



Safety Data Sheet

acc. to 29 CFR 1910.1200 App D

STP Brake Fluid DOT 4

Version number: 3.2
Replaces version of: 2022-07-19 (2)

Revision: 2023-09-11

SECTION 1: Identification

1.1 Product identifier

Trade name

STP Brake Fluid DOT 4

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

Relevant identified uses

General use

1.3 Details of the supplier of the safety data sheet

Energizer Manufacturing, Inc.
25225 Detroit Rd.
Westlake OH 44145
United States

Telephone: 800-383-7323; 314-985-2000 (USA / CANADA)
e-mail: Autocare.regulatory@energizer.com
Website: <http://data.energizer.com>

1.4 Emergency telephone number

Emergency information service

FOR EMERGENCY in USA & Canada CALL +1 800
255-3924 / For International CALL +1 813 248 0585
This number is only available during the following
office hours: Mon-Fri 09:00 AM - 05:00 PM

SECTION 2: Hazard(s) identification

2.1 Classification of the substance or mixture

Classification acc. to OSHA "Hazard Communication Standard" (29 CFR 1910.1200)

Section	Hazard class	Category	Hazard class and category	Hazard state-ment
A.3	serious eye damage/eye irritation	2	Eye Irrit. 2	H319
A.7	reproductive toxicity	2	Repr. 2	H361fd
A.9	specific target organ toxicity - repeated exposure	2	STOT RE 2	H373

For full text of abbreviations: see SECTION 16.

The most important adverse physicochemical, human health and environmental effects

Delayed or immediate effects can be expected after short or long-term exposure.

2.2 Label elements

Labelling acc. to OSHA "Hazard Communication Standard" (29 CFR 1910.1200)

- Signal word warning

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- Pictograms

GHS07, GHS08



- Hazard statements

H319	Causes serious eye irritation.
H361fd	Suspected of damaging fertility. Suspected of damaging the unborn child.
H373	May cause damage to organs (kidney) through prolonged or repeated exposure (if swallowed).

- Precautionary statements

P101	If medical advice is needed, have product container or label at hand.
P102	Keep out of reach of children.
P202	Do not handle until all safety precautions have been read and understood.
P260	Do not breathe dust/fume/gas/mist/vapors/spray.
P280	Wear eye protection/face protection.
P305+P351+P338	If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308+P313	If exposed or concerned: Get medical advice/attention.
P314	Get medical advice/attention if you feel unwell.
P337+P313	If eye irritation persists: Get medical advice/attention.
P405	Store locked up.
P501	Dispose of contents/container in accordance with local/regional/national/international regulations.

- Hazardous ingredients for labelling

Tris[2-[2-(2-methoxyethoxy)ethoxy]ethyl] orthoborate, diethylene glycol, 2-(2-methoxyethoxy)ethanol

2.3 Other hazards

Hazards not otherwise classified

May be harmful if swallowed (GHS category 5: acutely toxic - oral).
May be harmful in contact with skin (GHS category 5: acutely toxic - dermal).

Results of PBT and vPvB assessment

Does not contain a PBT-/vPvB-substance in a concentration of $\geq 0.1\%$.

Endocrine disrupting properties

Does not contain an endocrine disruptor (EDC) in a concentration of $\geq 0.1\%$.

SECTION 3: Composition/information on ingredients

3.1 Substances

Not relevant (mixture)







3.2 Mixtures

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Description of the mixture

Name of substance	Identifier	Wt%	Classification acc. to GHS	Pictograms
Tris[2-[2-(2-methoxyethoxy)ethoxy]ethyl] orthoborate	CAS No 30989-05-0	25 – < 50	Repr. 2 / H361fd	
Triethylene Glycol Butyl Ether	CAS No 143-22-6	25 – < 50	Eye Dam. 1 / H318	
diethylene glycol	CAS No 111-46-6	5 – < 10	Acute Tox. 4 / H302 Acute Tox. 4 / H332 STOT RE 2 / H373	 
2-(2-methoxyethoxy)ethanol	CAS No 111-77-3	1 – < 5	Repr. 2 / H361d	
Diethylene glycol monobutyl ether	CAS No 112-34-5	1 – < 5	Eye Irrit. 2 / H319	

For full text of abbreviations: see SECTION 16.

