

BTG_BUTYL_TRIGLYCOL_ETHER

Version 1.5

Date of last issue: 2018/05/15

Revision Date: 2020/10/30

Date of first issue: 04.25.2011

1. PRODUCT AND COMPANY IDENTIFICATION**Product name** : BTG_BUTYL_TRIGLYCOL_ETHER**Recommended use of the chemical and restrictions on use**

Recommended use : Raw material for industry

Restrictions on use : Prohibition of recommendation applications outside of use
The use of biocides as defined in Article 3 of The Act on Safety Management of Consumer Chemical Products and Biocides is restricted**Manufacturer or supplier's details**

Company : LOTTE Chemical Corporation

Address : Lotte World Tower, 300, Olympic-ro, Songpa-gu, Seoul, 05551
Rep. of KOREATelephone : Head-Office 82-2-829-4190
Yeosu Plant(Basic) 82-61-688-2021
Yeosu Plant(Advanced) 82-61-689-1531
Daesan Plant 82-41-689-5800
Ulsan Plant 82-52-278-3421Emergency telephone number : Head-Office 82-2-829-4190
Yeosu Plant(Basic) 82-61-688-2021
Yeosu Plant(Advanced) 82-61-689-1531
Daesan Plant 82-41-689-5800
Ulsan Plant 82-52-278-3421

Telefax : 82-2-834-6070

2. HAZARDS IDENTIFICATION**GHS Classification**

Serious eye damage/eye irritation : Category 2

GHS label elements

Hazard pictograms :



Signal word : Warning

Hazard statements : H319 Causes serious eye irritation.

Precautionary statements

General Information:

P202 Do not handle until all safety precautions have been read and understood.

Prevention:

P264 Wash the contact area thoroughly after handling.

P280 Wear eye protection/ face protection.

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Response:

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P337 + P313 If eye irritation persists: Get medical advice/ attention.

Storage:

P403 + P233 Store in a well-ventilated place. Keep container tightly closed.

Disposal:

P501 Dispose of contents and container according to wastes control act.

Other hazards which do not result in classification

According to our experience and to the information provided to us, the product does not have any harmful effects if it is used and handled as specified.

3. COMPOSITION/INFORMATION ON INGREDIENTS**Components**

Chemical name	Common Name	CAS-No.	KE No.	Concentration (%)
2-(2-(2-butoxyethoxy)ethoxy)ethanol	2-(2-(2-butoxyethoxy)ethoxy)ethanol	143-22-6	KE-04140	>= 95 ~ <= 100

4. FIRST AID MEASURES

General advice	: Move out of dangerous area. Show this safety data sheet to the doctor in attendance. Do not leave the victim unattended.
In case of eye contact	: Flush eyes with water as a precaution. Remove contact lenses. Keep eye wide open while rinsing. If eye irritation persists, consult a specialist.
In case of skin contact	: Immediately flush skin with large amounts of water. Remove contaminated clothing. If irritation develops, get medical attention.
If inhaled	: Remove person to fresh air. If signs/symptoms continue, get medical attention. Oxygen or artificial respiration if needed. Keep patient warm and at rest.
If swallowed	: Keep respiratory tract clear. Do not give milk or alcoholic beverages. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician.
Most important symptoms	: None known.

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and effects, both acute and delayed

Protection of first-aiders : First Aid responders should pay attention to self-protection and use the recommended protective clothing

Notes to physician : In case of ingestion, the stomach should be emptied by gastric lavage under qualified medical supervision. Oxygen, if needed.

5. FIREFIGHTING MEASURES**Suitable and unsuitable extinguishing media**

Suitable extinguishing media : Carbon dioxide (CO₂)
Dry powder
Alcohol-resistant foam
Sand

Unsuitable extinguishing media : No data available

Specific hazards during firefighting : Burning produces irritant fumes.
May release toxic, irritating and/or corrosive gases.
Exposure to decomposition products may be a hazard to health.

Hazardous combustion products : Carbon oxides

Specific extinguishing methods : Standard procedure for chemical fires.
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Extinguish using suitable media, or isolate and allow to burn out.
Cool containers/tanks with water spray.
Collect contaminated fire extinguishing water separately. This must not be discharged into drains.

