

Safety Data Sheet



Revision Date 2021-07-06

Revision Number 2

1. Identification

Product identifier

Product Name 5X In-Fusion Snap Assembly Master Mix

Other means of identification

Product Code ST2321

Synonyms No information available

Recommended use of the chemical and restrictions on use

Identified uses No information available

Restrictions on use No information available

Details of the supplier of the safety data sheet

Supplier

USA:

Takara Bio USA, Inc.

1290 Terra Bella Avenue

Mountain View, CA 94043

Phone: 800.662.2566/888.251.6618

Web: www.takarabio.com

Emergency telephone number

Emergency telephone In case of emergency, call PERS (Professional Emergency Resource Services) 1-800-633-8253 (US) or 801-629-0667 (international).

2. Hazard(s) identification

Classification

Acute toxicity - Inhalation (Dusts/Mists)

Category 4

Hazards not otherwise classified (HNOC)

Not applicable

Label elements

Warning

Hazard statements

Harmful if inhaled

**Appearance** Clear, colorless**Physical state** Liquid**Odor** Unpleasant**Precautionary Statements - Prevention**

Avoid breathing dust/fume/gas/mist/vapors/spray
 Use only outdoors or in a well-ventilated area

Precautionary Statements - Response

IF INHALED: Remove person to fresh air and keep comfortable for breathing
 Call a POISON CENTER or doctor if you feel unwell

Unknown acute toxicity

1.45984 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist)

Other information

No information available.

3. Composition/information on ingredients

Substance

Not applicable.

Mixture

| Chemical name | CAS No | Weight-% | Trade secret |
|---------------|---------|----------|--------------|
| Glycerol | 56-81-5 | 60 - 70 | * |

4. First-aid measures

Description of first aid measures**General advice**

Show this safety data sheet to the doctor in attendance.

Inhalation

Remove to fresh air. If symptoms persist, call a physician. If breathing has stopped, give artificial respiration. Get medical attention immediately.

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.

Ingestion

Do NOT induce vomiting. Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person. Get medical attention.

Self-protection of the first aider

Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Avoid breathing vapors or mists. Use personal protective equipment as required. See section 8 for more information.

Most important symptoms and effects, both acute and delayed

Symptoms Coughing and/ or wheezing. Difficulty in breathing.

Indication of any immediate medical attention and special treatment needed

Note to physicians Treat symptomatically.

5. Fire-fighting measures

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

Large Fire CAUTION: Use of water spray when fighting fire may be inefficient.

Unsuitable extinguishing media Do not scatter spilled material with high pressure water streams.

Specific hazards arising from the chemical No information available.

Explosion Data

Sensitivity to mechanical impact None.

Sensitivity to static discharge None.

Special protective equipment for fire-fighters Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Personal precautions Ensure adequate ventilation. Avoid breathing vapors or mists. Use personal protective equipment as required.

Other information Refer to protective measures listed in Sections 7 and 8.

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 Pick up and transfer to properly labeled containers.

7. Handling and storage

Precautions for safe handling

Advice on safe handling Handle in accordance with good industrial hygiene and safety practice. Avoid breathing vapors or mists. Ensure adequate ventilation. In case of insufficient ventilation, wear suitable respiratory equipment. Do not eat, drink or smoke when using this product.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep containers tightly closed in a dry, cool and well-ventilated place. Keep out of the reach of children.

8. Exposure controls/personal protection

Control parameters**Exposure Limits**

| Chemical name | ACGIH TLV | OSHA PEL | NIOSH |
|---------------------|-----------|--|-------|
| Glycerol 56-81-5 | - | TWA: 15 mg/m ³ TWA: 5 mg/m ³ (vacated) TWA: 10 mg/m ³ (vacated) TWA: 5 mg/m ³ | - |

Appropriate engineering controls

Engineering controls Showers
 Eyewash stations
 Ventilation systems.

Individual protection measures, such as personal protective equipment

Eye/face protection No special protective equipment required.

Skin and body protection No special protective equipment required.

Respiratory protection No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

General hygiene considerations Do not eat, drink or smoke when using this product.