SECTION 4: First-aid measures

4.1 Description of first-aid measures

General notes

Do not leave affected person unattended. Remove victim out of the danger area. Keep affected person warm, still and covered. Take off immediately all contaminated clothing. In all cases of doubt, or when symptoms persist, seek medical advice. In case of unconsciousness place person in the recovery position. Never give anything by mouth.

Following inhalation

If breathing is irregular or stopped, immediately seek medical assistance and start first aid actions. Provide fresh air.

Following skin contact

Wash with plenty of soap and water.

Following eye contact

Remove contact lenses, if present and easy to do. Continue rinsing. Irrigate copiously with clean, fresh water for at least 10 minutes, holding the eyelids apart.

Following ingestion

Rinse mouth with water (only if the person is conscious). Do NOT induce vomiting.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms and effects are not known to date.

4.3 Indication of any immediate medical attention and special treatment needed

none



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SECTION 5: Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media

Water spray, BC-powder, Carbon dioxide (CO₂)

Unsuitable extinguishing media

Water jet

5.2 Special hazards arising from the substance or mixture

Hazardous combustion products

Carbon monoxide (CO), Carbon dioxide (CO₂)

5.3 Advice for firefighters

In case of fire and/or explosion do not breathe fumes. Coordinate firefighting measures to the fire surroundings. Do not allow firefighting water to enter drains or water courses. Collect contaminated firefighting water separately. Fight fire with normal precautions from a reasonable distance.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Remove persons to safety.

For emergency responders

Wear breathing apparatus if exposed to vapors/dust/aerosols/gases.

6.2 Environmental precautions

Keep away from drains, surface and ground water. Retain contaminated washing water and dispose of it.

6.3 Methods and material for containment and cleaning up

Advice on how to contain a spill

Covering of drains

Advice on how to clean up a spill

Wipe up with absorbent material (e.g. cloth, fleece). Collect spillage: sawdust, kieselgur (diatomite), sand, universal binder

Appropriate containment techniques

Use of adsorbent materials.

Other information relating to spills and releases

Place in appropriate containers for disposal. Ventilate affected area.

6.4 Reference to other sections

Hazardous combustion products: see section 5. Personal protective equipment: see section 8. Incompatible materials: see section 10. Disposal considerations: see section 13.



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SECTION 7: Handling and storage

7.1 Precautions for safe handling

Recommendations

- Measures to prevent fire as well as aerosol and dust generation

Use local and general ventilation. Use only in well-ventilated areas.

Advice on general occupational hygiene

Wash hands after use. Do not eat, drink and smoke in work areas. Remove contaminated clothing and protective equipment before entering eating areas. Never keep food or drink in the vicinity of chemicals. Never place chemicals in containers that are normally used for food or drink. Keep away from food, drink and animal feedingstuffs.

7.2 Conditions for safe storage, including any incompatibilities

7.3 Specific end use(s)

See section 16 for a general overview.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limit values (Workplace Exposure Limits)

Country	Name of agent	CAS No	Identifier	TWA [ppm]	TWA [mg/m ³]	STEL [ppm]	STEL [mg/m ³]	Ceiling-C [ppm]	Ceiling-C [mg/m ³]	Notation	Source
US	diethylene glycol monobutyl ether	112-34-5	TLV®	10						iv	AC-GIH® 2023

Notation

Ceiling-C

iv

STEL

TWA

ceiling value is a limit value above which exposure should not occur

inhalable fraction and vapor

short-term exposure limit: a limit value above which exposure should not occur and which is related to a 15-minute period (unless otherwise specified)

time-weighted average (long-term exposure limit): measured or calculated in relation to a reference period of 8 hours time-weighted average (unless otherwise specified)

Relevant DNELs of components of the mixture

Name of substance	CAS No	Endpoint	Threshold level	Protection goal, route of exposure	Used in	Exposure time
Triethylene Glycol Butyl Ether	143-22-6	DNEL	195 mg/m ³	human, inhalatory	worker (industry)	chronic - systemic effects
Triethylene Glycol Butyl Ether	143-22-6	DNEL	208 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects



