal Considerations
Waste treatment methods
Recommendation:
Disposal should be in accordance with applicable regional, national and local laws and regulations.
Refer to Section 7: Handling and Storage and Section 8: Exposure Control/Personal Protection for additional handling information and protection of employees.

Uncleaned packagings:
Recommendation: Disposal must be made according to official regulations.
Recommended cleansing agent: Water, if necessary with cleansing agents.

Section 14: Transport Information
This product is not dangerous and no special precautions are needed according to DOT, ADR/RID (cross border), IMDG and IATA/ICAO.

Section 15: Other Regulatory Information
Safety, health and environmental regulations/legislation specific for the substance or mixture Sara
Section 355 (extremely hazardous substances):
None of the ingredients are listed.
Section 313 (Specific toxic chemical listings):
None of the ingredients are listed.
TSCA (Toxic Substances Control Act):
All ingredients are listed.
Proposition 65
Chemicals known to cause cancer:
None of the ingredients are listed.
Chemicals known to cause reproductive toxicity for females:
None of the ingredients are listed.
Chemicals known to cause reproductive toxicity for males:
None of the ingredients are listed.
Chemicals known to cause developmental toxicity:
None of the ingredients are listed.
Cancerogenity categories
EPA (Environmental Protection Agency)
None of the ingredients are listed.
TLV (Threshold Limit Value established by ACGIH)
None of the ingredients are listed.
SAFETY DATA SHEET: Plant Hi-C Kit

NIOSH-Ca (National Institute for Occupational Safety and Health)
None of the ingredients are listed.
GHS label elements Void
Signal word Void
Hazard statements Void
National regulations:
Water hazard class: Generally not hazardous for water.
Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

Section 16: Other Information
References: Not available. Other Special Considerations: Not available.
Last Updated: 02/07/2018 4:00 PM
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Stop Solution

Section 1: Chemical Information
Product Name: Stop Solution
Supplier: Phase Genomics, 1617 8th Ave N, Seattle, WA 98109, 1-833-742-7436
Recommended Use: reagent

Section 2: Composition and Information on Ingredients

Hazard Classification
Health Hazards: This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200)

Hazard Symbol: N/A

Section 3: Hazard Identification

GHS Classification OSHA Regulatory Status
This chemical is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Signal Word:
Warning

Hazard statements
Causes respiratory tract, eye and skin irritation. Avoid breathing vapor or mist. Avoid contact with eyes, skin, and clothing. Use only with adequate ventilation. Keep container tightly closed and sealed until ready for use. Wash thoroughly after handling.

Physical state:
Liquid

Potential Acute Health Effects:
INHALATION: irritating to respiratory system. Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure. INGESTION: No known significant effects or critical hazards. SKIN: irritating to skin. EYES: irritating to eyes.

Potential Chronic Health Effects:
CARCINOGENICITY: No known significant effects or critical hazards. MUTAGENICITY: No known significant effects or critical hazards. TERATOGENICITY: No known significant effects or critical hazards. DEVELOPMENT EFFECTS: No known significant effects or critical hazards. FERTILITY EFFECTS: No known significant effects or critical hazards. MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE: None known.

Section 4: First Aid Measures

In Case of Skin Contact: Immediately flush with plenty of water for at least 15 minutes while removing contaminated clothes and shoes. Wash clothes before reuse. Clean shoes thoroughly before reuse. Get medical attention immediately.

In Case of Eye Contact: Remove contact lenses, if present and easy to do. Flush eyes with plenty of water for at least 15 minutes, making sure to occasionally flush upper and lower eyelids. Get medical attention immediately.

If Swallowed: Wash out mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention immediately.

