

Safety Data Sheets

GEM-X Flex Gene Expression Reagent Kits

Fixed RNA Feature Barcode Multiplexing Kit, 64 rxns
(PN-1000628)

Reagents	PNs	Reagents	PNs
Pre-Amp Primers C	2000953	Antibody Multiplexing Barcode AB009	2000925
Amp Mix	2000047	Antibody Multiplexing Barcode AB010	2000926
Antibody Multiplexing Barcode AB001	2000917	Antibody Multiplexing Barcode AB011	2000927
Antibody Multiplexing Barcode AB002	2000918	Antibody Multiplexing Barcode AB012	2000928
Antibody Multiplexing Barcode AB003	2000919	Antibody Multiplexing Barcode AB013	2000929
Antibody Multiplexing Barcode AB004	2000920	Antibody Multiplexing Barcode AB014	2000930
Antibody Multiplexing Barcode AB005	2000921	Antibody Multiplexing Barcode AB015	2000931
Antibody Multiplexing Barcode AB006	2000922	Antibody Multiplexing Barcode AB016	2000932
Antibody Multiplexing Barcode AB007	2000923		
Antibody Multiplexing Barcode AB008	2000924		

Safety Data Sheet (SDS)

OSHA HazCom Standard 29 CFR 1910.1200(g) revised in 2012 and GHS Rev 03.

Issue date 12/10/2021

Reviewed on 12/10/2021

* 1 Identification

· **Product Identifier**

· **Trade Name:** *Pre-Amp Primers C, Antibody Multiplexing Barcode AB001, Antibody Multiplexing Barcode AB002, Antibody Multiplexing Barcode AB003, Antibody Multiplexing Barcode AB004, Antibody Multiplexing Barcode AB005, Antibody Multiplexing Barcode AB006, Antibody Multiplexing Barcode AB007, Antibody Multiplexing Barcode AB008, Antibody Multiplexing Barcode AB009, Antibody Multiplexing Barcode AB010, Antibody Multiplexing Barcode AB011, Antibody Multiplexing Barcode AB012, Antibody Multiplexing Barcode AB013, Antibody Multiplexing Barcode AB014, Antibody Multiplexing Barcode AB015, Antibody Multiplexing Barcode AB016*

· **Product Number:**

2000953
2000917
2000918
2000919
2000920
2000921
2000922
2000923
2000924
2000925
2000926
2000927
2000928
2000929
2000930
2000931
2000932

· **Relevant identified uses of the substance or mixture and uses advised against:**

· **Product Description:** No further relevant information available.

· **Details of the Supplier of the Safety Data Sheet:**

· **Manufacturer/Supplier:**

10x Genomics
6230 Stoneridge Mall Road
Pleasanton, CA 94588 USA
1 925 401 7300
<https://www.10xgenomics.com/>

· **Emergency telephone number:** 1 925 401 7300

Safety Data Sheet (SDS)

OSHA HazCom Standard 29 CFR 1910.1200(g) revised in 2012 and GHS Rev 03.

Issue date 12/10/2021

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2 Hazard(s) Identification

· **Classification of the substance or mixture:**

The product does not need classification according to OSHA HazCom Standard 29 CFR paragraph (d) of §1910.1200(g) and GHS Rev 03.

Trade Name: *Pre-Amp Primers C, Antibody Multiplexing Barcode AB001, Antibody Multiplexing Barcode AB002, Antibody Multiplexing Barcode AB003, Antibody Multiplexing Barcode AB004, Antibody Multiplexing Barcode AB005, Antibody Multiplexing Barcode AB006, Antibody Multiplexing Barcode AB007, Antibody Multiplexing Barcode AB008, Antibody Multiplexing Barcode AB009, Antibody Multiplexing Barcode AB010, Antibody Multiplexing Barcode AB011, Antibody Multiplexing Barcode AB012, Antibody Multiplexing Barcode AB013, Antibody Multiplexing Barcode AB014, Antibody Multiplexing Barcode AB015, Antibody Multiplexing Barcode AB016*

· **Label elements:**

· **Hazard pictograms:** Non-Regulated Material

· **Signal word:** Non-Regulated Material

· **Hazard statements:** Non-Regulated Material

· **Unknown acute toxicity:**

This value refers to knowledge of known, established toxicological or ecotoxicological values.

