

Issuing Date 25-Mar-2021
Revision date 14-Mar-2023
Revision Number 2

1. Identification

Product Name ThreeBond 1809B

Details of the supplier of the safety data sheet

Supplier

ThreeBond Fine Chemical Co., Ltd.
1-1 Oyama-cho, Midori-ku, Sagamihara-shi, Kanagawa 252-0146 Japan

Emergency telephone number

+81-42-703-7126 (Inquiries regarding SDS content)
+81-42-670-5333 (Inquiries regarding the product or SDS claim)

Recommended use of the chemical and restrictions on use

Recommended use Antirust, lubricant

Restrictions on use

Please be sure to confirm in advance the appropriateness and safety of using the product for the relevant application. If the product is to be used for applications other than those recommended, please seek professional judgment. This product is for industrial use and its use for household and medical implants is prohibited.

2. Hazard(s) identification

GHS Classification

Acute toxicity - Oral	Classification not possible
Acute toxicity - Dermal	Classification not possible
Acute toxicity - Inhalation (Gases)	Classification not applicable
Acute toxicity - Inhalation (Vapors)	Classification not possible
Acute toxicity - Inhalation (Dusts/Mists)	Classification not possible
Skin corrosion/irritation	Classification not possible
Serious eye damage/eye irritation	Classification not possible
Respiratory sensitization	Classification not possible
Skin sensitization	Classification not possible
Germ cell mutagenicity	Classification not possible
Carcinogenicity	Category 1A
Reproductive toxicity	Classification not possible
Effects on or via lactation	Classification not possible
Specific target organ toxicity (single exposure)	Classification not possible
Specific target organ toxicity (repeated exposure)	Category 2
Category 2 Respiratory system, liver.	
Aspiration hazard	Classification not possible
Acute aquatic toxicity	Classification not possible
Chronic aquatic toxicity	Classification not possible
Ozone	Classification not possible

GHS label elements

**Signal word**

Danger

Hazard statements

H350 - May cause cancer

H373 - May cause damage to organs through prolonged or repeated exposure

May cause damage to the following organs through prolonged or repeated exposure: Respiratory system, liver.

Precautionary statements**Prevention**

- Do not handle until all safety precautions have been read and understood
- Wear protective gloves/protective clothing/eye protection/face protection
- Do not breathe dust/fume/gas/mist/vapors/spray
- Obtain special instructions or technical data sheet before use

Response

- IF exposed or concerned: Get medical advice/attention

Storage

- Store locked up

Disposal

- Dispose of contents/container to an approved waste disposal plant

Other hazards

No information available.

3. Composition/information on ingredients

Pure substance/mixture

Mixture

Chemical name	CAS No	Weight-%	ENCS Number	ISHL No
Diethylene glycol monobutyl ether	112-34-5	1.8	(7)-97,(2)-422	(7)-97,(2)-422
Mineral oil	-	70-<80		
Lubricant additive	-	10-<20		
Organic molybdenum compound	-	1-<5		
Additive	-	0.1-<1		

Until March 31, 2023 Pollutant Release and Transfer Register (PRTR)

Not applicable

After April 1, 2023 Pollutant Release and Transfer Register (PRTR)

The amount of the relevant substance in certain cases referenced in article 4(i)(a) or 4(i)(b) of the Enforcement Order of the Act on Confirmation, etc. of Release Amounts of Specific Chemical Substances in the Environment and Promotion of Improvements to the Management Thereof (PRTR Act) is calculated based on the conversion factors shown (with safety factor = 1 in cases where conversion factor information is not available)

Chemical name	Cabinet order name	Metal, CN, F, etc	Conversion coefficient	Content rate %	Category	Ordinance number	Control number
Diethylene glycol monobutyl ether	Diethylene Glycol Monobutyl Ether			1.8	Class I designated chemical substance	1-170	627

Industrial Safety and Health Law**ISHL Notifiable Substances**

Article 57-2 of the ISHL, Article 18-2, Item 1, Item 2, Table 9 and Item 3, Table 3 of Order for Enforcement

Chemical name	CAS No	Category	Ordinance number
Diethylene glycol monobutyl ether	112-34-5	ISHL Notifiable Substances	Attached table 9-224-3
Mineral oil	-	ISHL Notifiable Substances	Attached table 9-168
Organic molybdenum compound	-	ISHL Notifiable Substances	Attached table 603