Section 5: Fire and Explosion Data

Conditions of Flammability: If heated, a pressure increase will occur and the container may burst.
Suitable Extinguishing Media: Dry powder, CO2, water spray or regular foam.
Special Protective Equipment for Firefighters: Wear self-contained breathing apparatus with a full face-piece operated in positive pressure mode.
Hazardous Combustion Products: Further Information: N/A
Further information: N/A

Section 6: Accidental Release Measures
Personal Precautions: Do not walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see section 8).
Environmental Precautions: Do not allow undiluted product to enter sewer/surface or soil or ground water. Inform relevant authorities if product has caused environmental pollution.
Emergency Procedures: Evacuate personnel to safe areas and follow emergency response protocols.
Methods and Materials for Containment and Cleaning Up: Use inert absorbent material to soak up spill. Prevent further leakage or spillage if safe to do so.

See section 7 for information on safe handling.
See section 8 for information on PPE.
See section 13 for disposal information.

Section 7: Handling and Storage
Precautions for Safe Handling: Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Provide appropriate exhaust ventilation. Keep tightly closed when not in use. Keep container tightly closed in a dry, well-ventilated place and out of direct sunlight.

Section 8: Exposure Controls and Personal Protection
Appropriate Engineering Controls: General industrial hygiene practice.
Recommendations for Personal Protective Measures:
Hand Protection: The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture. Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
Material of gloves: The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material cannot be calculated in advance and has therefore to be checked prior to the application.
Eye Protection: Safety eyewear complying with an approved standard should be used.
Skin and Body Protection: Wear appropriate laboratory attire when handling this product, such as gloves, long pants, closed-toe shoes and a laboratory coat.
Respiratory Protection: N/A
Hygiene Measures: Avoid contact with eyes, skin and clothing. Wash hands thoroughly after using this product.
Special Requirements for Personal Protective Equipment, Protective Clothing, Respirators, etc: N/A
Components with Workplace Control Parameters: N/A

Section 9: Physical and Chemical Properties
Appearance:
Form: Liquid
Color: Clear to light yellow
Odor: No data available
Odor Threshold: No data available
pH: No data available
Melting Point/Freezing Point: No data available
Initial Boiling Point/Boiling Range: No data available
Flash Point: No data available
Evaporation Rate: No data available
Flammability (Solid, Gas): No data available
Vapor Pressure: No data available
Vapor Density: No data available
Relative Density: No data available

Section 10: Stability and Reactivity Data
Reactivity: No data available
Chemical Stability: This product is stable.
Possibility of Hazardous Reactions: Under normal conditions of storage and use, hazardous reactions will not occur.
Materials to Avoid: No data available
Hazardous Decomposition Products: Under normal conditions of storage and use, no hazardous decomposition products will be produced.

Section 11: Toxicological Information
Acute toxicity:
SAFETY DATA SHEET: Plant Hi-C Kit

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>Oral LD50</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethylenediaminetetraacetic acid</td>
<td>( \geq 30 \text{ mg/kg (mouse)} )</td>
</tr>
</tbody>
</table>

Carcinogenicity: No known significant effects or critical hazards.
Mutagenicity: No known significant effects or critical hazards.
Teratogenicity: No known significant effects or critical hazards.

Section 12: Ecological Information
- Toxicity: No known significant effects or critical hazards.
- Persistence and Degradability: No data available
- Bioaccumulative Potential: No data available
- Mobility in Soil: No data available
- PBT and vPvB Assessment: No data available

Section 13: Disposal Considerations
Dispose unused material. Observe regulations.

Section 14: Transport Information
- DOT: Not regulated.
- IMDG: Not regulated.
- IATA: Not regulated.

Section 15: Other Regulatory Information
- HCS classification: Irritating material
- SARA 302 Components: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.
- SARA 313 Components: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.
- SARA 311/312 Hazards: No SARA Hazards
- Massachusetts Right To Know Components: N/A
- Pennsylvania Right To Know Components: N/A
- New Jersey Right To Know Components: N/A
- California Prop. 65 Components: This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

Section 16: Other Information
- References: Not available.
- Other Special Considerations: Not available.
- Last Updated: 07/06/2018 12:00 PM

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Streptavidin Beads

Section 1: Chemical Information
- Product Name: Streptavidin Beads
- Supplier: Phase Genomics, 1617 8th Ave N, Seattle, WA 98109, 1-833-742-7436
- Recommended use: reagent
Section 2: Composition and Information on Ingredients

Hazard Classification

Health Hazards: No known OSHA hazards

GHS Label Element

Hazard Symbol: N/A

Hazard Statements: Not a hazardous substance or mixture.