0 % of the mixture consists of component(s) of unknown toxicity.

· **Classification system:** NFPA/HMIS Definitions: 0-Least, 1-Slight, 2-Moderate, 3-High, 4-Extreme

· **NFPA ratings (scale 0 - 4)**



· **HMIS-ratings (scale 0 - 4)**



· **Hazard(s) not otherwise classified (HNOC):** None known

3 Composition/Information on Ingredients

· **Chemical characterization: Substance**

· **Description:** Non-Regulated Material

· **Dangerous Components:** Non-Regulated Material

4 First-Aid Measures

· **Description of first aid measures**

· **General information:** No special measures required.

· **After inhalation:**

In case of unconsciousness place patient stably in the side position for transportation.

Supply fresh air; consult doctor in case of complaints.

· **After skin contact:**

Wash with soap and water.

(Contd. on page 3)

Safety Data Sheet (SDS)

OSHA HazCom Standard 29 CFR 1910.1200(g) revised in 2012 and GHS Rev 03.

Issue date 12/10/2021 **Trade**

Reviewed on 12/10/2021

Name: *Pre-Amp Primers C, Antibody Multiplexing Barcode AB001, Antibody Multiplexing Barcode AB002, Antibody Multiplexing Barcode AB003, Antibody Multiplexing Barcode AB004, Antibody Multiplexing Barcode AB005, Antibody Multiplexing Barcode AB006, Antibody Multiplexing Barcode AB007, Antibody Multiplexing Barcode AB008, Antibody Multiplexing Barcode AB009, Antibody Multiplexing Barcode AB010, Antibody Multiplexing Barcode AB011, Antibody Multiplexing Barcode AB012, Antibody Multiplexing Barcode AB013, Antibody Multiplexing Barcode AB014, Antibody Multiplexing Barcode AB015, Antibody Multiplexing Barcode AB016*

If skin irritation occurs, consult a doctor.

· **After eye contact:**

If eye irritation occurs, consult a doctor.

Rinse opened eye for several minutes under running water.

· **After swallowing:**

Do not induce vomiting without medical advice.

If swallowed and symptoms occur, consult a doctor.

· **Information for doctor**

· **Most important symptoms and effects, both acute and delayed:** No further relevant information available.

· **Indication of any immediate medical attention and special treatment needed:**

No further relevant information available.

5 Fire-Fighting Measures

· **Extinguishing media**

· **Suitable extinguishing agents:** Use fire fighting measures that suit the environment.

· **For safety reasons unsuitable extinguishing agents:** No further relevant information.

· **Special hazards arising from the substance or mixture:** No further relevant information available.

· **Advice for firefighters**

· **Special protective equipment for firefighters:**

As in any fire, wear self-contained breathing apparatus pressure-demand (NIOSH approved or equivalent) and full protective gear to prevent contact with skin and eyes.

6 Accidental Release Measures

· **Personal precautions, protective equipment and emergency procedures:**

Avoid contact with skin, eyes and clothing.

· **Environmental precautions:** Dilute with plenty of water.

· **Methods and material for containment and cleaning up:**

Absorb with liquid-binding material (i.e. sand, diatomite, acid binders, universal binders, sawdust).

Dispose of the collected material according to regulations.

· **Reference to other sections:**

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

(Contd. on page 4)

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· PAC-1:
None of the ingredients are listed.
· PAC-2:
None of the ingredients are listed.
· PAC-3:
None of the ingredients are listed.

7 Handling and Storage

- **Handling**
- **Precautions for safe handling:** Avoid breathing fume/gas/mist/vapors/spray.
- **Information about protection against explosions and fires:** No special measures required.
- **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.

8 Exposure Controls/Personal Protection

- **Additional information about design of technical systems:** No further data; see section 7.
- **Control parameters:**
- **Components with occupational exposure limits:**
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 of this SDS 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:** Not applicable.

