



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 2025-01-17

Revision Number 20

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

1.1. Product identifier

Product Code 632189

Product Name Shield1

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
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CAV "Osp. Pediatrico Bambino Gesù" Dip. Emergenza e Accettazione DEA Roma, Piazza Sant'Onofrio,4 00165 0668593726

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to
Regulation (EC) No. 1272/2008 [CLP]

Hazardous to the aquatic environment - chronic	Category 2 - (H411)
Flammable liquids	Category 2 - (H225)

2.2. Label elements



Signal word
Danger

Hazard statements

H411 - Toxic to aquatic life with long lasting effects
H225 - Highly flammable liquid and vapor

Precautionary Statements - EU (§28, 1272/2008)

P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking
P273 - Avoid release to the environment
P370 + P378 - In case of fire: Use dry chemical, CO₂, water spray or alcohol-resistant foam to extinguish
P391 - Collect spillage
P403 + P235 - Store in a well-ventilated place. Keep cool
P501 - Dispose of contents and container in accordance with local, regional, national, and international regulations as applicable
P370 + P378 - In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish

Additional information

This product requires tactile warnings if supplied to the general public.

2.3. Other hazards

Toxic to aquatic life.

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)
ETHANOL, 100% (ANHYDROS) 64-17-5	90 - 100	No data available	200-578-6 (603-002-00-5)	Flam. Liq. 2 (H225)	-	-	-

Full text of H- and EUH-phrases: see section 16Acute 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
ETHANOL, 100% (ANHYDROS) 64-17-5	7060	No data available	116.9 133.8	No data available	No data available

This product does not contain candidate substances of very high concern at a concentration $\geq 0.1\%$ (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 immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Do not rub affected area.
Skin contact	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes.
Ingestion	Rinse mouth.
Self-protection of the first aider	Remove all sources of ignition. Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Use personal protective equipment as required. See section 8 for more information.

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

Symptoms	No information available.
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4.3. Indication of any immediate medical attention and special treatment needed

Note to physicians	Treat symptomatically.
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SECTION 5: Firefighting measures**5.1. Extinguishing media**

Suitable Extinguishing Media	Dry chemical. Carbon dioxide (CO ₂). Water spray. Alcohol resistant foam.
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	Risk of ignition. Keep product and empty container away from heat and sources of ignition. In the event of fire, cool tanks with water spray. Fire residues and contaminated fire
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extinguishing water must be disposed of in accordance with local regulations.

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

Evacuate personnel to safe areas. Use personal protective equipment as required. See section 8 for more information. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Keep people away from and upwind of spill/leak. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Pay attention to flashback. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Do not touch or walk through spilled material.

Other information

Ventilate the area.

For emergency responders

Use personal protection recommended in Section 8.

6.2. Environmental precautions

Environmental precautions

Refer to protective measures listed in Sections 7 and 8. Prevent further leakage or spillage if safe to do so. Prevent product from entering drains.

6.3. Methods and material for containment and cleaning up

Methods for containment

Stop leak if you can do it without risk. Do not touch or walk through spilled material. A vapor suppressing foam may be used to reduce vapors. Dike far ahead of spill to collect runoff water. Keep out of drains, sewers, ditches and waterways. Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal.

Methods for cleaning up

Take precautionary measures against static discharges. Dam up. Soak up with inert absorbent material. Pick up and transfer to properly labeled containers.

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

Use personal protection equipment. Avoid contact with skin and eyes. Avoid breathing vapors or mists. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use grounding and bonding connection when transferring this material to prevent static discharge, fire or explosion. Use with local exhaust ventilation. Use spark-proof tools and explosion-proof equipment. Keep in an area equipped with sprinklers. Use according to package label instructions.

General hygiene considerations

Do not eat, drink or smoke when using this product. Contaminated work clothing should not be allowed out of the workplace. Regular cleaning of equipment, work area and clothing is recommended. Wash hands before breaks and immediately after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Storage Conditions

Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from heat, sparks, flame and other sources of ignition (i.e., pilot lights, electric motors and static electricity). Keep in properly labeled containers. Do not store near combustible materials. Keep in an area equipped with sprinklers. Store in accordance with the particular national regulations. Store in accordance with local regulations.

