ThreeBond

SAFETY DATA SHEET

Issue date 18-Mar-2021 **Revision Date** 18-Mar-2021 **Revision Number** 1

1. Identification

Product name ThreeBond 1804 (Aerosol)

Recommended use of the chemical and restrictions on use

Recommended use Antirust, lubricant

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)
+81-42-670-5333 (Inquiries regarding product specifications)

2. Hazard(s) identification

GHS - Classification

Aerosols	Category 1
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	Classification not possible
Reproductive toxicity	Classification not possible
Effects on or via lactation	No effects on or via lactation
Specific target organ toxicity (single exposure)	Category 1
Category 1 circulatory system.	
Category 3 Target organ effects: Narcotic effects.	
Specific target organ toxicity (repeated exposure)	Category 1
Category 1 Central nervous system.	
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
H370 - Causes damage to organs
H336 - May cause drowsiness or dizziness
H372 - Causes damage to organs through prolonged or repeated exposure
H222 - Extremely flammable aerosol
H229 - Pressurized container: May burst if heated
H370 - Causes damage to the following organs: circulatory system.
H372 - Causes damage to the following organs through prolonged or repeated exposure: Central nervous system.

Precautionary statements
Prevention
Do not breathe dust/fume/gas/mist/vapors/spray.
Wash face, hands and any exposed skin thoroughly after handling.
Do not eat, drink or smoke when using this product.
Use only outdoors or in a well-ventilated area.
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
Do not pierce or burn, even after use.
Do not spray on an open flame or other ignition source.

Response
IF exposed or concerned: Call a POISON CENTER or doctor.
Get medical advice/attention if you feel unwell.
Specific treatment (see section 4 on this SDS).
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
Call a POISON CENTER or doctor if you feel unwell.
Storage
Store locked up.
Store in a well-ventilated place. Keep container tightly closed.
Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.
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
Butane	106-97-8	35-<45	(2)-4	-
2-Butoxyethanol	111-76-2	0.1-<1	(2)-407,(2)-2424,(7)-97	(2)-407,(2)-2424,(7)-97
Propane	74-98-6	10-<20	(2)-3	(2)-3
Isoparaffins, petroleum sulfonate-based rust inhibitor	-	25-<35	-	-
Mineral oil	-	5-<15	-	-

This product contains ≥0.1 - <3.0% of substance (s) that are classified for Reproductive toxicity Category 2.

Pollutant Release and Transfer Registry (PRTR)
Not applicable

Industrial Safety and Health Law
ISHL Notifiable Substances
ISHL Notifiable Substances - information (safety data sheet) to be supplied; Industrial Safety and Health Law enforcement order Table 9 (related to Industrial Safety and Health Law article 57-2 and ISHL Ordinance Article 34-2-4)

Chemical name	CAS No	Category	Ordinance number
Butane	106-97-8	ISHL Notifiable Substances	482
2-Butoxyethanol	111-76-2	ISHL Notifiable Substances	079

Mineral oil	-	ISHL Notifiable Substances	168

Harmful Substances Whose Names Are to be Indicated on the Label
Harmful Substances - names to be indicated on the label; Industrial Safety and Health Law enforcement order Table 9 (related to Industrial Safety and Health Law article 57 and ISHL Ordinance Article 33)

Chemical name	CAS No	Category	Ordinance number
Butane	106-97-8	Harmful Substances Whose Names Are to be Indicated on the Label	482
Mineral oil	-	Harmful Substances Whose Names Are to be Indicated on the Label	168

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 Show this safety data sheet to the doctor in attendance.

In case of inhalation Remove to fresh air. IF exposed or concerned: Get medical advice/attention.

In case of skin contact Wash off immediately with plenty of water for at least 15 minutes. If symptoms persist, call a physician.

In case of eye contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Keep eye wide open while rinsing. Do not rub affected area. Get medical attention if irritation develops and persists. If symptoms persist, call a physician.

In case of ingestion Do NOT induce vomiting. Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person. Call a physician.

Most important symptoms/effects, acute and delayed No information available.

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. Wear personal protective clothing (see section 8).

Note to physicians Treat symptomatically.

5. Fire-fighting measures

Suitable Extinguishing Media Dry chemical. Carbon dioxide (CO2). Water spray.