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- **Penetration time of glove material:** Not applicable.
- **Eye protection:**



Safety glasses

9 Physical and Chemical Properties

- **Information on basic physical and chemical properties**
- **General Information**
- **Appearance:**
 - Form:** Liquid
 - Color:** Clear, colorless
- **Odor:** Odorless
- **Odor threshold:** Not determined.
- **pH-value:** Not applicable.
- **Change in condition**
 - Melting point/Melting range:** Not determined.
- **Flash point:** None
- **Flammability (solid, gaseous):** Not applicable.
- **Ignition temperature:** Not applicable
- **Decomposition temperature:** Not determined.
- **Auto igniting:** Product is not self-igniting.
- **Danger of explosion:** Product does not present an explosion hazard.
- **Explosion limits:**
 - Lower:** Not determined.
 - Upper:** Not determined.
- **Vapor pressure:** Not determined.
- **Density @ 20 °C (68 °F):** \ g/cm³
- **Relative density:** Not determined.

(Contd. on page 6)

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- **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.
- **Solvent content:**
 - VOC content:** 0.00 %
- **Other information:** No further relevant information available.

10 Stability and Reactivity

- **Reactivity:** No further relevant information available.
- **Chemical stability:** Stable under normal conditions.
- **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:** Strong acids, strong bases
- **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological Information

- **Information on toxicological effects:**
 - **Acute toxicity:**
 - **LD/LC50 values that are relevant for classification:** No data available.
 - **Primary irritant effect:**
 - **On the skin:** No irritating effect.
 - **On the eye:** No irritating effect.
 - **Additional toxicological information:**
The product is not subject to classification according to internally approved calculation methods for preparations.

(Contd. on page 7)

Safety Data Sheet (SDS)

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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.

· **Carcinogenic categories:**

· **IARC (International Agency for Research on Cancer):**

None of the ingredients are listed.

· **NTP (National Toxicology Program):**

None of the ingredients are listed.

· **OSHA-Ca (Occupational Safety & Health Administration):**

None of the ingredients are listed.

12 Ecological Information

· **Toxicity:**

· **Aquatic toxicity:** No further relevant information available.

· **Persistence and degradability:** No further relevant information available.

· **Behavior in environmental systems:**

· **Bioaccumulative potential:** No further relevant information available.

· **Mobility in soil:** No further relevant information available.

· **Additional ecological information:**

· **General notes:**

Do not allow undiluted product or product that has not been neutralized 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.

13 Disposal Considerations

· **Waste treatment methods**

· **Recommendation:**

Smaller quantities can be disposed of with household waste.

Observe all federal, state and local environmental regulations when disposing of this material.

· **Uncleaned packaging**

· **Recommendation:** Disposal must be made according to official regulations.

(Contd. on page 8)

Safety Data Sheet (SDS)

OSHA HazCom Standard 29 CFR 1910.1200(g) revised in 2012 and GHS Rev 03.

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- **Recommended cleansing agent:** Water, if necessary with cleansing agents.

14 Transport Information

- **UN-Number:**
- **DOT, ADR/ADN, ADN, IMDG, IATA** Non-Regulated Material
- **UN proper shipping name:**
- **DOT, ADR/ADN, ADN, IMDG, IATA** Non-Regulated Material
- **Transport hazard class(es):**
- **DOT, ADR/ADN, ADN, IMDG, IATA**
- **Class:** Non-Regulated Material
- **Packing group:**
- **DOT, ADR/ADN, IMDG, IATA** Non-Regulated Material
- **Environmental hazards:** Not applicable.
- **Special precautions for user:** Not applicable.
- **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code:** Not applicable.
- **UN "Model Regulation":** Non-Regulated Material

15 Regulatory Information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture:**
No further relevant information available.
- **SARA (Superfund Amendments and Reauthorization):**

· **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):**

· **California 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.

(Contd. on page 9)

Safety Data Sheet (SDS)

OSHA HazCom Standard 29 CFR 1910.1200(g) revised in 2012 and GHS Rev 03.