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Name of substance	CAS No	End-point	Threshold level	Protection goal, route of exposure	Used in	Exposure time
diethylene glycol	111-46-6	DNEL	44 mg/m ³	human, inhalatory	worker (industry)	chronic - systemic effects
diethylene glycol	111-46-6	DNEL	60 mg/m ³	human, inhalatory	worker (industry)	chronic - local effects
diethylene glycol	111-46-6	DNEL	43 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects
Diethylene glycol monobutyl ether	112-34-5	DNEL	67.5 mg/m ³	human, inhalatory	worker (industry)	chronic - systemic effects
Diethylene glycol monobutyl ether	112-34-5	DNEL	83 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects
Diethylene glycol monobutyl ether	112-34-5	DNEL	67.5 mg/m ³	human, inhalatory	worker (industry)	chronic - local effects
Diethylene glycol monobutyl ether	112-34-5	DNEL	101.2 mg/m ³	human, inhalatory	worker (industry)	acute - local effects
2-(2-methoxyethoxy)ethanol	111-77-3	DNEL	50.1 mg/m ³	human, inhalatory	worker (industry)	chronic - systemic effects
2-(2-methoxyethoxy)ethanol	111-77-3	DNEL	2.22 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects

Relevant PNECs of components of the mixture

Name of substance	CAS No	End-point	Threshold level	Organism	Environmental compartment	Exposure time
Triethylene Glycol Butyl Ether	143-22-6	PNEC	2 mg/l	aquatic organisms	freshwater	short-term (single instance)
Triethylene Glycol Butyl Ether	143-22-6	PNEC	0.2 mg/l	aquatic organisms	marine water	short-term (single instance)
Triethylene Glycol Butyl Ether	143-22-6	PNEC	200 mg/l	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)
Triethylene Glycol Butyl Ether	143-22-6	PNEC	7.7 mg/kg	aquatic organisms	freshwater sediment	short-term (single instance)
Triethylene Glycol Butyl Ether	143-22-6	PNEC	0.77 mg/kg	aquatic organisms	marine sediment	short-term (single instance)
Triethylene Glycol Butyl Ether	143-22-6	PNEC	0.47 mg/kg	terrestrial organisms	soil	short-term (single instance)



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Relevant PNECs of components of the mixture

Name of substance	CAS No	End-point	Threshold level	Organism	Environmental compartment	Exposure time
diethylene glycol	111-46-6	PNEC	10 mg/l	aquatic organisms	freshwater	short-term (single instance)
diethylene glycol	111-46-6	PNEC	1 mg/l	aquatic organisms	marine water	short-term (single instance)
diethylene glycol	111-46-6	PNEC	199.5 mg/l	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)
diethylene glycol	111-46-6	PNEC	20.9 mg/kg	aquatic organisms	freshwater sediment	short-term (single instance)
diethylene glycol	111-46-6	PNEC	2.09 mg/kg	aquatic organisms	marine sediment	short-term (single instance)
diethylene glycol	111-46-6	PNEC	1.53 mg/kg	terrestrial organisms	soil	short-term (single instance)
Diethylene glycol monobutyl ether	112-34-5	PNEC	200 mg/l	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)
Diethylene glycol monobutyl ether	112-34-5	PNEC	1.1 mg/l	aquatic organisms	freshwater	short-term (single instance)
Diethylene glycol monobutyl ether	112-34-5	PNEC	0.11 mg/l	aquatic organisms	marine water	short-term (single instance)
Diethylene glycol monobutyl ether	112-34-5	PNEC	4.4 mg/kg	aquatic organisms	freshwater sediment	short-term (single instance)
Diethylene glycol monobutyl ether	112-34-5	PNEC	0.44 mg/kg	aquatic organisms	marine sediment	short-term (single instance)
Diethylene glycol monobutyl ether	112-34-5	PNEC	0.32 mg/kg	terrestrial organisms	soil	short-term (single instance)
2-(2-methoxyethoxy)ethanol	111-77-3	PNEC	12 mg/l	aquatic organisms	freshwater	short-term (single instance)
2-(2-methoxyethoxy)ethanol	111-77-3	PNEC	1.2 mg/l	aquatic organisms	marine water	short-term (single instance)
2-(2-methoxyethoxy)ethanol	111-77-3	PNEC	10,000 mg/l	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)
2-(2-methoxyethoxy)ethanol	111-77-3	PNEC	44.4 mg/kg	aquatic organisms	freshwater sediment	short-term (single instance)



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Name of substance	CAS No	End-point	Threshold level	Organism	Environmental compartment	Exposure time
2-(2-methoxyethoxy)ethanol	111-77-3	PNEC	0.44 mg/kg	aquatic organisms	marine sediment	short-term (single instance)
2-(2-methoxyethoxy)ethanol	111-77-3	PNEC	2.1 mg/kg	terrestrial organisms	soil	short-term (single instance)

8.2 Exposure controls

Appropriate engineering controls

General ventilation.