Unsuitable extinguishing media DO NOT EXTINGUISH A LEAKING GAS FIRE UNLESS LEAK CAN BE STOPPED.

Specific hazards arising from the chemical Risk of ignition. Keep product and empty container away from heat and sources of ignition. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. Cylinders may rupture under extreme heat. Damaged cylinders should be handled only by specialists. Containers may explode when heated. In the event of fire, cool container with water spray.

Flammable properties Containers may explode when heated.

Special extinguishing media Cool container with water spray.
Large Fire CAUTION: Use of water spray when fighting fire may be inefficient.

Special protective equipment and precautions 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	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). Take precautionary measures against static discharges. Avoid breathing dust/fume/gas/mist/vapors/spray.
For emergency responders	Use personal protection recommended in Section 8.
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.
Methods for containment	Keep out of drains, sewers, ditches and waterways. Stop leak if you can do it without risk. A vapor suppressing foam may be used to reduce vapors. Dike far ahead of spill to collect runoff water. Flood with water to complete polymerization and scrape off floor.
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.
Other information	Ventilate the area. 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. Use personal protection equipment. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Do not spray on an open flame or other ignition source. Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapors). Use spark-proof tools and explosion-proof equipment. Handle product only in closed system or provide appropriate exhaust ventilation. Keep in an area equipped with sprinklers. Do not puncture or incinerate cans. Contents under pressure. In case of rupture. Avoid contact with skin and eyes. Avoid breathing vapors or mists.
Hygiene Measures	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.

Storage

Storage Conditions	Protect from sunlight. 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. Store in a cool, dry area away from potential sources of heat, open flames, sunlight or other chemicals. Store locked up.

8. Exposure controls/personal protection

Engineering controls	Showers

Eyewash stations
Ventilation systems.

Exposure guidelines

Chemical name	Japan Society of Occupational Health	ISHL Working Environmental Evaluation Standards - Administrative Control Levels	ACGIH TLV
Butane 106-97-8	TWA: 500 ppm TWA: 1200 mg/m^3	-	STEL: 1000 ppm explosion hazard
2-Butoxyethanol 111-76-2	Ceiling: 20 ppm Ceiling: 97 mg/m^3 Skin ISHL/ACL: 25 ppm	25ppm	TWA: 20 ppm
Propane 74-98-6	-	-	: See Appendix F: Minimal Oxygen Content, explosion hazard

Biological occupational exposure limits

Chemical name	Japan Society of Occupational Health	ACGIH
2-Butoxyethanol 111-76-2	200 mg/g creatine - urine (total Butoxyacetic acid) - end of shift	200 mg/g creatinine - urine (Butoxyacetic acid with hydrolysis) - end of shift

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

Personal protective equipment

Respiratory protection In case of inadequate ventilation wear respiratory protection.

Hand protection Impervious gloves.

Eye/face protection Tight sealing safety goggles. Safety glasses with side shields are recommended for medical or industrial exposures.

Skin and body protection Wear suitable protective clothing. Long sleeved clothing. Chemical resistant apron. Antistatic boots.

9. Physical and chemical properties

Information on basic physical and chemical properties

Physical state Liquid
Color Dark brown
Odor Distinct odor

Property	**Values**	**Remarks • Method**
Melting point/freezing point	No data available	
Boiling point / boiling range	No data available	
Combustible	No data available	
Upper/lower flammability or explosive limits	No data available	
Upper flammability limit:		
Lower flammability limit:		
Flash point	79 °C	
Autoignition temperature	No data available	
Decomposition temperature	No data available	

pH	No data available
Kinematic viscosity	No data available
Dynamic viscosity	5 mPa・s
Water solubility	Slightly soluble
Solubility(ies)	No data available
Partition Coefficient (n-octanol/water)	No data available
Vapor pressure	No data available
Vapor density	No data available
Relative density	0.8
Particle characteristics	
Particle Size	No data available
Particle Size Distribution	No data available

10. Stability and reactivity

Stability Stable under normal conditions.

Possibility of hazardous reactions React with strong acid. Could cause fire.

Conditions to avoid Heat

Incompatible materials Strong oxidizing agents

Hazardous decomposition products May generate harmful gas by incineration.

11. Toxicological information

Acute toxicity
Classification not possible.