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Trade Name: *Pre-Amp Primers C, Antibody Multiplexing Barcode AB001, Antibody Multiplexing Barcode AB002, Antibody Multiplexing Barcode AB003, Antibody Multiplexing Barcode AB004, Antibody Multiplexing Barcode AB005, Antibody Multiplexing Barcode AB006, Antibody Multiplexing Barcode AB007, Antibody Multiplexing Barcode AB008, Antibody Multiplexing Barcode AB009, Antibody Multiplexing Barcode AB010, Antibody Multiplexing Barcode AB011, Antibody Multiplexing Barcode AB012, Antibody Multiplexing Barcode AB013, Antibody Multiplexing Barcode AB014, Antibody Multiplexing Barcode AB015, Antibody Multiplexing Barcode AB016*

· 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.
· New Jersey Right-to-Know List:
None of the ingredients are listed.
· New Jersey Special Hazardous Substance List:
None of the ingredients are listed.
· Pennsylvania Right-to-Know List:
None of the ingredients are listed.
· Pennsylvania Special Hazardous Substance List:
None of the ingredients are listed.
· Carcinogenic categories:
· EPA (Environmental Protection Agency):
None of the ingredients are listed.
· TLV (Threshold Limit Value established by ACGIH):
None of the ingredients are listed.
· NIOSH-Ca (National Institute for Occupational Safety and Health):
None of the ingredients are listed.
· GHS label elements Non-Regulated Material
· Hazard pictograms: Non-Regulated Material
· Signal word: Non-Regulated Material
· Hazard statements: Non-Regulated Material
· National regulations:
The product is not subject to be labelled according with the prevailing version of the regulations on hazardous substances.
· Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other Information

The information and recommendations in this safety data sheet are, to the best of our knowledge, accurate as of the date of issue. Nothing herein shall be deemed to create warranty, expressed or implied, and shall not
(Contd. on page 10)

Safety Data Sheet (SDS)

OSHA HazCom Standard 29 CFR 1910.1200(g) revised in 2012 and GHS Rev 03.

Issue date 12/10/2021

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Trade Name: *Pre-Amp Primers C, Antibody Multiplexing Barcode AB001, Antibody Multiplexing Barcode AB002, Antibody Multiplexing Barcode AB003, Antibody Multiplexing Barcode AB004, Antibody Multiplexing Barcode AB005, Antibody Multiplexing Barcode AB006, Antibody Multiplexing Barcode AB007, Antibody Multiplexing Barcode AB008, Antibody Multiplexing Barcode AB009, Antibody Multiplexing Barcode AB010, Antibody Multiplexing Barcode AB011, Antibody Multiplexing Barcode AB012, Antibody Multiplexing Barcode AB013, Antibody Multiplexing Barcode AB014, Antibody Multiplexing Barcode AB015, Antibody Multiplexing Barcode AB016*

establish a legally valid contractual relationship. It is the responsibility of the user to determine applicability of this information and the suitability of the material or product for any particular purpose.

· **Contact:**

· **Date of last revision/ revision number:** 12/10/2021 / 2

· **Abbreviations and acronyms:**

ADR: The European Agreement concerning the International Carriage of Dangerous Goods by Road

ADN: The European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

NIOSH: National Institute for Occupational Safety and Health

OSHA: Occupational Safety & Health Administration

TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit

· *** Data compared to the previous version altered.**

SDS created by MSDS Authoring Services www.msdsauthoring.com +1-877-204-9106

Safety Data Sheet (SDS)

OSHA HazCom Standard 29 CFR 1910.1200(g) and GHS Rev 03.

Issue date 08/20/2018

Reviewed on 08/20/2018

*** 1 Identification**

- **Product Identifier**
- **Trade Name: Amp Mix**
Amp Mix
- **Product Number:**
2000047
2000103
- **Relevant identified uses of the substance or mixture and uses advised against:**
- **Product Description:** No Further Information
- **Application of the substance / the mixture:** Industry Specific Application
- **Details of the Supplier of the Safety Data Sheet:**
- **Manufacturer/Supplier:**
10X Genomics
7068 Koll Center Parkway
Suite 401
Pleasanton, CA 94566
1 925 401 7300
- **Emergency telephone number:** 1 925 401 7300

2 Hazard(s) Identification

- **Classification of the substance or mixture:**



Skin Irrit. 2 H315 Causes skin irritation.

Eye Irrit. 2B H320 Causes eye irritation.

