# Safety Data Sheet

This safety data sheet was created pursuant to the requirements of:
Regulation (EC) No. 1907/2006 and Regulation (EC) No. 1272/2008

**Revision Date** 2025-01-14 **Revision Number** 6

## SECTION 1: Identification of the substance/mixture and of the company/undertaking

### 1.1. Product identifier

**Product Code** 636693

**Product Name** qPCR Human Reference cDNA, oligo(dT)-primed

**Pure substance/mixture** Mixture

### 1.2. Relevant identified uses of the substance or mixture and uses advised against

**Identified uses** For research use only. Not for use in diagnostic procedures

**Uses advised against** No information available

### 1.3. Details of the supplier of the safety data sheet

**Supplier**

USA:
Takara Bio USA, Inc.
2560 Orchard Parkway
San Jose, CA 95131, USA
Phone: 800.662.2566/888.251.6618
Web: www.takarabio.com

Europe:
Takara Bio Europe S.A.S.
34, Rue de la Croix de Fer
78100 Saint-Germain-en-Laye, France
Phone: +33.1.39.04.68.80
Web: www.takarabio.com

Europe:
Takara Bio Europe AB
Arvid Wallgrens Backe 20,
SE-413 46 Göteborg, Sweden
Phone: +46.31.758.09.00
Web: www.takarabio.com

India:
DSS Takara Bio India Pvt. Ltd.
A-5 Mohan Co-operative Industrial Estate, Mathura Road,
New Delhi 110044, India
Phone: +91.1800.212.4922 (Toll free)
Web: www.takarabio.com

For further information, please contact:

### 1.4. 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).

| | |
|---|---|
| **Italy** | Marco Marano |

| | |
|---|---|
| | CAV “Osp. Pediatrico Bambino Gesù” Dip. Emergenza e Accettazione DEA<br>Roma, Piazza Sant'Onofrio,4 00165<br>0668593726 |

## SECTION 2: Hazards identification

**2.1. Classification of the substance or mixture**

*Classification according to*
*Regulation (EC) No. 1272/2008 [CLP]*
This mixture is classified as not hazardous according to regulation (EC) 1272/2008 [CLP]

**2.2. Label elements**

This mixture is classified as not hazardous according to regulation (EC) 1272/2008 [CLP]
**Hazard statements**
This mixture is classified as not hazardous according to regulation (EC) 1272/2008 [CLP]
EUH210 - Safety data sheet available on request

**2.3. Other hazards**

Causes mild skin irritation.

## SECTION 3: Composition/information on ingredients

**3.1 Substances**

Not applicable

**3.2 Mixtures**

| Chemical name | Weight-% | REACH registration number | EC No (EU Index No) | Classification according to Regulation (EC) No. 1272/2008 [CLP] | Specific concentration limit (SCL) | M-Factor | M-Factor (long-term) |
|---|---|---|---|---|---|---|---|
| Glycerol<br>56-81-5 | 1 - 5 | No data available | 200-289-5 | No data available | - | - | - |
| ACETIC ACID, GLACIAL<br>64-19-7 | 0.1 - 1 | No data available | 200-580-7<br>(607-002-00-6) | Flam. Liq. 3 (H226)<br>Skin Corr. 1A (H314) | Eye Irrit. 2 :: 10%<=C<25%<br>Skin Corr. 1A :: C>=90%<br>Skin Corr. 1B :: 25%<=C<90%<br>Skin Irrit. 2 :: 10%<=C<25% | - | - |

**Full text of H- and EUH-phrases: see section 16**

*Acute Toxicity Estimate*
*If LD50/LC50 data is not available or does not correspond to the classification category, then the appropriate conversion value from CLP Annex I, Table 3.1.2, is used to calculate the acute toxicity estimate (ATEmix) for classifying a mixture based on its components*

| Chemical name | Oral LD50 mg/kg | Dermal LD50 mg/kg | Inhalation LC50 - 4 hour - dust/mist - mg/L | Inhalation LC50 - 4 hour - vapor - mg/L | Inhalation LC50 - 4 hour - gas - ppm |
|---|---|---|---|---|---|
| Glycerol<br>56-81-5 | 27200 | 10000 | 5.85 | No data available | No data available |

| Chemical name | Oral LD50 mg/kg | Dermal LD50 mg/kg | Inhalation LC50 - 4 hour - dust/mist - mg/L | Inhalation LC50 - 4 hour - vapor - mg/L | Inhalation LC50 - 4 hour - gas - ppm |
|---|---|---|---|---|---|
| ACETIC ACID, GLACIAL 64-19-7 | 3310 | 1060 | 11.4 | No data available | No data available |

This product does not contain candidate substances of very high concern at a concentration >=0.1% (Regulation (EC) No. 1907/2006 (REACH), Article 59)

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

**Inhalation** Remove to fresh air.

**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. In the case of skin irritation or allergic reactions see a physician.