Individual protection measures (personal protective equipment)

Eye/face protection

Wear eye/face protection.

Skin protection

- Hand protection

Wear suitable gloves. Chemical protection gloves are suitable, which are tested according to EN 374. Check leak-tightness/impermeability prior to use. In the case of wanting to use the gloves again, clean them before taking off and air them well. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

- Other protection measures

Take recovery periods for skin regeneration. Preventive skin protection (barrier creams/ointments) is recommended. Wash hands thoroughly after handling.

Respiratory protection

In case of inadequate ventilation wear respiratory protection.

Environmental exposure controls

Use appropriate container to avoid environmental contamination. Keep away from drains, surface and ground water.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance



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Physical state	liquid
Color	not determined
Particle	not relevant (liquid)
Odor	characteristic

Other safety parameters

pH (value)	not determined
Melting point/freezing point	not determined
Initial boiling point and boiling range	193 °C at 760 mmHg
Flash point	not determined
Evaporation rate	Not determined
Flammability (solid, gas)	not relevant, (fluid)
Vapor pressure	1.2 hPa at 20 °C
Density	not determined
Vapor density	this information is not available
Relative density	Information on this property is not available
Solubility(ies)	not determined

Partition coefficient

- n-octanol/water (log KOW)	this information is not available
Auto-ignition temperature	202 °C (auto-ignition temperature (liquids and gases))
Viscosity	not determined
Explosive properties	none
Oxidizing properties	none



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9.2 Other information

Temperature class (USA, acc. to NEC 500)

T3 (maximum permissible surface temperature on the equipment:
200°C)

SECTION 10: Stability and reactivity

10.1 Reactivity

Concerning incompatibility: see below "Conditions to avoid" and "Incompatible materials".

10.2 Chemical stability

See below "Conditions to avoid".

10.3 Possibility of hazardous reactions

No known hazardous reactions.

10.4 Conditions to avoid

There are no specific conditions known which have to be avoided.

10.5 Incompatible materials

Oxidizers

10.6 Hazardous decomposition products

Reasonably anticipated hazardous decomposition products produced as a result of use, storage, spill and heating are not known. Hazardous combustion products: see section 5.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Test data are not available for the complete mixture.

Classification procedure

The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

Classification acc. to OSHA "Hazard Communication Standard" (29 CFR 1910.1200)

Acute toxicity

Shall not be classified as acutely toxic.

GHS of the United Nations, annex 4: May be harmful if swallowed or in contact with skin.

Acute toxicity estimate (ATE) of components of the mixture

Name of substance	CAS No	Exposure route	ATE
diethylene glycol	111-46-6	oral	1,120 mg/kg
diethylene glycol	111-46-6	inhalation: vapor	11 mg/l/4h



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Acute toxicity estimate (ATE) of components of the mixture

Name of substance	CAS No	Exposure route	ATE
diethylene glycol	111-46-6	inhalation: dust/mist	>4.6 mg/l/4h

Skin corrosion/irritation

Shall not be classified as corrosive/irritant to skin.

Serious eye damage/eye irritation

Causes serious eye irritation.

Respiratory or skin sensitization

Shall not be classified as a respiratory or skin sensitizer.

Germ cell mutagenicity

Shall not be classified as germ cell mutagenic.

Carcinogenicity

Shall not be classified as carcinogenic.

Reproductive toxicity

Suspected of damaging the unborn child. Suspected of damaging fertility.

Specific target organ toxicity - single exposure

Shall not be classified as a specific target organ toxicant (single exposure).

Specific target organ toxicity - repeated exposure

May cause damage to organs (kidney) through prolonged or repeated exposure (if swallowed).

Hazard category	Target organ	Exposure route
2	kidney	if swallowed

Aspiration hazard

Shall not be classified as presenting an aspiration hazard.

SECTION 12: Ecological information

12.1 Toxicity

Shall not be classified as hazardous to the aquatic environment.

12.2 Persistence and degradability

Data are not available.

12.3 Bioaccumulative potential

Data are not available.



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12.4 Mobility in soil

Data are not available.