9. Physical and chemical properties

Information on basic physical and chemical properties

Physical state Liquid
Appearance Clear, colorless
Color No information available
Odor Unpleasant
Odor Threshold No information available

| <u>Property</u> | <u>Values</u> | <u>Remarks • Method</u> |
|---|-------------------|-------------------------|
| pH | No data available | None known |
| Melting point / freezing point | No data available | None known |
| Boiling point/boiling range (°C) | No data available | None known |
| Flash point | No data available | Open cup |
| Evaporation Rate | No data available | None known |
| Flammability (solid, gas) | No data available | None known |
| Flammability Limit in Air | | None known |
| Upper flammability limit: | No data available | |
| Lower flammability limit: | No data available | |
| Vapor pressure | No data available | None known |
| Vapor density | No data available | None known |
| Relative density | No data available | None known |
| Water solubility | No data available | None known |
| Solubility in other solvents | No data available | None known |
| Partition coefficient | No data available | None known |
| Autoignition temperature | 392.8 °C / 739 °F | None known |
| Decomposition temperature | | None known |
| Kinematic viscosity | No data available | None known |
| Dynamic Viscosity | No data available | None known |

Other information

| | |
|-----------------------------|--------------------------|
| Explosive properties | No information available |
| Oxidizing properties | No information available |
| Softening point | No information available |
| Molecular Weight | No information available |
| VOC Content (%) | No information available |
| Liquid Density | No information available |
| Bulk Density | No information available |

10. Stability and reactivity

| | |
|---|---|
| Reactivity | No information available. |
| Chemical stability | Stable under normal conditions. |
| Possibility of hazardous reactions | None under normal processing. |
| Conditions to Avoid | Excessive heat. |
| Incompatible materials | None known based on information supplied. |
| Hazardous decomposition products | None known based on information supplied. |

11. Toxicological information

Information on likely routes of exposure

Product Information

| | |
|---------------------|---|
| Inhalation | Specific test data for the substance or mixture is not available. Harmful by inhalation. (based on components). |
| Eye contact | Specific test data for the substance or mixture is not available. |
| Skin contact | Specific test data for the substance or mixture is not available. |
| Ingestion | Specific test data for the substance or mixture is not available. |

Symptoms related to the physical, chemical and toxicological characteristics

| | |
|-----------------|----------------------------|
| Symptoms | Coughing and/ or wheezing. |
|-----------------|----------------------------|

Acute toxicity

Numerical measures of toxicity

The following values are calculated based on chapter 3.1 of the GHS document

| | |
|--------------------------------------|-----------------|
| ATEmix (oral) | 17,972.30 mg/kg |
| ATEmix (dermal) | 14,390.50 mg/kg |
| ATEmix (inhalation-dust/mist) | 4.4778 mg/l |

Unknown acute toxicity

1.45984 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist)

Component Information

| Chemical name | Oral LD50 | Dermal LD50 | Inhalation LC50 |
|---------------------|-----------------------|----------------------|-------------------------|
| Glycerol 56-81-5 | = 12600 mg/kg (Rat) | > 10 g/kg (Rabbit) | > 2.75 mg/L (Rat) 4 h |

Delayed and immediate effects as well as chronic effects from short and long-term exposure

| | |
|----------------------------------|---------------------------|
| Skin corrosion/irritation | No information available. |
|----------------------------------|---------------------------|

| | |
|--|---|
| Serious eye damage/eye irritation | No information available. |
| Respiratory or skin sensitization | No information available. |
| Germ cell mutagenicity | No information available. |
| Carcinogenicity | No information available. |
| Reproductive toxicity | No information available. |
| STOT - single exposure | No information available. |
| STOT - repeated exposure | No information available. |
| Target organ effects | Kidney, Respiratory system, Eyes, Skin. |
| Aspiration hazard | No information available. |
| Other adverse effects | No information available. |
| Interactive effects | No information available. |

12. Ecological information

Ecotoxicity

| Chemical name | Algae/aquatic plants | Fish | Toxicity to microorganisms | Crustacea |
|---------------------|----------------------|--|----------------------------|-----------|
| Glycerol 56-81-5 | - | 51 - 57: 96 h Oncorhynchus mykiss mL/L LC50 static | - | - |

Persistence and degradability No information available.