**Ingestion** Rinse mouth.

### 4.2. Most important symptoms and effects, both acute and delayed

**Symptoms** Prolonged contact may cause redness and irritation.

### 4.3. Indication of any immediate medical attention and special treatment needed

**Note to physicians** Treat symptomatically.

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

**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.

### 5.2. Special hazards arising from the substance or mixture

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

### 5.3. Advice for firefighters

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

## SECTION 6: Accidental release measures

**6.1. Personal precautions, protective equipment and emergency procedures**

**Personal precautions** Ensure adequate ventilation.

**For emergency responders** Use personal protection recommended in Section 8.

**6.2. Environmental precautions**

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

**6.3. 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** Take up mechanically, placing in appropriate containers for disposal.

**Prevention of secondary hazards** Clean contaminated objects and areas thoroughly observing environmental regulations.

**6.4. Reference to other sections**

**Reference to other sections** See section 8 for more information. See section 13 for more information.

## SECTION 7: Handling and storage

**7.1. Precautions for safe handling**

**Advice on safe handling** Ensure adequate ventilation.

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

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

**Storage Conditions** Keep container tightly closed in a dry and well-ventilated place.

**7.3. Specific end use(s)**

## SECTION 8: Exposure controls/personal protection

**8.1. Control parameters**

**Exposure Limits**

| Chemical name | European Union | Austria | Belgium | Bulgaria | Croatia |
|---|---|---|---|---|---|
| Glycerol<br>56-81-5 | - | - | TWA: 10 mg/m³ | - | TWA: 10 mg/m³ |
| ACETIC ACID, GLACIAL<br>64-19-7 | TWA: 25 mg/m³<br>TWA: 10 ppm<br>STEL: 50 mg/m³<br>STEL: 20 ppm | TWA: 10 ppm<br>TWA: 25 mg/m³<br>STEL 20 ppm<br>STEL 50 mg/m³ | TWA: 10 ppm<br>TWA: 25 mg/m³<br>STEL: 15 ppm<br>STEL: 38 mg/m³ | TWA: 25 mg/m³<br>TWA: 10 ppm<br>STEL: 50 mg/m³<br>STEL: 20 ppm | TWA: 10 ppm<br>TWA: 25 mg/m³<br>STEL: 20 ppm<br>STEL: 50 mg/m³ |
| Chemical name | Cyprus | Czech Republic | Denmark | Estonia | Finland |
| Glycerol<br>56-81-5 | - | TWA: 10 mg/m³<br>Ceiling: 15 mg/m³ | - | TWA: 10 mg/m³ | TWA: 20 mg/m³ |
| ACETIC ACID, GLACIAL<br>64-19-7 | TWA: 10 ppm<br>TWA: 25 mg/m³<br>STEL: 50 mg/m³ | TWA: 25 mg/m³<br>Ceiling: 50 mg/m³ | TWA: 10 ppm<br>TWA: 25 mg/m³<br>STEL: 50 mg/m³ | TWA: 10 ppm<br>TWA: 25 mg/m³<br>STEL: 10 ppm | TWA: 5 ppm<br>TWA: 13 mg/m³<br>STEL: 10 ppm |