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
ETHANOL, 100% (ANHYDROS) 64-17-5	-	TWA: 1000 ppm TWA: 1900 mg/m ³ STEL 2000 ppm STEL 3800 mg/m ³	TWA: 1000 ppm TWA: 1907 mg/m ³	TWA: 1000 mg/m ³	TWA: 1000 ppm TWA: 1900 mg/m ³
Chemical name	Cyprus	Czech Republic	Denmark	Estonia	Finland
ETHANOL, 100% (ANHYDROS) 64-17-5	-	TWA: 1000 mg/m ³ Ceiling: 3000 mg/m ³	TWA: 1000 ppm TWA: 1900 mg/m ³ STEL: 2000 ppm STEL: 3800 mg/m ³	TWA: 500 ppm TWA: 1000 mg/m ³ STEL: 1000 ppm STEL: 1900 mg/m ³	TWA: 1000 ppm TWA: 1900 mg/m ³ STEL: 1300 ppm STEL: 2500 mg/m ³
Chemical name	France	Germany TRGS	Germany DFG	Greece	Hungary
ETHANOL, 100% (ANHYDROS) 64-17-5	TWA: 1000 ppm TWA: 1900 mg/m ³ STEL: 5000 ppm STEL: 9500 mg/m ³	TWA: 200 ppm TWA: 380 mg/m ³	TWA: 200 ppm TWA: 380 mg/m ³ Peak: 800 ppm Peak: 1520 mg/m ³	TWA: 1000 ppm TWA: 1900 mg/m ³	TWA: 1000 ppm TWA: 1900 mg/m ³ STEL: 2000 ppm STEL: 3800 mg/m ³
Chemical name	Ireland	Italy MDLPS	Italy AIDII	Latvia	Lithuania
ETHANOL, 100% (ANHYDROS) 64-17-5	STEL: 1000 ppm	-	STEL: 1000 ppm STEL: 1884 mg/m ³	TWA: 1000 mg/m ³	TWA: 500 ppm TWA: 1000 mg/m ³ STEL: 1000 ppm STEL: 1900 mg/m ³
Chemical name	Luxembourg	Malta	Netherlands	Norway	Poland
ETHANOL, 100% (ANHYDROS) 64-17-5	-	-	TWA: 137 ppm TWA: 260 mg/m ³ STEL: 1000 ppm STEL: 1900 mg/m ³ Sk*	TWA: 500 ppm TWA: 950 mg/m ³ STEL: 625 ppm STEL: 1187.5 mg/m ³	TWA: 1900 mg/m ³
Chemical name	Portugal	Romania	Slovakia	Slovenia	Spain
ETHANOL, 100% (ANHYDROS) 64-17-5	STEL: 1000 ppm	TWA: 1000 ppm TWA: 1900 mg/m ³ STEL: 5000 ppm STEL: 9500 mg/m ³	TWA: 500 ppm TWA: 960 mg/m ³ Ceiling: 1920 mg/m ³	TWA: 960 mg/m ³ TWA: 500 ppm STEL: 1000 ppm STEL: 1920 mg/m ³	STEL: 1000 ppm STEL: 1910 mg/m ³
Chemical name	Sweden		Switzerland		United Kingdom
ETHANOL, 100% (ANHYDROS) 64-17-5	NGV: 500 ppm NGV: 1000 mg/m ³ Vägledande KGV: 1000 ppm Vägledande KGV: 1900 mg/m ³		TWA: 500 ppm TWA: 960 mg/m ³ STEL: 1000 ppm STEL: 1920 mg/m ³		TWA: 1000 ppm TWA: 1920 mg/m ³ STEL: 3000 ppm STEL: 5760 mg/m ³

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 No information available.

(PNEC)

8.2. Exposure controls**Personal Protective Equipment**

Eye/face protection	Tight sealing safety goggles.
Hand protection	Wear suitable gloves. Impervious gloves.
Skin and body protection	Wear suitable protective clothing. Long sleeved clothing. Chemical resistant apron. Antistatic boots.
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. Contaminated work clothing should not be allowed out of the workplace. Regular cleaning of equipment, work area and clothing is recommended. Wash hands before breaks and immediately after handling the product.
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	Characteristic
Odor Threshold	No information available

Property	Values	Remarks • Method
Melting point / freezing point	No data available	None known
Boiling point/boiling range (°C)	78 °C	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	13 °C	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 Yes.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions None under normal processing.

10.4. Conditions to avoid

Conditions to avoid Heat, flames and sparks.

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.

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

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms No information available.

Numerical measures of toxicity

Acute toxicity

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

ATEmix (oral)	7,062.60 mg/kg
ATEmix (dermal)	99,999.00 mg/kg
ATEmix (inhalation-dust/mist)	116.90 mg/l

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
ETHANOL, 100% (ANHYDROS)	= 7060 mg/kg (Rat)	-	= 116.9 mg/L (Rat) 4 h = 133.8 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.

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 Toxic to aquatic life. Toxic to aquatic life with long lasting effects.

Unknown aquatic toxicity Contains 0 % of components with unknown hazards to the aquatic environment.