Section 3: Hazard Identification

Substance or Mixture: Mixture of non-hazardous substances.
Synonyms/Common Names: N/A
Chemical Name: Sodium azide
Cas No.: 26628-22-8
Concentration: 0.05%

Section 4: First Aid Measures

General Advice: Wear protective gloves/protective clothing/eye protection/face protection.

If Inhaled: If not breathing, give artificial respiration.

In Case of Skin Contact: Wash with soap and water.

In Case of Eye Contact: Remove contact lenses, if present and easy to do. Continue rinsing.

If Swallowed: N/A

Most Important Symptoms and Effects, Acute and Delayed: N/A

Recommendations for Immediate Medical Attention and Special Treatment: Treat symptomatically. Symptoms may be delayed.

Section 5: Fire and Explosion Data

Conditions of Flammability: Not flammable or combustible.

Suitable Extinguishing Media: Dry powder, CO2, water spray or regular foam.

Special Protective Equipment for Firefighters: Wear self-contained breathing apparatus, if necessary.

Hazardous Combustion Products: Further Information: N/A

Further information: Prevent fire fighting water from entering surface water or groundwater.

Section 6: Accidental Release Measures

Personal Precautions: Avoid inhalation of vapors or mist. See Section 8: Exposure Controls/ Personal Protection for more information.

Environmental Precautions: Do not allow undiluted product to enter sewer/surface or ground water.

Emergency Procedures: Evacuate personnel to safe areas and follow emergency response protocols.

Methods and Materials for Containment and Cleaning Up: Use inert absorbent material to soak up spill.

Section 7: Handling and Storage

Precautions for Safe Handling: Handle in accordance with good chemical hygiene and safety practices. Protect from moisture. Avoid contact with eyes, skin and clothing. Avoid inhalation of vapors or mist.

Conditions for Safe Storage: Store at 2-8°C. Keep container tightly closed in a dry, well-ventilated place.

Incompatible Products: N/A

Section 8: Exposure Controls and Personal Protection

Appropriate Engineering Controls: Adequate ventilation and access to eye washing stations are required.

Recommendations for Personal Protective Measures:

Hand Protection: Use gloves when handling this product. Inspect gloves prior to use for any visible damage. Use proper glove removal technique to prevent contact with skin. Dispose of gloves in accordance with applicable laws. Wash and dry hands after use.

Eye Protection: Use a face shield and/or safety goggles when handling this product. Use eyewear that has been approved by NIOSH.

Skin and Body Protection: Wear appropriate laboratory attire when handling this product, such as gloves, long pants, closed-toe shoes and a laboratory coat.

Respiratory Protection: If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be used.

Hygiene Measures: Avoid contact with eyes, skin and clothing. Wash hands thoroughly after using this product. Do not eat, drink or smoke when handling this product.

Special Requirements for Personal Protective Equipment, Protective Clothing, Respirators, etc: N/A

Components with Workplace Control Parameters: N/A

Section 9: Physical and Chemical Properties

Appearance:

Form: Liquid, with precipitates
Color: Brown
Odor: No data available
SAFETY DATA SHEET: Plant Hi-C Kit

Odor Threshold: No data available
pH: No data available
Melting Point/Freezing Point: No data available
Initial Boiling Point/Boiling Range: No data available
Flash Point: No data available
Evaporation Rate: No data available
Flammability (Solid, Gas): No data available
Upper/Lower Limits on Flammability and Explosive Limits:
Flammability Limit (Upper): No data available
Flammability Limit (Lower): No data available
Explosive Limit (Upper): No data available
Explosive Limit (Lower): No data available
Vapor Pressure: No data available
Vapor Density: No data available
Relative Density: No data available
Solubility:
Solubility in Water: No data available
Solubility (Other): No data available
Partition Coefficient (n-octanol/water): No data available
Auto-Ignition Temperature: No data available
Decomposition Temperature: No data available
Viscosity: No data available