12.5 Results of PBT and vPvB assessment

According to the results of its assessment, this substance is not a PBT or a vPvB. Does not contain a PBT-/vPvB-substance in a concentration of $\geq 0.1\%$.

12.6 Endocrine disrupting properties

Does not contain an endocrine disruptor (EDC) in a concentration of $\geq 0.1\%$.

12.7 Other adverse effects

Data are not available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Sewage disposal-relevant information

Do not empty into drains. Avoid release to the environment. Refer to special instructions/safety data sheets.

Waste treatment of containers/packages

Completely emptied packages can be recycled. Handle contaminated packages in the same way as the substance itself.

Remarks

Please consider the relevant national or regional provisions. Waste shall be separated into the categories that can be handled separately by the local or national waste management facilities.

SECTION 14: Transport information

14.1	UN number	not subject to transport regulations
14.2	UN proper shipping name	not relevant
14.3	Transport hazard class(es)	none
14.4	Packing group	not assigned
14.5	Environmental hazards	non-environmentally hazardous acc. to the dangerous goods regulations
14.6	Special precautions for user	There is no additional information.
14.7	Transport in bulk according to IMO instruments	The cargo is not intended to be carried in bulk.

Information for each of the UN Model Regulations

DOT



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Transport of dangerous goods by road or rail (49 CFR US DOT) - Additional information

Not subject to transport regulations.

International Maritime Dangerous Goods Code (IMDG) - Additional information

Not subject to IMDG.

International Civil Aviation Organization (ICAO-IATA/DGR) - Additional information

Not subject to ICAO-IATA.

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations specific for the product in question

National regulations (United States)

Superfund Amendment and Reauthorization Act (SARA TITLE III)

- The List of Extremely Hazardous Substances and Their Threshold Planning Quantities (EPCRA Section 302, 304)

none of the ingredients are listed

- Specific Toxic Chemical Listings (EPCRA Section 313)

none of the ingredients are listed

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)

- List of Hazardous Substances and Reportable Quantities (CERCLA section 102a) (40 CFR 302.4)

none of the ingredients are listed

Clean Air Act

none of the ingredients are listed

Right to Know Hazardous Substance List

- Cleaning Product Right to Know Act Substance List (CA-RTK)

Name of substance	CAS No	Functionality	Authoritative Lists
Triethylene Glycol Butyl Ether			CA TACs
diethylene glycol	111-46-6	solvents	
2-(2-methoxyethoxy)ethanol			CA TACs
Diethylene glycol monobutyl ether		solvents	CA TACs

- Toxic or Hazardous Substance List (MA-TURA)



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Name of substance	CAS No	DEP CODE	PBT / HHS / LHS	PBT / HHS Threshold	De Minimis Concentration Threshold
Triethylene Glycol Butyl Ether		1022			1.0 %
2-(2-methoxyethoxy)ethanol		1022			1.0 %
Diethylene glycol monobutyl ether		1022			1.0 %

- Hazardous Substances List (MN-ERTK)

Name of substance	CAS No	References	Remarks
diethylene glycol	111-46-6	I	

Legend

I American Industrial Hygiene Association (AIHA), "Workplace Environmental Exposure Level Guides" (1992), available from AIHA

- Hazardous Substance List (NJ-RTK)

Name of substance	CAS No	Remarks	Classifications
Triethylene Glycol Butyl Ether			
2-(2-methoxyethoxy)ethanol			
Diethylene glycol monobutyl ether			

- Hazardous Substance List (Chapter 323) (PA-RTK)

Name acc. to inventory	CAS No	Classification
GLYCOL ETHERS		E
ETHANOL, 2-(2-METHOXYETHOXY)-	111-77-3	
GLYCOL ETHERS		E
ETHANOL, 2,2'-OXYBIS-	111-46-6	

Legend

E Environmental hazard

- Hazardous Substance List (RI-RTK)

Name of substance	CAS No	References
diethylene glycol	111-46-6	F

Legend

F Flammability (NFPA®)



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California Environmental Protection Agency (Cal/EPA): Proposition 65 - Safe Drinking Water and Toxic Enforcement Act of 1987

none of the ingredients are listed

Drug precursors, Chemicals designated within the Controlled Substances Act, 21 U.S.C. § 802, paragraphs 34 (list I) and 35 (list II)

none of the ingredients are listed

Industry or sector specific available guidance(s)

NPCA-HMIS® III

Hazardous Materials Identification System. American Coatings Association.