| | | | | | |
|---|---|---|---|---|---|
| | STEL: 20 ppm | | STEL: 20 ppm | STEL: 25 mg/m³ | STEL: 25 mg/m³ |
| Chemical name | France | Germany TRGS | Germany DFG | Greece | Hungary |
| Glycerol<br>56-81-5 | TWA: 10 mg/m³ | TWA: 200 mg/m³ | TWA: 200 mg/m³<br>Peak: 400 mg/m³ | TWA: 10 mg/m³ | - |
| ACETIC ACID, GLACIAL<br>64-19-7 | TWA: 10 ppm<br>TWA: 25 mg/m³<br>STEL: 20 ppm<br>STEL: 50 mg/m³ | TWA: 10 ppm<br>TWA: 25 mg/m³ | TWA: 10 ppm<br>TWA: 25 mg/m³<br>Peak: 20 ppm<br>Peak: 50 mg/m³ | TWA: 10 ppm<br>TWA: 25 mg/m³<br>STEL: 15 ppm<br>STEL: 37 mg/m³ | TWA: 10 ppm<br>TWA: 25 mg/m³<br>STEL: 20 ppm<br>STEL: 50 mg/m³ |
| Chemical name | Ireland | Italy MDLPS | Italy AIDII | Latvia | Lithuania |
| ACETIC ACID, GLACIAL<br>64-19-7 | TWA: 10 ppm<br>TWA: 25 mg/m³<br>STEL: 20 ppm<br>STEL: 50 mg/m³ | TWA: 25 ppm<br>TWA: 10 mg/m³<br>STEL: 50 mg/m³<br>STEL: 20 ppm | TWA: 10 ppm<br>TWA: 25 mg/m³<br>STEL: 15 ppm<br>STEL: 37 mg/m³ | TWA: 10 ppm<br>TWA: 25 mg/m³<br>STEL: 50 mg/m³<br>STEL: 20 ppm | TWA: 10 ppm<br>TWA: 25 mg/m³<br>STEL: 50 mg/m³<br>STEL: 20 ppm |
| Chemical name | Luxembourg | Malta | Netherlands | Norway | Poland |
| Glycerol<br>56-81-5 | - | - | - | - | TWA: 10 mg/m³ |
| ACETIC ACID, GLACIAL<br>64-19-7 | TWA: 10 ppm<br>TWA: 25 mg/m³<br>STEL: 50 mg/m³<br>STEL: 20 ppm | TWA: 10 ppm<br>TWA: 25 mg/m³<br>STEL: 20 ppm<br>STEL: 50 mg/m³ | TWA: 10 ppm<br>TWA: 25 mg/m³<br>STEL: 20 ppm<br>STEL: 50 mg/m³ | TWA: 10 ppm<br>TWA: 25 mg/m³<br>STEL: 20 ppm<br>STEL: 50 mg/m³<br>A+ | TWA: 25 mg/m³<br>STEL: 50 mg/m³ |
| Chemical name | Portugal | Romania | Slovakia | Slovenia | Spain |
| Glycerol<br>56-81-5 | TWA: 10 mg/m³ | - | TWA: 10 mg/m³ | TWA: 200 mg/m³<br>STEL: 400 mg/m³ | TWA: 10 mg/m³ |
| ACETIC ACID, GLACIAL<br>64-19-7 | TWA: 10 ppm<br>TWA: 25 mg/m³<br>STEL: 20 ppm<br>STEL: 50 mg/m³ | TWA: 10 ppm<br>TWA: 25 mg/m³<br>STEL: 20 ppm<br>STEL: 50 mg/m³ | TWA: 10 ppm<br>TWA: 25 mg/m³<br>Ceiling: 50 mg/m³ | TWA: 10 ppm<br>TWA: 25 mg/m³<br>STEL: 50 mg/m³<br>STEL: 20 ppm | TWA: 10 ppm<br>TWA: 25 mg/m³<br>STEL: 20 ppm<br>STEL: 50 mg/m³ |

| Chemical name | Sweden | Switzerland | United Kingdom |
|---|---|---|---|
| Glycerol<br>56-81-5 | - | TWA: 50 mg/m³<br>STEL: 100 mg/m³ | TWA: 10 mg/m³<br>STEL: 30 mg/m³ |
| ACETIC ACID, GLACIAL<br>64-19-7 | NGV: 5 ppm<br>NGV: 13 mg/m³<br>Bindande KGV: 10 ppm<br>Bindande KGV: 25 mg/m³ | TWA: 10 ppm<br>TWA: 25 mg/m³<br>STEL: 20 ppm<br>STEL: 50 mg/m³ | TWA: 10 ppm<br>TWA: 25 mg/m³<br>STEL: 20 ppm<br>STEL: 50 mg/m³ |

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

**Derived No Effect Level (DNEL)** No information available.
**Predicted No Effect Concentration (PNEC)** No information available.

**8.2. Exposure controls**

**Personal Protective Equipment**

**Eye/face protection** Wear safety glasses with side shields (or goggles).

**Hand protection** Wear suitable gloves.

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

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

**Environmental exposure controls** No information available.

## SECTION 9: Physical and chemical properties

**9.1. Information on basic physical and chemical properties**

| | |
|---|---|
| **Physical state** | Liquid |
| **Appearance** | Clear, colorless |
| **Color** | Clear |
| **Odor** | Odorless |
| **Odor Threshold** | No information available |

| **Property** | **Values** | **Remarks • Method** |
|---|---|---|
| **Melting point / freezing point** | No data available | None known |
| **Boiling point/boiling range (°C)** | 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 | |
| **Flash point** | No data available | Open cup |
| **Autoignition temperature** | No data available | None known |
| **Decomposition temperature** | | None known |
| **pH** | No data available | None known |
| **pH (as aqueous solution)** | No data available | No information available |
| **Kinematic viscosity** | No data available | None known |
| **Dynamic Viscosity** | 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 |
| **Vapor pressure** | No data available | None known |
| **Relative density** | No data available | None known |
| **Bulk Density** | No data available | |
| **Liquid Density** | No data available | |
| **Vapor density** | No data available | None known |
| **Particle characteristics** | | |
| **Particle Size** | No information available | |
| **Particle Size Distribution** | No information available | |