Harmful Substances Whose Names Are to be Indicated on the Label

Article 57 of ISHL, Article 18, Item 1, Item 2, Table 9 and Item 3, Table 3 of Order for Enforcement

Chemical name	CAS No	Category	Ordinance number
Diethylene glycol monobutyl ether	112-34-5	Harmful Substances Whose Names Are to be Indicated on the Label	Attached table 9-224-3
Mineral oil	-	Harmful Substances Whose Names Are to be Indicated on the Label	Attached table 9-168
Organic molybdenum compound	-	Harmful Substances Whose Names Are to be Indicated on the Label	Attached table 9-603

Poisonous and Deleterious Substances Control Law

Not applicable

Act on the Evaluation of Chemical Substances and Regulation of Their Manufacture, etc. (CSCL)

Not applicable

4. First-aid measures

General advice	IF exposed or concerned: Get medical advice/attention. Show this safety data sheet to the doctor in attendance.
In case of inhalation	Remove to fresh air.
In case of skin contact	Wash skin with soap and water.
In case of eye contact	Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.
In case of ingestion	Clean mouth with water and drink afterwards plenty of water.
Most important symptoms/effects, acute and delayed	No information available.
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.
Unsuitable extinguishing media	Do not scatter spilled material with high pressure water streams.
Specific hazards arising from the chemical	No information available.
Special Extinguishing Media	Cool container with water spray.
Special protective equipment and	Firefighters should wear self-contained breathing apparatus and full firefighting turnout

precautions for fire-fighters gear. Use personal protection equipment.

Other information CAUTION: Use of water spray when fighting fire may be inefficient.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas.

For emergency responders Use personal protection recommended in Section 8.

Environmental precautions See Section 12 for additional Ecological Information.

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.

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

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

7. Handling and storage

Handling

Advice on safe handling Take equipment measures listed in Section 8. Wear protection gear. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation.

Hygiene Measures Do not eat, drink or smoke when using this product. Wash hands before breaks and immediately after handling the product.

Storage

Storage Conditions Refer to technical data sheet or material agreement and other documents for storage temperature range.

8. Exposure controls/personal protection

Exposure guidelines

Chemical name	Japan Society of Occupational Health	ISHL Working Environmental Evaluation Standards - Administrative Control Levels	ACGIH TLV
Diethylene glycol monobutyl ether 112-34-5	-	-	TWA: 10 ppm inhalable fraction and vapor

Biological occupational exposure limits Not applicable

Engineering controls Showers
Eyewash stations
Ventilation systems.

Environmental exposure controls Install safety shower, hand wash, and eye wash station. Clearly indicate the location. Install local ventilation or seal source of substances.

Personal protective equipment

Respiratory protection	In case of inadequate ventilation wear respiratory protection.
Hand protection	Wear suitable gloves.
Eye/face protection	Wear safety glasses with side shields (or goggles).
Skin and body protection	Wear suitable protective clothing.

9. Physical and chemical properties**Information on basic physical and chemical properties**

Physical state	Liquid	
Color	Dark brown	
Odor	Slight odor	
<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
Melting point / freezing point	no data available	
Initial boiling point and boiling range	Not available	
Flammability	no data available	
Upper/lower flammability or explosive limits		
Upper flammability or explosive limits	no data available	
Lower flammability or explosive limits	no data available	
Flash point	218 °C	Cleveland open cup
Evaporation rate	no data available	
Autoignition temperature	no data available	
Decomposition temperature	no data available	
pH	no data available	
Viscosity		
Kinematic viscosity		
Dynamic viscosity	120 mPa •s	
Water solubility	Slightly soluble	
Solubility(ies)	no data available	
Partition Coefficient (n-octanol/water)	no data available	
Vapor pressure	no data available	
Density and/or relative density		
Relative density	0.91	
Liquid Density	no data available	
Bulk density	no data available	
Relative vapor density	no data available	
Particle characteristics		
Particle Size	no data available	
Particle Size Distribution	no data available	
<u>Other information</u>		
Explosive properties	no data available	
Oxidizing properties	no data available	

10. Stability and reactivity

Chemical stability	Stable under normal conditions.
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Possibility of hazardous reactions React with strong oxidizing agent. Could cause fire.

Conditions to avoid heating.

Incompatible materials Strong oxidizing agents.