Special protective equipment for firefighters : Wear self-contained breathing apparatus for firefighting if necessary.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures : Use personal protective equipment.
Refer to protective measures listed in sections 7 and 8.
Evacuate personnel to safe areas.
Remove all sources of ignition.
Ensure adequate ventilation.

Environmental precautions : Do not let product enter drains.
Prevent further leakage or spillage if safe to do so.

Methods and materials for containment and cleaning up : Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).

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Keep in suitable, closed containers for disposal.
Clean contaminated surface thoroughly.

7. HANDLING AND STORAGE

- Advice on safe handling : For personal protection see section 8.
Avoid inhalation, ingestion and contact with skin and eyes.
Use only in area provided with appropriate exhaust ventilation.
Smoking, eating and drinking should be prohibited in the application area.
Keep away from heat.
- Conditions for safe storage : Keep away from sources of ignition - No smoking.
Keep container tightly closed in a dry and well-ventilated place.
Observe label precautions.
Electrical installations / working materials must comply with the technological safety standards.
- Materials to avoid : Keep away from oxidizing agents, strongly alkaline and strongly acid materials in order to avoid exothermic reactions.
- Recommended storage temperature : < 40 °C
- Storage period : 12 Months
- Packaging material : Suitable material: Polypropylene, Stainless steel, Cold Rolled Carbon Steel

8. EXPOSURE CONTROLS/PERSONAL PROTECTION**Components with workplace control parameters**

Contains no substances with occupational exposure limit values.

- Engineering measures** : Handle only in a place equipped with local exhaust (or other appropriate exhaust).

Personal protective equipment

- Respiratory protection : Use respiratory protection (gas mask) unless adequate local exhaust ventilation is provided or exposure assessment demonstrates that exposures are within recommended exposure guidelines.

- Eye protection : Goggles
Always wear eye protection when the potential for inadvertent eye contact with the product cannot be excluded.
Eye wash bottle with pure water
Ensure that eyewash stations and safety showers are close to the workstation location.

- Hand protection
Remarks : The suitability for a specific workplace should be discussed

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	with the producers of the protective gloves. For prolonged or repeated contact use protective gloves.
Skin and body protection	: Industrial safety helmets Safety shoes Impervious clothing Complete suit protecting against chemicals Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place.
Hygiene measures	: General industrial hygiene practice. When using do not smoke. When using do not eat or drink.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	: liquid
Colour	: colourless
Odour	: mild
Odour Threshold	: No data available
pH	: 7
Melting point/freezing point	: -35.2 °C
Boiling point/boiling range	: 278 °C
Flash point	: 131 °C
Evaporation rate	: No data available
Flammability (solid, gas)	: No data available
Flammability (liquids)	: No data available
Burning rate	: No data available
Self-ignition	: No data available
Burning number	: No data available
Upper explosion limit / Upper flammability limit	: Upper flammability limit 3.8 %(V)
Lower explosion limit / Lower flammability limit	: Lower flammability limit 0.8 %(V)
Vapour pressure	: 0.004 hPa (25 °C)
Bulk density	: 990 g/l (20 °C)
Solubility(ies)	

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Water solubility	:	1,000 g/l (25 °C)
Solubility in other solvents	:	Description: miscible with most organic solvents
Relative vapour density	:	7.1 (Air = 1.0)
Relative density	:	0.989
Density	:	0.989 g/cm ³
Partition coefficient: n-octanol/water	:	log Pow: 0.02
Auto-ignition temperature	:	202 °C
Decomposition temperature	:	No data available
Self-Accelerating decomposition temperature (SADT)	:	No data available
Temperature of Polymerisation (SAPT)	:	No data available
Viscosity		
Viscosity, dynamic	:	9.1 mPa.s
Viscosity, kinematic	:	9.2 mm ² /s (25 °C)
Flow time	:	No data available
Solvent separation	:	No data available
Explosive properties	:	Not explosive
Oxidizing properties	:	No data available
Self-heating substances	:	No data available
Heat of combustion	:	No data available
Impact sensitivity	:	No data available
Surface tension	:	0.03 N/m
Conductivity	:	No data available
Molecular weight	:	206.3 g/mol
Minimum explosible dust concentration	:	No data available
Dust deflagration index (Kst)	:	No data available
Dust explosion class	:	No data available
Radioactivity	:	No data available