- **Label elements:**
- **GHS label elements**
The product is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms:**



GHS07

- **Signal word:** Warning
- **Hazard statements:**
H315+H320 Causes skin and eye irritation.
- **Precautionary statements:**
 - P264 Wash thoroughly after handling.
 - P280 Wear protective gloves.
 - P302+P352 If on skin: Wash with plenty of water.
 - P321 Specific treatment (see supplementary first aid instructions on this Safety Data Sheet).
 - P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 - P332+P313 If skin irritation occurs: Get medical advice/attention.
 - P362+P364 Take off contaminated clothing and wash it before reuse.
 - P337+P313 If eye irritation persists: Get medical advice/attention.
- **Unknown acute toxicity:**
This value refers to knowledge of known, established toxicological or ecotoxicological values.

(Contd. on page 2)

Safety Data Sheet (SDS)

OSHA HazCom Standard 29 CFR 1910.1200(g) and GHS Rev 03.

Issue date 08/20/2018

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**Trade Name: Amp Mix
Amp Mix**

0 % of the mixture consists of component(s) of unknown toxicity.

- **Classification system:** NFPA/HMIS Definitions: 0-Least, 1-Slight, 2-Moderate, 3-High, 4-Extreme
- **NFPA ratings (scale 0 - 4)**



- **HMIS-ratings (scale 0 - 4)**



- **Hazard(s) not otherwise classified (HNOC):** None known

* **3 Composition/Information on Ingredients**

- **Chemical characterization: Mixtures**
- **Description:** Mixture of substances listed below with non-hazardous additions.

· **Dangerous Components:**

CAS: 56-81-5 RTECS: MA 8050000	Glycerol	1-10%
CAS: 9016-45-9	Nonylphenoxy poly(ethyleneoxy) ethanol ⚠ Skin Irrit. 2, H315; Eye Irrit. 2A, H319	Proprietary%
CAS: 7664-93-9	Sulfuric acid ⚠ Skin Corr. 1A, H314	Proprietary%

· **Additional information:**

The exact percentages of the ingredients of this mixture are considered to be proprietary and are withheld in accordance with the provisions of paragraph (i) of §1910.1200 of 29 CFR 1910.1200 Trade Secrets.

* **4 First-Aid Measures**

· **Description of first aid measures**

· **After inhalation:**

In case of unconsciousness place patient stably in side position for transportation.
Supply fresh air; consult doctor in case of complaints.

· **After skin contact:**

Wash with soap and water.
If skin irritation occurs, consult a doctor.

· **After eye contact:**

Rinse opened eye for several minutes under running water.
If easy to do so, remove contact lenses if worn.
If eye irritation occurs, consult a doctor.

· **After swallowing:**

If swallowed and symptoms occur, consult a doctor.
Do not induce vomiting without medical advice.

· **Information for doctor**

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

· **Indication of any immediate medical attention and special treatment needed:**

No further relevant information available.

(Contd. on page 3)

Safety Data Sheet (SDS)

OSHA HazCom Standard 29 CFR 1910.1200(g) and GHS Rev 03.

Issue date 08/20/2018

Reviewed on 08/20/2018

**Trade Name: Amp Mix
Amp Mix**

5 Fire-Fighting Measures

- **Extinguishing media**
- **Suitable extinguishing agents:** Use fire fighting measures that suit the environment.
- **For safety reasons unsuitable extinguishing agents:** No further relevant information.
- **Special hazards arising from the substance or mixture:** No further relevant information available.
- **Advice for firefighters**
- **Special protective equipment for firefighters:**
As in any fire, wear self-contained breathing apparatus pressure-demand (NIOSH approved or equivalent) and full protective gear to prevent contact with skin and eyes.