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
ETHANOL, 100% (ANHYDROS)	-	LC50: 12.0 - 16.0mg/L (96h, Oncorhynchus mykiss) LC50: >100mg/L (96h, Pimephales promelas) LC50: 13400 - 15100mg/L (96h, Pimephales promelas)	-	LC50: 9268 - 14221mg/L (48h, Daphnia magna) EC50: =2mg/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
ETHANOL, 100% (ANHYDROS)	-0.35

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
ETHANOL, 100% (ANHYDROS)	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 Should not be released into the environment. Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

Contaminated packaging Empty containers pose a potential fire and explosion hazard. Do not cut, puncture or weld containers.

SECTION 14: Transport information

IATA**Notes**

Could not find a Marine Pollutant Name.

14.1 UN number or ID number	UN1993
14.2 UN proper shipping name	Flammable liquid, n.o.s. (ETHANOL, 100% (ANHYDROS))
14.3 Transport hazard class(es)	3
14.4 Packing group	III
Description	UN1993, Flammable liquid, n.o.s. (ETHANOL, 100% (ANHYDROS)), 3, III
14.5 Environmental hazards	Yes
14.6 Special precautions for user	
Special Provisions	A3
ERG Code	3L

IMDG**Notes****Could not find a Marine Pollutant Name.**

14.1 UN number or ID number	UN1993
14.2 UN proper shipping name	Flammable liquid, n.o.s. (ETHANOL, 100% (ANHYDROS))
14.3 Transport hazard class(es)	3
14.4 Packing group	III
Description	UN1993, Flammable liquid, n.o.s., 3, III, (13°C c.c.), Residue: Last Contained
14.5 Environmental hazards	Yes
14.6 Special precautions for user	
Special Provisions	223, 274, 955
F-E, S-E	
14.7 Maritime transport in bulk according to IMO instruments	No information available

RID**Notes****Could not find a Marine Pollutant Name.**

14.1 UN number or ID number	UN1993
14.2 UN proper shipping name	Flammable liquid, n.o.s. (ETHANOL, 100% (ANHYDROS))
14.3 Transport hazard class(es)	3
14.4 Packing group	III
Description	UN1993, Flammable liquid, n.o.s. (ETHANOL, 100% (ANHYDROS)), 3, III
14.5 Environmental hazards	Yes
14.6 Special precautions for user	
Special Provisions	274, 601
Classification code	F1

ADR**Notes****Could not find a Marine Pollutant Name.**

14.1 UN number or ID number	UN1993
14.2 UN proper shipping name	Flammable liquid, n.o.s. (ETHANOL, 100% (ANHYDROS))
14.3 Transport hazard class(es)	3
14.4 Packing group	III
Description	UN1993, Flammable liquid, n.o.s. (ETHANOL, 100% (ANHYDROS)), 3, III, (D/E)
14.5 Environmental hazards	Yes
14.6 Special precautions for user	
Special Provisions	274, 601
Classification code	F1
Tunnel restriction code	(D/E)

SECTION 15: Regulatory information**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture****National regulations****France****Occupational Illnesses (R-463-3, France)**

Chemical name	French RG number	Title
ETHANOL, 100% (ANHYDROS) 64-17-5	RG 84	-

Netherlands

Chemical name	Netherlands - List of Carcinogens	Netherlands - List of Mutagens	Netherlands - List of Reproductive Toxins
ETHANOL, 100% (ANHYDROS)	Present	-	Fertility Category 1A Development Category 1A Can be harmful via breastfeeding

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 does not contain substances subject to authorization (Regulation (EC) No. 1907/2006 (REACH), Annex XIV) This product does not contain substances subject to restriction (Regulation (EC) No. 1907/2006 (REACH), Annex XVII)

Persistent Organic Pollutants

Not applicable

Dangerous substance category per Seveso Directive (2012/18/EU)

P5a - FLAMMABLE LIQUIDS

P5b - FLAMMABLE LIQUIDS

P5c - FLAMMABLE LIQUIDS

E2 - Hazardous to the Aquatic Environment in Category Chronic 2

Ozone-depleting substances (ODS) Regulation (EU) 2024/590

Not applicable

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

Chemical name	Biocidal Products Regulation (EU) No 528/2012 (BPR)
ETHANOL, 100% (ANHYDROS) - 64-17-5	Product-type 1: Human hygiene Product-type 2: Disinfectants and algicides not intended for direct application to humans or animals Product-type 4: Food and feed area

International Inventories

TSCA	-
DSL/NDL	-
EINECS/ELINCS	-
ENCS	-
IECSC	-
KECI	-
PICCS	-
AICS	-

Legend:

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

DSL/NDL - 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

Full text of any hazard and/or precautionary statements referred to under Sections 2-15

H225 - Highly flammable liquid and vapor

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 2025-01-17

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