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Metal corrosion rate	:	No data available
Particle size	:	No data available
Particle Size Distribution	:	No data available

10. STABILITY AND REACTIVITY

Chemical stability and possibility of hazardous reactions	:	Stable under recommended storage conditions. No decomposition if stored and applied as directed. Heating can release hazardous gases.
Conditions to avoid	:	Heat, flames and sparks.
Incompatible materials	:	Combustible material Strong reducing agents
Hazardous decomposition products	:	Carbon oxides Thermal decomposition can lead to release of irritating gases and vapours.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure	:	Inhalation Skin contact
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Health hazard information**Acute toxicity****Product:**

Acute oral toxicity : LD50 (Rat): 5,300 mg/kg

Acute dermal toxicity : LD50 (Rabbit): > 2,000 mg/kg

Skin corrosion/irritation**Product:**

Species: Rabbit

Exposure time: 24 h

Result: Mild skin irritation

Serious eye damage/eye irritation**Product:**

Species: Rabbit

Result: Moderate eye irritation

Exposure time: 24 h

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Respiratory or skin sensitisation

No data available

Carcinogenicity

No data available

Germ cell mutagenicity

No data available

Reproductive toxicity

No data available

STOT - single exposure

No data available

STOT - repeated exposure

No data available

Aspiration toxicity

No data available

12. ECOLOGICAL INFORMATION

Ecotoxicity

No data available

Persistence and degradability

Product:

Biodegradability : Test Type: aerobic
Biodegradation: 77 %
Exposure time: 6 d

Bioaccumulative potential

No data available

Mobility in soil

No data available

Other adverse effects

13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues : Do not dispose of waste into sewer.
Do not contaminate ponds, waterways or ditches with chemical or used container.
Send to a licensed waste management company.

Contaminated packaging : Empty remaining contents.
Dispose of as unused product.
Do not re-use empty containers.

Disposal precautions

Dispose of in accordance with local regulations.

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14. TRANSPORT INFORMATION

International Regulations

UNRTDG

Not regulated as a dangerous good

IATA-DGR

Not regulated as a dangerous good

IMDG-Code

Not regulated as a dangerous good

UN number	: Not applicable
Proper shipping name	: Not applicable
Class	: Not applicable
Subsidiary risk	: Not applicable
Packing group	: Not applicable
Labels	: Not applicable
EmS Code	: Not applicable
Marine pollutant	: Not applicable

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

National Regulations

Refer to section 15 for specific national regulation.

Special precautions for user

Remarks : Not classified as dangerous in the meaning of transport regulations.

15. REGULATORY INFORMATION

National regulatory information

Regulation under the Occupational Safety and Health Act

Harmful Substances Prohibited from Manufacturing

Not applicable

Harmful Substances Required Permission for Manufacture

Not applicable

Hazardous substances requiring management

Not applicable

Controlled Substances Subject to Environment Monitoring

Not applicable

Controlled Substances Subject to Health Examination

Not applicable

Act on the Registration and Evaluation, etc. of Chemical Substances, Chemicals Control Act

Toxic Chemicals

Not applicable

Restricted Chemicals

Not applicable

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Prohibited Chemicals

Not applicable

Toxic Release Inventory

Not applicable

Accident Precaution Chemicals

Not applicable

Dangerous Substances Safety Management Act

Classification : Group 4, Flammable liquids, Type 3 petroleum, Water soluble liquid

Hazard rank : Hazardous rank III

Designated Quantity : 4000 litre

Safety Warning : Keep away from fire

Air Pollution Control Act**Wastes Control Act**

Industrial waste

Follow article 13 of the act to dispose the product waste

Other requirements in domestic and other countries

No data available

16. OTHER INFORMATION**Further information**

Sources of key data used to compile the Safety Data Sheet : KOSHA, ECHA, ICSC, NCIS, TOXNET

Revision number and date

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Other information

Date format : yyyy/mm/dd

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.