* 6 Accidental Release Measures

- **Personal precautions, protective equipment and emergency procedures:**
Do not inhale gases / fumes / aerosols
Avoid contact with skin, eyes and clothing.
- **Environmental precautions:**
Dilute with plenty of water.
Do not allow to enter sewers/surface or ground water.
- **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (i.e. sand, diatomite, acid binders, universal binders, sawdust).
Dispose of the collected material according to regulations.
- **Reference to other sections:**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.
- **Protective Action Criteria for Chemicals**

· **PAC-1:**

56-81-5	Glycerol	45 mg/m ³
9016-45-9	Nonylphenoxypoly(ethyleneoxy)ethanol	43 mg/m ³
7664-93-9	Sulfuric acid	0.20 mg/m ³

· **PAC-2:**

56-81-5	Glycerol	180 mg/m ³
9016-45-9	Nonylphenoxypoly(ethyleneoxy)ethanol	470 mg/m ³
7664-93-9	Sulfuric acid	8.7 mg/m ³

· **PAC-3:**

56-81-5	Glycerol	1,100 mg/m ³
9016-45-9	Nonylphenoxypoly(ethyleneoxy)ethanol	5,400 mg/m ³
7664-93-9	Sulfuric acid	160 mg/m ³

* 7 Handling and Storage

- **Handling**
- **Precautions for safe handling:** Avoid release into the environment.
- **Information about protection against explosions and fires:** No special measures required.
- **Conditions for safe storage, including any incompatibilities**
- **Storage**
- **Requirements to be met by storerooms and receptacles:** Store at room temperature.
- **Information about storage in one common storage facility:** Not required.

(Contd. on page 4)

Safety Data Sheet (SDS)

OSHA HazCom Standard 29 CFR 1910.1200(g) and GHS Rev 03.

Issue date 08/20/2018

Reviewed on 08/20/2018

**Trade Name: Amp Mix
Amp Mix**

- **Further information about storage conditions:** None.
- **Specific end use(s):** No further relevant information available.

*** 8 Exposure Controls/Personal Protection**

- **Additional information about design of technical systems:** No further data; see section 7.
- **Control parameters:**
- **Components with occupational exposure limits:**
The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit.
At this time, the remaining constituent has no known exposure limits.

56-81-5 Glycerol	
PEL	Long-term value: 15* 5** mg/m ³ mist; *total dust **respirable fraction
TLV	TLV withdrawn-insufficient data human occup. exp.
7664-93-9 Sulfuric acid	
PEL	Long-term value: 1 mg/m ³
REL	Long-term value: 1 mg/m ³
TLV	Long-term value: 0.2* mg/m ³ *as thoracic fraction

- **Additional information:** The lists that were valid during the creation of this SDS were used as basis.
- **Exposure controls:**
- **Personal protective equipment**
- **General protective and hygienic measures:**
The usual precautionary measures for handling chemicals should be followed.
Wash hands before breaks and at the end of work.
- **Breathing equipment:** Not required.
- **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Select glove material based on penetration times, rates of diffusion and 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.
- **Penetration time of glove material:**
The exact break-through time has to be determined and observed by the manufacturer of the protective gloves.
- **Eye protection:**



Safety glasses

Safety Data Sheet (SDS)

OSHA HazCom Standard 29 CFR 1910.1200(g) and GHS Rev 03.

Issue date 08/20/2018

Reviewed on 08/20/2018

Trade Name: Amp Mix
Amp Mix

9 Physical and Chemical Properties

- **Information on basic physical and chemical properties**
- **General Information**
- **Appearance:**
 - **Form:** Liquid
 - **Color:** Clear, colorless
 - **Odour:** Odorless
 - **Odor threshold:** Not determined.
 - **pH-value:** Not applicable.
- **Change in condition**
 - **Melting point/Melting range:** Not determined.
 - **Boiling point/Boiling range:** Not determined.
- **Flash point:** None
- **Flammability (solid, gaseous):** Not applicable.
- **Ignition temperature:** Not applicable
- **Decomposition temperature:** Not determined.
- **Auto igniting:** Product is not self-igniting.
- **Danger of explosion:** Product does not present an explosion hazard.
- **Explosion limits:**
 - **Lower:** Not determined.
 - **Upper:** Not determined.
- **Vapor pressure:** Not determined.
- **Density:**
 - **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.
- **Other information:** No further relevant information available.