Numerical measures of toxicity - Product Information

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

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Butane	-	-	= 658 g/m³ (Rat) 4 h
2-Butoxyethanol	= 470 mg/kg (Rat)	= 435 mg/kg (Rabbit)	= 450 ppm (Rat) 4 h = 486 ppm (Rat) 4 h
Propane	-	-	> 800000 ppm (Rat) 15 min

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 Intentional misuse by deliberately concentrating and inhaling contents may be harmful or fatal.

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

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

Chemical name	Japan	IARC
2-Butoxyethanol 111-76-2	-	Group 3

Legend

IARC (International Agency for Research on Cancer)
Group 3 - Not Classifiable as to Carcinogenicity in Humans

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

STOT - single exposure Based on the classification criteria of the Globally Harmonized System as adopted in the country or region with which this safety data sheet complies, this product has been determined to cause systemic target organ toxicity from acute exposure. (STOT SE). Causes damage to organs. May cause drowsiness or dizziness. May cause respiratory irritation.

H370 - Causes damage to the following organs: circulatory system.

STOT - repeated exposure Causes damage to organs through prolonged or repeated exposure.

H372 - Causes damage to the following organs through prolonged or repeated exposure: Central nervous system.

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

12. Ecological information

Ecotoxicity Classification not possible.

Percentage for unknown hazards 0.001 % of the mixture consists of component(s) of unknown hazards to the aquatic environment.

Chemical name	Algae/aquatic plants	Fish	Crustacea
2-Butoxyethanol	-	LC50: =1490mg/L (96h, Lepomis macrochirus) LC50: =2950mg/L (96h, Lepomis macrochirus)	EC50: >1000mg/L (48h, Daphnia magna) >1000: 48 h Daphnia magna mg/L EC50

Persistence and degradability No information available.

Bioaccumulation No data available as this product.

Component Information

Chemical name	Partition coefficient
Butane 106-97-8	2.89
2-Butoxyethanol 111-76-2	0.81
Propane 74-98-6	2.3

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 managent 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

UN/ID No. UN1950
Proper shipping name Aerosols
Description UN1950, Aerosols, 2.1
Hazard class 2.1
Marine pollutant NP
EmS-No F-D, S-U
Special provisions 63,190, 277, 327, 344, 381, 959

ADR

UN/ID No. 1950
Proper shipping name Aerosols
Description 1950, Aerosols, 2.1, (E)
Hazard class 2.1
ERG code 10L
Special provisions 327, 625, 344, 190

IATA

UN/ID No. UN1950
Proper shipping name Aerosols, flammable
Description UN1950, Aerosols, flammable, 2.1
Hazard class 2.1
Special provisions A145, A167, A802

Japanese regulations

UN Number UN1950
Proper shipping name Aerosols
Description UN1950, Aerosols, 2.1
Hazard class 2.1
Special provisions 63, 190, 327, 344, 959

15. Regulatory information

National regulations

Pollutant Release and Transfer Registry (PRTR)

Not applicable

Industrial Safety and Health Law

Harmful Substances Whose Names Are to be Indicated on the Label

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ISHL Notifiable Substances

ISHL Notifiable Substances - information (safety data sheet) to be supplied; Industrial Safety and Health Law enforcement order Table 9 (related to Industrial Safety and Health Law article 57-2 and ISHL Ordinance Article 34-2-4)

ISHL Working Environmental Evaluation Standards - Administrative Control Levels

Subject to working environment measurements (related to Industrial Safety and Health Law Enforcement Order article 21 and Working Environment Evaluation Standards - administrative control levels). For further specification, refer to section 8 of the SDS.

Poisonous and Deleterious Substances Control Law

Not applicable

Explosives Control Law

No

High Pressure Gas Safety Act

Exemption

Fire Service Law:

Flammable liquids, group 4, 3rd class petroleums, water-insoluble, hazard rank III, 2000 liters

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

Not applicable

Ship (Marine Transportation) Safety Act

See section 14 for more information

Civil Aeronautics Act

See section 14 for more information

16. Other information

Revision Date 18-Mar-2021

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

Legend 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

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-Labelling and Safety Data Sheet (SDS).

Disclaimer

This SDS complies with the requirements of JIS Z 7252:2014 and JIS Z 7253:2012 (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.