Category	Rating	Description
Chronic	*	chronic (long-term) health effects may result from repeated overexposure
Health	2	temporary or minor injury may occur
Flammability	1	material that must be preheated before ignition can occur
Physical hazard	0	material that is normally stable, even under fire conditions, and will not react with water, polymerize, decompose, condense, or self-react. Non-explosive
Personal protection	-	

NFPA® 704

National Fire Protection Association: Standard System for the Identification of the Hazards of Materials for Emergency Response (United States).

Category	Degree of hazard	Description
Flammability	1	material that must be preheated before ignition can occur
Health	0	material that, under emergency conditions, would offer no hazard beyond that of ordinary combustible material
Instability	0	material that is normally stable, even under fire conditions
Special hazard		

National inventories

Country	Inventory	Status
AU	AIIC	all ingredients are listed
CA	DSL	all ingredients are listed
CN	IECSC	all ingredients are listed
EU	ECSI	all ingredients are listed



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Country	Inventory	Status
EU	REACH Reg.	all ingredients are listed
JP	CSCL-ENCS	all ingredients are listed
JP	ISHA-ENCS	not all ingredients are listed
KR	KECI	all ingredients are listed
MX	INSQ	not all ingredients are listed
NZ	NZIoC	all ingredients are listed
PH	PICCS	all ingredients are listed
TR	CICR	all ingredients are listed
TW	TCSI	all ingredients are listed
US	TSCA	all ingredients are listed (ACTIVE)
VN	NCI	all ingredients are listed

Legend

AIIC	Australian Inventory of Industrial Chemicals
CICR	Chemical Inventory and Control Regulation
CSCL-ENCS	List of Existing and New Chemical Substances (CSCL-ENCS)
DSL	Domestic Substances List (DSL)
ECSI	EC Substance Inventory (EINECS, ELINCS, NLP)
IECSC	Inventory of Existing Chemical Substances Produced or Imported in China
INSQ	National Inventory of Chemical Substances
ISHA-ENCS	Inventory of Existing and New Chemical Substances (ISHA-ENCS)
KECI	Korea Existing Chemicals Inventory
NCI	National Chemical Inventory
NZIoC	New Zealand Inventory of Chemicals
PICCS	Philippine Inventory of Chemicals and Chemical Substances (PICCS)
REACH Reg.	REACH registered substances
TCSI	Taiwan Chemical Substance Inventory
TSCA	Toxic Substance Control Act

15.2 Chemical Safety Assessment

Chemical safety assessments for substances in this mixture were not carried out.

SECTION 16: Other information, including date of preparation or last revision

Indication of changes (revised safety data sheet)

Section	Former entry (text/value)	Actual entry (text/value)	Safety-relevant
2.1		Classification acc. to OSHA "Hazard Communication Standard" (29 CFR 1910.1200): change in the listing (table)	yes



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Replaces version of: 2022-07-19 (2)

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Section	Former entry (text/value)	Actual entry (text/value)	Safety-relevant
2.2		- Hazard statements: change in the listing (table)	yes
2.2		- Precautionary statements: change in the listing (table)	yes
2.2	- Hazardous ingredients for labelling: 2-(2-methoxyethoxy)ethanol, diethylene glycol	- Hazardous ingredients for labelling: Tris[2-[2-(2-methoxyethoxy)ethoxy]ethyl] orthoborate, diethylene glycol, 2-(2-methoxyethoxy)ethanol	yes
2.3	Other hazards: of no significance	Other hazards	yes
2.3		Hazards not otherwise classified	yes
2.3		Hazards not otherwise classified: change in the listing (table)	yes
2.3		Results of PBT and vPvB assessment: Does not contain a PBT-/vPvB-substance in a concentration of $\geq 0.1\%$.	yes
2.3		Endocrine disrupting properties: Does not contain an endocrine disruptor (EDC) in a concentration of $\geq 0.1\%$.	yes
3.2		Description of the mixture: change in the listing (table)	yes
8.1		Occupational exposure limit values (Workplace Exposure Limits): change in the listing (table)	yes
8.1		Relevant DNELs of components of the mixture: change in the listing (table)	yes
8.1		Relevant PNECs of components of the mixture: change in the listing (table)	yes
9.1	Initial boiling point and boiling range: 231 °C at 1 atm	Initial boiling point and boiling range: 193 °C at 760 mmHg	yes
9.1	Vapor pressure: 0.022 mmHg at 25 °C	Vapor pressure: 1.2 hPa at 20 °C	yes
11.1	Acute toxicity: Shall not be classified as acutely toxic.	Acute toxicity: Shall not be classified as acutely toxic. GHS of the United Nations, annex 4: May be harmful if swallowed or in contact with skin.	yes
11.1	Reproductive toxicity: Suspected of damaging the unborn child.	Reproductive toxicity: Suspected of damaging the unborn child. Suspected of damaging fertility.	yes