*** 10 Stability and Reactivity**

- **Reactivity:** No further relevant information available.
- **Chemical stability:** Stable under normal conditions.
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions:** No dangerous reactions known.
- **Conditions to avoid:** Contact with moisture, acids and bases.
- **Incompatible materials:**
 - Strong oxidizing agents, strong reducing agents
 - Strong acids, strong bases

(Contd. on page 6)

Safety Data Sheet (SDS)

OSHA HazCom Standard 29 CFR 1910.1200(g) and GHS Rev 03.

Issue date 08/20/2018

Reviewed on 08/20/2018

**Trade Name: Amp Mix
Amp Mix**

- **Hazardous decomposition products:** No dangerous decomposition products known.

*** 11 Toxicological Information**

- **Information on toxicological effects:**
- **Acute toxicity:**

· **LD/LC50 values that are relevant for classification:**

56-81-5 Glycerol

Oral	LD50	12,600 mg/kg (Rat)
Dermal	LD50	>10,000 mg/kg (Rabbit)
Inhalative	LC50/96 hours	>50,000 mg/l (Trout)

9016-45-9 Nonylphenoxypoly(ethyleneoxy)ethanol

Oral	LD50	3,310 mg/kg (Rat)
Dermal	LD50	>2,000 mg/kg (Rat)

7664-93-9 Sulfuric acid

Oral	LD50 Oral	2,140 ml/kg (Rat)
Inhalative	LC50/96 hours	375 mg/l (Rat)
Sulfuric acid is harmful by all routes of entry.		

- **Primary irritant effect:**
- **On the skin:** No irritating effect.
- **On the eye:** Irritating effect.
- **Additional toxicological information:**
- **Carcinogenic categories:**
- **IARC (International Agency for Research on Cancer):**
Group 1 - Carcinogenic to humans
Group 2A - Probably carcinogenic to humans
Group 2B - Possibly carcinogenic to humans
Group 3 - Not classifiable as to its carcinogenicity to humans
Group 4 - Probably not carcinogenic to humans

7664-93-9	Sulfuric acid	3
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· **NTP (National Toxicology Program):**

None of the ingredients are listed.

· **OSHA-Ca (Occupational Safety & Health Administration):**

None of the ingredients are listed.

12 Ecological Information

· **Toxicity:**

· **Aquatic toxicity:**

9016-45-9 Nonylphenoxypoly(ethyleneoxy)ethanol

EC50	12 mg/l (Algae - Selenastrum capricornutum) (96 HOURS)
	0.148 mg/l (Daphnia) (48 hours)

7664-93-9 Sulfuric acid

EC50	22 mg/l (Daphnia)
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- **Persistence and degradability:** No further relevant information available.
- **Behavior in environmental systems:**
- **Bioaccumulative potential:** No further relevant information available.

Safety Data Sheet (SDS)

OSHA HazCom Standard 29 CFR 1910.1200(g) and GHS Rev 03.

Issue date 08/20/2018

Reviewed on 08/20/2018

Trade Name: Amp Mix
Amp Mix

- **Mobility in soil:** No further relevant information available.
- **Additional ecological information:**
- **General notes:**
Do not allow undiluted product or product that has not been neutralized 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.

*** 13 Disposal Considerations**

- **Waste treatment methods**
- **Recommendation:**
Observe all federal, state and local environmental regulations when disposing of this material.
- **Uncleaned packaging**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agent:** Water, if necessary with cleansing agents.

14 Transport Information

- **UN-Number:**
- **DOT, ADR/ADN, ADN, IMDG, IATA** Non-Regulated Material
- **UN proper shipping name:**
- **DOT, ADR/ADN, ADN, IMDG, IATA** Non-Regulated Material
- **Transport hazard class(es):**
- **DOT, ADR/ADN, ADN, IMDG, IATA**
- **Class:** Non-Regulated Material
- **Packing group:**
- **DOT, ADR/ADN, IMDG, IATA** Non-Regulated Material
- **Environmental hazards:** Not applicable.
- **Special precautions for user:** Not applicable.
- **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code:** Not applicable.
- **UN "Model Regulation":** Non-Regulated Material

15 Regulatory Information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture:**
- **SARA (Superfund Amendments and Reauthorization):**

· **Section 355 (extremely hazardous substances):**

7664-93-9	Sulfuric acid
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· **Section 313 (Specific toxic chemical listings):**

7664-93-9	Sulfuric acid
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· **TSCA (Toxic Substances Control Act):**

All ingredients are listed or exempt from listing.