Bioaccumulation There is no data for this product.

Component Information

| Chemical name | Partition coefficient |
|---------------------|-----------------------|
| Glycerol 56-81-5 | -1.76 |

Other adverse effects No information available.

13. Disposal considerations

Waste treatment methods

| | |
|--|---|
| Waste from residues/unused products | Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation. |
| Contaminated packaging | Do not reuse empty containers. |

14. Transport information

| | |
|--------------------------|---------------|
| <u>DOT</u> | Not regulated |
| <u>TDG</u> | Not regulated |
| <u>MEX</u> | Not regulated |
| <u>ICAO (air)</u> | Not regulated |
| <u>IATA</u> | Not regulated |
| <u>IMDG</u> | Not regulated |
| <u>RID</u> | Not regulated |
| <u>ADR</u> | Not regulated |
| <u>ADN</u> | Not regulated |

15. Regulatory information

International Inventories

TSCA - .

*Contact supplier for details. One or more substances in this product are either not listed on the US TSCA inventory, listed on the confidential US TSCA inventory or are otherwise exempted from inventory listing requirements

DSL/NDSL - .
EINECS/ELINCS - .
ENCS - .
IECSC - .
KECL - .
PICCS - .
AICS - .

Legend:

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

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

AICS - Australian Inventory of Chemical Substances

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

Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications.

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

| Chemical name | New Jersey | Massachusetts | Pennsylvania |
|---------------------|------------|---------------|--------------|
| Glycerol 56-81-5 | X | X | X |

U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

16. Other information

| | | | | |
|-------------|-------------------------|-----------------------|---------------------------|------------------------------|
| NFPA | Health hazards 2 | Flammability 1 | Instability 0 | Special hazards - |
| HMIS | Health hazards 2 | Flammability 1 | Physical hazards 0 | Personal protection X |

Key or legend to abbreviations and acronyms used in the safety data sheet**Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

| | | | |
|---------|-----------------------|------|---------------------------|
| TWA | Time weighted average | STEL | Short term exposure limit |
| Ceiling | Maximum limit value | * | Skin designation |

Key literature references and sources for data used to compile the SDS

Agency for Toxic Substances and Disease Registry (ATSDR)
 U.S. Environmental Protection Agency ChemView Database
 European Food Safety Authority (EFSA)
 EPA (Environmental Protection Agency)
 Acute Exposure Guideline Level(s) (AEGL(s))
 U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act
 U.S. Environmental Protection Agency High Production Volume Chemicals
 Food Research Journal
 Hazardous Substance Database
 International Uniform Chemical Information Database (IUCLID)
 Japan GHS Classification
 Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)
 NIOSH (National Institute for Occupational Safety and Health)
 National Library of Medicine's ChemID Plus (NLM CIP)
 National Library of Medicine's PubMed database (NLM PUBMED)
 National Toxicology Program (NTP)
 New Zealand's Chemical Classification and Information Database (CCID)
 Organization for Economic Co-operation and Development Environment, Health, and Safety Publications
 Organization for Economic Co-operation and Development High Production Volume Chemicals Program

Organization for Economic Co-operation and Development Screening Information Data Set
World Health Organization

Revision Date 2021-07-06
Revision Note No information available.

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

Notice to Purchaser:

Our products are to be used for research purposes only. They may not be used for any other purpose, including, but not limited to, use in drugs, in vitro diagnostic purposes, therapeutics, or in humans. Our products may not be transferred to third parties, resold, modified for resale, or used to manufacture commercial products or to provide a service to third parties without our prior written approval. Your use of this product is also subject to compliance with the licensing requirements described on the product's web page. It is your responsibility to review, understand and adhere to any restrictions imposed by these statements. All other marks are the property of their respective owners. Certain trademarks may not be registered in all jurisdictions.

End of Safety Data Sheet