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Section	Former entry (text/value)	Actual entry (text/value)	Safety-relevant
12.5	Results of PBT and vPvB assessment: Data are not available.	Results of PBT and vPvB assessment: According to the results of its assessment, this substance is not a PBT or a vPvB. Does not contain a PBT-/vPvB-substance in a concentration of $\geq 0.1\%$.	yes
12.6	Endocrine disrupting properties: None of the ingredients are listed.	Endocrine disrupting properties: Does not contain an endocrine disruptor (EDC) in a concentration of $\geq 0.1\%$.	yes
14.3	Transport hazard class(es): not assigned	Transport hazard class(es): none	yes
15.1		National inventories: change in the listing (table)	yes

Abbreviations and acronyms

Abbr.	Descriptions of used abbreviations
49 CFR US DOT	49 CFR U.S. Department of Transportation
ACGIH® 2023	From ACGIH®, 2023 TLVs® and BEIs® Book. Copyright 2023. Reprinted with permission. Information on the proper use of the TLVs® and BEIs®: http://www.acgih.org/tlv-bei-guidelines/policies-procedures-presentations/tlv-bei-position-statement
Acute Tox.	Acute toxicity
ATE	Acute Toxicity Estimate
CAS	Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)
Ceiling-C	Ceiling value
DEP CODE	Department of Environmental Protection Code
DGR	Dangerous Goods Regulations (see IATA/DGR)
DNEL	Derived No-Effect Level
DOT	Department of Transportation (USA)
EINECS	European Inventory of Existing Commercial Chemical Substances
ELINCS	European List of Notified Chemical Substances
Eye Dam.	Seriously damaging to the eye
Eye Irrit.	Irritant to the eye
GHS	"Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Nations
HHS	Higher hazard substance



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Abbr.	Descriptions of used abbreviations
IATA	International Air Transport Association
IATA/DGR	Dangerous Goods Regulations (DGR) for the air transport (IATA)
ICAO	International Civil Aviation Organization
IMDG	International Maritime Dangerous Goods Code
LHS	Lower hazard substance
NFPA®	National Fire Protection Association (United States)
NLP	No-Longer Polymer
NPCA-HMIS® III	National Paint and Coatings Association: Hazardous Materials Identification System - HMIS® III, Third Edition
OSHA	Occupational Safety and Health Administration (United States)
PBT	Persistent, Bioaccumulative and Toxic
PNEC	Predicted No-Effect Concentration
ppm	Parts per million
Repr.	Reproductive toxicity
RTECS	Registry of Toxic Effects of Chemical Substances (database of NIOSH with toxicological information)
STEL	Short-term exposure limit
STOT RE	Specific target organ toxicity - repeated exposure
TLV®	Threshold Limit Values
TWA	Time-weighted average
vPvB	Very Persistent and very Bioaccumulative

Key literature references and sources for data

OSHA Hazard Communication Standard (HCS), 29 CFR 1910.1200.

Transport of dangerous goods by road or rail (49 CFR US DOT). International Maritime Dangerous Goods Code (IMDG). Dangerous Goods Regulations (DGR) for the air transport (IATA).

Classification procedure

Physical and chemical properties: The classification is based on tested mixture.

Health hazards, Environmental hazards: The method for classification of the mixture is based on ingredients of the mixture (additivity formula).



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List of relevant phrases (code and full text as stated in section 2 and 3)

Code	Text
H302	Harmful if swallowed.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H361d	Suspected of damaging the unborn child.
H361fd	Suspected of damaging fertility. Suspected of damaging the unborn child.
H373	May cause damage to organs (kidney) through prolonged or repeated exposure (if swallowed).

Disclaimer

This information is based upon the present state of our knowledge. This SDS has been compiled and is solely intended for this product.