· **California Proposition 65:**

· **Chemicals known to cause cancer:**

None of the ingredients are listed.

Safety Data Sheet (SDS)

OSHA HazCom Standard 29 CFR 1910.1200(g) and GHS Rev 03.

Issue date 08/20/2018

Reviewed on 08/20/2018

**Trade Name: Amp Mix
Amp Mix**

· 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.		
· New Jersey Right-to-Know List:		
56-81-5	Glycerol	
7664-93-9	Sulfuric acid	
· New Jersey Special Hazardous Substance List:		
7664-93-9	Sulfuric acid	CA, CO, R2
· Pennsylvania Right-to-Know List:		
56-81-5	Glycerol	
7664-93-9	Sulfuric acid	
· Pennsylvania Special Hazardous Substance List:		
7664-93-9	Sulfuric acid	E
· Carcinogenic categories:		
· EPA (Environmental Protection Agency):		
None of the ingredients are listed.		
· TLV (Threshold Limit Value established by ACGIH):		
7664-93-9	Sulfuric acid	A2
· NIOSH-Ca (National Institute for Occupational Safety and Health):		
None of the ingredients are listed.		

· **GHS label elements**
The product is classified and labeled according to the Globally Harmonized System (GHS).

· **Hazard pictograms:**



GHS07

· **Signal word:** Warning

· **Hazard statements:**

H315+H320 Causes skin and eye irritation.

· **Precautionary statements:**

P264 Wash thoroughly after handling.

P280 Wear protective gloves.

P302+P352 If on skin: Wash with plenty of water.

P321 Specific treatment (see supplementary first aid instructions on this Safety Data Sheet).

P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P332+P313 If skin irritation occurs: Get medical advice/attention.

P362+P364 Take off contaminated clothing and wash it before reuse.

P337+P313 If eye irritation persists: Get medical advice/attention.

(Contd. on page 9)

Safety Data Sheet (SDS)

OSHA HazCom Standard 29 CFR 1910.1200(g) and GHS Rev 03.

Issue date 08/20/2018

Reviewed on 08/20/2018

Trade Name: Amp Mix
Amp Mix

· **National regulations:**

None of the ingredients are listed.

· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other Information

The information and recommendations in this safety data sheet are, to the best of our knowledge, accurate as of the date of issue. Nothing herein shall be deemed to create warranty, expressed or implied, and shall not establish a legally valid contractual relationship. It is the responsibility of the user to determine applicability of this information and the suitability of the material or product for any particular purpose.

· **Date of preparation / last revision:** 08/20/2018 / 2

· **Abbreviations and acronyms:**

- ADR: The European Agreement concerning the International Carriage of Dangerous Goods by Road
- ADN: The European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
- IMDG: International Maritime Code for Dangerous Goods
- DOT: US Department of Transportation
- IATA: International Air Transport Association
- ACGIH: American Conference of Governmental Industrial Hygienists
- EINECS: European Inventory of Existing Commercial Chemical Substances
- ELINCS: European List of Notified Chemical Substances
- CAS: Chemical Abstracts Service (division of the American Chemical Society)
- NFPA: National Fire Protection Association (USA)
- HMIS: Hazardous Materials Identification System (USA)
- VOC: Volatile Organic Compounds (USA, EU)
- LC50: Lethal concentration, 50 percent
- LD50: Lethal dose, 50 percent
- PBT: Persistent, Bioaccumulative and Toxic
- vPvB: very Persistent and very Bioaccumulative
- NIOSH: National Institute for Occupational Safety and Health
- OSHA: Occupational Safety & Health Administration
- TLV: Threshold Limit Value
- PEL: Permissible Exposure Limit
- REL: Recommended Exposure Limit
- Skin Corr. 1A: Skin corrosion/irritation – Category 1A
- Skin Irrit. 2: Skin corrosion/irritation – Category 2
- Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A
- Eye Irrit. 2B: Serious eye damage/eye irritation – Category 2B

· *** Data compared to the previous version altered.**

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