**9.2. Other information**

*9.2.1. Information with regard to physical hazard classes*
Not applicable

*9.2.2. Other safety characteristics*
No information available

## SECTION 10: Stability and reactivity

**10.1. Reactivity**

**Reactivity** No information available.

**10.2. Chemical stability**

**Stability** Stable under normal conditions.

**Explosion Data**

**Sensitivity to mechanical impact** None.
**Sensitivity to static discharge** None.

**10.3. Possibility of hazardous reactions**

**Possibility of hazardous reactions** None under normal processing.

**10.4. Conditions to avoid**

**Conditions to avoid** None known based on information supplied.

**10.5. Incompatible materials**

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

**10.6. Hazardous decomposition products**

**Hazardous Decomposition Products** None known based on information supplied.

## SECTION 11: Toxicological information

**11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008**

**Information on likely routes of exposure**

**Product Information**

**Inhalation** Specific test data for the substance or mixture is not available.

**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. Causes mild skin irritation.

**Ingestion** Specific test data for the substance or mixture is not available.

**Symptoms related to the physical, chemical and toxicological characteristics**

**Symptoms** Prolonged contact may cause redness and irritation.

**Numerical measures of toxicity**

**Acute toxicity**

**The following values are calculated based on chapter 3.1 of the GHS document**
**ATEmix (oral)** 25,387.70 mg/kg
**ATEmix (dermal)** 21,358.70 mg/kg
**ATEmix (inhalation-dust/mist)** 40.70 mg/l

**Component Information**

| Chemical name | Oral LD50 | Dermal LD50 | Inhalation LC50 |
|---|---|---|---|
| Glycerol | = 27200 mg/kg ( Rat ) | > 10 g/kg ( Rabbit ) | > 5.85 mg/L ( Rat ) 4 h |
| ACETIC ACID, GLACIAL | = 3310 mg/kg ( Rat ) | = 1060 mg/kg ( Rabbit ) | = 11.4 mg/L ( Rat ) 4 h |

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

**Skin corrosion/irritation** Classification based on data available for ingredients. Causes mild skin irritation.

**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.

**Aspiration hazard** No information available.

**11.2. Information on other hazards**

**11.2.1. Endocrine disrupting properties**

**Endocrine disrupting properties** No information available.

**11.2.2. Other information**

**Other adverse effects** No information available.

## SECTION 12: Ecological information

**12.1. Toxicity**

**Ecotoxicity**

**Unknown aquatic toxicity** Contains 73.32392 % of components with unknown hazards to the aquatic environment.

| Chemical name | Algae/aquatic plants | Fish | Toxicity to microorganisms | Crustacea |
|---|---|---|---|---|
| Glycerol | - | LC50: 51 - 57mL/L (96h, Oncorhynchus mykiss) | - | - |
| ACETIC ACID, GLACIAL | - | LC50: =79mg/L (96h, Pimephales promelas) LC50: =75mg/L (96h, Lepomis macrochirus) | - | EC50: =65mg/L (48h, Daphnia magna) |

**12.2. Persistence and degradability**

**Persistence and degradability** No information available.

### 12.3. Bioaccumulative potential

**Bioaccumulation** There is no data for this product.

**Component Information**

| Chemical name | Partition coefficient |
|---|---|
| Glycerol | -1.75 |
| ACETIC ACID, GLACIAL | -0.17 |

### 12.4. Mobility in soil

**Mobility in soil** No information available.

### 12.5. Results of PBT and vPvB assessment

**PBT and vPvB assessment** No information available.

| Chemical name | PBT and vPvB assessment |
|---|---|
| Glycerol | The substance is not PBT / vPvB |
| ACETIC ACID, GLACIAL | The substance is not PBT / vPvB PBT assessment does not apply |

### 12.6. Endocrine disrupting properties

**Endocrine disrupting properties** No information available.

### 12.7. Other adverse effects

No information available.