Section 10: Stability and Reactivity Data
Reactivity: No data available
Chemical Stability: No data available
Possibility of Hazardous Reactions: Conditions to Avoid: No data available
Materials to Avoid: No data available
Hazardous Decomposition Products: No data available

Section 11: Toxicological Information
Information on Likely Routes of Exposure:
Inhalation: No data available
Ingestion: No data available
Skin: No data available
Eyes: No data available
Information on Toxicological Effects:
Acute Toxicity:
Oral LD50: No data available
Inhalation LC50: No data available
Dermal LD50: No data available
Other Information: No data available
Skin Corrosion/Irritation: No data available
Serious Eye Damage/Irritation: No data available
Respiratory or Skin Sensitization: No data available
Germ Cell Mutagenicity: No data available
Carcinogenicity:
IARC: No component of this product that is present at 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
ACGIH: No component of this product that is present at 0.1% is identified as probable, possible or confirmed human carcinogen by ACGIH.
NTP: No component of this product that is present at 0.1% is identified as probable, possible or confirmed human carcinogen by NTP.
OSHA: No component of this product that is present at 0.1% is identified as probable, possible or confirmed human carcinogen by OSHA.
Reproductive Toxicity: No data available
Teratogenicity: No data available
Specific Target Organ Toxicity –
Single Exposure: No data available
Specific Target Organ Toxicity –
Repeated Exposures: No data available
Aspiration Hazard: No data available
Signs and Symptoms of Exposure: No data available
Synergistic Effects: No data available
Additional Information: No data available
Section 12: Ecological Information
Toxicity: No known significant effects or critical hazards.
Persistence and Degradability: No data available
Bioaccumulative Potential: No data available
Mobility in Soil: No data available
PBT and vPvB Assessment: No data available
Other Adverse Effects: This product contains an environmentally hazardous substance below the cutoff level. Refer to Section 3 for ingredient information. Do not allow undiluted product to enter sewer/surface or ground water.

Section 13: Disposal Considerations
Product:
Disposal should be in accordance with applicable regional, national and local laws and regulations.
Sodium azide preservative may form explosive compounds in metal drain lines. See NIOSH Bulletin: Explosive Azide Hazard (8/16/76). To avoid possible build-up of azide compounds, flush wastepipes with water after the disposal of undiluted reagent. Sodium azide disposal must be in accordance with appropriate local regulations.

Refer to Section 7: Handling and Storage and Section 8: Exposure Control/ Personal Protection for additional handling information and protection of employees.
Contaminated Packaging:
Disposal must be made according to official regulations.

Section 14: Transport Information
DOT: Not regulated.
IMDG: Not regulated.
IATA: Not regulated.

Section 15: Other Regulatory Information
SARA 302/304:
SARA 302 TPQ:
Name: Sodium azide
%: 0.05
EHS Yes
(lbs) 500
(gallons) -
SARA 304 RQ:
(lbs) 1,000
(gallons) -
SARA 304 RQ:
2,000,000 lbs / 908,000 kg
SARA 313 Components:
Sodium azide is subject to reporting requirements of Section 313, Title III of SARA. 1.0% de minimis concentration.
SARA 311/312 Hazards:
N/A

US State Regulations:
California Prop. 65: No ingredient regulated by CA Prop 65 present.
Massachusetts RTK: Sodium azide CAS No. 26628-22-8
New Jersey & Community RTK:
Water CAS No. 7732-18-5
Sodium azide CAS. No 26628-22-8
Pennsylvania RTK:
Water CAS No. 7732-18-5
Sodium azide CAS No. 26628-22-8
Rhode Island RTK: No ingredient regulated by RI Right to Know Act present.

Section 16: Other Information
References: Not available. Other Special Considerations: Not available.
Last Updated: 07/06/2018 12:00 PM
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