Hazardous decomposition products May generate harmful gas by incineration.

11. Toxicological information

Acute toxicity

Numerical measures of toxicity - Product Information

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

ATEmix (oral) 29,028.60 mg/kg
ATEmix (dermal) 9,676.20 mg/kg

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Diethylene glycol monobutyl ether	= 5660 mg/kg (Rat)	= 2700 mg/kg (Rabbit)	-

Abbreviations and acronyms

Rat: Rat

Rabbit: Rabbit

Symptoms No information available.

Product Information

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

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

Skin contact 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 corrosion/irritation Based on available data, the classification criteria are not met. Classification not possible.

Serious eye damage/eye irritation Based on available data, the classification criteria are not met. Classification not possible.

Respiratory or skin sensitization Classification not possible.

Germ cell mutagenicity Based on available data, the classification criteria are not met. Classification not possible.

Carcinogenicity Contains a known or suspected carcinogen. Classification based on data available for ingredients. May cause cancer.

The table below indicates whether each agency has listed any ingredient as a carcinogen.

Legend

IARC (International Agency for Research on Cancer)

Group 1 - Carcinogenic to Humans

Reproductive toxicity Based on available data, the classification criteria are not met. Classification not possible.

STOT - single exposure Based on available data, the classification criteria are not met. Classification not possible.

STOT - repeated exposure May cause damage to organs through prolonged or repeated exposure.

May cause damage to the following organs through prolonged or repeated exposure: Respiratory system, liver.

Aspiration hazard Based on available data, the classification criteria are not met. Classification not possible.

12. Ecological information

Ecotoxicity Classification not possible.

Chemical name	Algae/aquatic plants	Fish	Crustacea
Diethylene glycol monobutyl ether	EC50: >100mg/L (96h, <i>Desmodesmus subspicatus</i>)	LC50: =1300mg/L (96h, <i>Lepomis macrochirus</i>)	EC50: >100mg/L (48h, <i>Daphnia magna</i>)

Percentage for unknown hazards 0 % of the mixture consists of component(s) of unknown hazards to the aquatic environment.

Persistence and degradability No information available.

Bioaccumulation

Component Information

Chemical name	Partition coefficient
Diethylene glycol monobutyl ether 112-34-5	1

Mobility in soil No information available.

Hazardous to the ozone layer Classification not possible. Based on available data, the classification criteria are not met.

Other adverse effects No information available.

13. Disposal considerations

Waste from residues/unused products Dispose of in accordance with national, state and local regulations. Consult industrial waste management companies for waste. Do not release this product to natural environment nor reclaim.

Contaminated packaging Dispose containers as same as residual of this product.

14. Transport information

IMDG Not regulated

ADR Not regulated

IATA Not regulated

Japan

Not regulated

15. Regulatory information**National regulations****Until March 31, 2023** Pollutant Release and Transfer Register (PRTR)

Not applicable

After April 1, 2023 Pollutant Release and Transfer Register (PRTR)

Applies See section 3 for more information

Industrial Safety and Health Law**Harmful Substances Whose Names Are to be Indicated on the Label**

Article 57 of ISHL, Article 18, Item 1, Item 2, Table 9 and Item 3, Table 3 of Order for Enforcement

ISHL Notifiable Substances

Article 57-2 of the ISHL, Article 18-2, Item 1, Item 2, Table 9 and Item 3, Table 3 of Order for Enforcement

Poisonous and Deleterious Substances Control Law

Not applicable

Explosives Control Law

Not applicable

High Pressure Gas Safety Act

Not applicable

Fire Service Law:

Flammable liquids, group 4, 4th class petroleums, hazard rank III, 6000 liters

Act on the Evaluation of Chemical Substances and Regulation of Their Manufacture, etc. (CSCL)

Not applicable

16. Other information**Issuing Date**

25-Mar-2021

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

TWA	TWA (time-weighted average)	Ceiling	Maximum limit value
*	Skin designation	+	Sensitizers

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

JIS Z 7252:2019 Classification of chemicals based on "Globally Harmonized System of Classification and Labelling of Chemicals (GHS)". JIS Z 7253:2019 Hazard communication of chemicals based on GHS-Labeling and Safety Data Sheet (SDS).

Disclaimer

This SDS complies with the requirements of JIS Z 7252:2019 and JIS Z 7253:2019 (Japan). 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.