## SECTION 13: Disposal considerations

### 13.1. 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.

## SECTION 14: Transport information

**IATA**

**14.1 UN number or ID number** Not regulated
**14.2 UN proper shipping name** No information available
**14.3 Transport hazard class(es)** Not regulated
**14.4 Packing group** Not regulated
**14.5 Environmental hazards** Not applicable
**14.6 Special precautions for user**
**Special Provisions** None

**IMDG**

**14.1 UN number or ID number** Not regulated
**14.2 UN proper shipping name** No information available
**14.3 Transport hazard class(es)** Not regulated
**14.4 Packing group** Not regulated
**14.5 Environmental hazards** Not applicable
**14.6 Special precautions for user**

**Special Provisions** None
**14.7 Maritime transport in bulk according to IMO instruments** No information available

**RID**
**14.1 UN number or ID number** Not regulated
**14.2 UN proper shipping name** No information available
**14.3 Transport hazard class(es)** Not regulated
**14.4 Packing group** Not regulated
**14.5 Environmental hazards** Not applicable
**14.6 Special precautions for user**
**Special Provisions** None

**ADR**
**14.1 UN number or ID number** Not regulated
**14.2 UN proper shipping name** No information available
**14.3 Transport hazard class(es)** Not regulated
**14.4 Packing group** Not regulated
**14.5 Environmental hazards** Not applicable
**14.6 Special precautions for user**
**Special Provisions** None

## SECTION 15: Regulatory information

**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**

**National regulations**

**Germany**
**TA Luft (German Air Pollution Control Regulation)**

**European Union**
Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work.

**Authorizations and/or restrictions on use:**
This product contains one or more substance(s) subject to restriction (Regulation (EC) No. 1907/2006 (REACH), Annex XVII)

| Chemical name | Restricted substance per REACH Annex XVII | Substance subject to authorization per REACH Annex XIV |
|---|---|---|
| ACETIC ACID, GLACIAL - 64-19-7 | 75 | - |

**Persistent Organic Pollutants**
Not applicable

**Ozone-depleting substances (ODS) Regulation (EU) 2024/590**
Not applicable

**EU - Plant Protection Products (1107/2009/EC)**

| Chemical name | EU - Plant Protection Products (1107/2009/EC) |
|---|---|
| ACETIC ACID, GLACIAL - 64-19-7 | Plant protection agent |

**Biocidal Products Regulation (EU) No 528/2012 (BPR)**

| Chemical name | Biocidal Products Regulation (EU) No 528/2012 (BPR) |
|---|---|
| ACETIC ACID, GLACIAL - 64-19-7 | Product-type 2: Disinfectants and algaecides not intended |

| | |
|---|---|
| | for direct application to humans or animals Simplified procedure - Category 1 |

**International Inventories**

| | |
|---|---|
| **TSCA** | - |
| **DSL/NDSL** | - |
| **EINECS/ELINCS** | - |
| **ENCS** | - |
| **IECSC** | - |
| **KECI** | - |
| **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 Chemicals Inventory
**PICCS** - Philippines Inventory of Chemicals and Chemical Substances
**AICS** - Australian Inventory of Chemical Substances

**15.2. Chemical safety assessment**

**Chemical Safety Assessment** No information available

## SECTION 16: Other information

**Key or legend to abbreviations and acronyms used in the safety data sheet**

**Legend**
SVHC: Substances of Very High Concern for Authorization:

**Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

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

| Classification procedure | |
|---|---|
| Classification according to Regulation (EC) No. 1272/2008 [CLP] | Method Used |
| Acute oral toxicity | Calculation method |
| Acute dermal toxicity | Calculation method |
| Acute inhalation toxicity - gas | Calculation method |
| Acute inhalation toxicity - vapor | Calculation method |
| Acute inhalation toxicity - dust/mist | Calculation method |
| Skin corrosion/irritation | Calculation method |
| Serious eye damage/eye irritation | Calculation method |
| Respiratory sensitization | Calculation method |
| Skin sensitization | Calculation method |
| Mutagenicity | Calculation method |
| Carcinogenicity | Calculation method |
| Reproductive toxicity | Calculation method |
| STOT - single exposure | Calculation method |
| STOT - repeated exposure | Calculation method |

| | |
|---|---|
| Acute aquatic toxicity | Calculation method |
| Chronic aquatic toxicity | Calculation method |
| Aspiration hazard | Calculation method |
| Ozone | Calculation method |

**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)
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)
National Institute of Technology and Evaluation (NITE)
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)
U.S. 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** 2025-01-14

**This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006**

**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.

**End of Safety Data Sheet**