

Safety Data Sheet

acc. to 29 CFR 1910.1200 App D

Royal Reflections Dagger

Version number: GHS 1.0

Date of compilation: 2019-11-19

SECTION 1: Identification

1.1 Product identifier

Trade name **Royal Reflections Dagger**

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

Relevant identified uses Engine cleaner/degreaser

1.3 Details of the supplier of the safety data sheet

Royal Reflections
127 N 8th Street
West Branch, MI 48661

1-877-511-8411

1.4 Emergency telephone number

Emergency information service USA 1.800.535.5053, INTL 1.352.323.3500
24 hour emergency number

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 statement
A.3	serious eye damage/eye irritation	1	Eye Dam. 1	H318
A.9	specific target organ toxicity - repeated exposure	2	STOT RE 2	H373
B.6	flammable liquid	4	Flam. Liq. 4	H227

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. The product is combustible and can be ignited by potential ignition sources.

2.2 Label elements

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

- Signal word **danger**

- Pictograms

GHS05, GHS08



- Hazard statements

H227 Combustible liquid.
H318 Causes serious eye damage.
H373 May cause damage to organs through prolonged or repeated exposure.

- Precautionary statements

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P260 Do not breathe dust/fume/gas/mist/vapors/spray.
P280 Wear protective gloves/protective clothing/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.
P310 Immediately call a poison center/doctor.
P370+P378 In case of fire: Use sand, carbon dioxide or powder extinguisher to extinguish.

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- Precautionary statements

P403+P235

Store in a well-ventilated place. Keep cool.

P501

Dispose of contents/container in accordance with local/regional/national/international regulations.

- Hazardous ingredients for labelling

EDTA, anhydrous, Alcohols, C9-11 ethoxylated, N,N-Diethoxylated-N-coco-N-methylammonium chloride

2.3 Other hazards

This material is combustible, but will not ignite readily.

Hazards not otherwise classified

Toxic to aquatic life with long lasting effects (GHS category 2: aquatic toxicity - acute and/or chronic).

Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

SECTION 3: Composition/information on ingredients

3.1 Substances

Not relevant (mixture)

3.2 Mixtures

Description of the mixture

Name of substance	Identifier	Wt%	Classification acc. to GHS
2-(2-butoxyethoxy)ethanol	CAS No 112-34-5	3 - < 12	Eye Irrit. 2 / H319
EDTA, anhydrous	CAS No 64-02-8	1 - < 3	Acute Tox. 4 / H302 Acute Tox. 4 / H332 Eye Dam. 1 / H318 STOT RE 2 / H373
Alcohols, C9-11 ethoxylated	CAS No 68439-46-3	1 - < 3	Acute Tox. 4 / H302 Acute Tox. 4 / H312 Eye Dam. 1 / H318
N,N-Diethoxylated-N-coco-N-methylammonium chloride	CAS No 61791-10-4	1 - < 3	Eye Dam. 1 / H318
disodium cocoamphodipropionate	CAS No 68604-71-7	1 - < 3	Eye Irrit. 2B / H320 Flam. Liq. 4 / H227
sodium metasilicate, anhydrous	CAS No 6834-92-0	0.1 - < 1	Acute Tox. 4 / H302 Acute Tox. 3 / H331 Skin Corr. 1B / H314 Eye Dam. 1 / H318 STOT SE 3 / H335
methanol	CAS No 67-56-1	0.1 - < 1	Acute Tox. 3 / H301 Acute Tox. 3 / H311 Acute Tox. 3 / H331 STOT SE 1 / H370 Flam. Liq. 2 / H225

Hazardous ingredients, Consideration of other advice

Exact percentage of ingredients is withheld as a trade secret.

For full text of abbreviations: see SECTION 16.

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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

SECTION 5: Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media

Water spray, Alcohol resistant foam, BC-powder, Carbon dioxide (CO₂)

Unsuitable extinguishing media

Water jet

5.2 Special hazards arising from the substance or mixture

In case of insufficient ventilation and/or in use, may form flammable/explosive vapor-air mixture. Solvent vapors are heavier than air and may spread along floors. Places which are not ventilated, e.g. unventilated below ground level areas such as trenches, conduits and shafts, are particularly prone to the presence of flammable substances or mixtures.

Hazardous combustion products

Nitrogen oxides (NO_x), 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.

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6.2 Environmental precautions

Keep away from drains, surface and ground water. Retain contaminated washing water and dispose of it. If substance has entered a water course or sewer, inform the responsible authority.

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.

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. Avoidance of ignition sources. Keep away from sources of ignition - No smoking. Take precautionary measures against static discharge. Use only in well-ventilated areas. Due to danger of explosion, prevent leakage of vapours into cellars, flues and ditches. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting/equipment. Use only non-sparking tools.

- Specific notes/details

Places which are not ventilated, e.g. unventilated below ground level areas such as trenches, conduits and shafts, are particularly prone to the presence of flammable substances or mixtures. Vapors are heavier than air, spread along floors and form explosive mixtures with air. Vapors may form explosive mixtures with air.

- Handling of incompatible substances or mixtures

Do not mix with acids.

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

Managing of associated risks

- Explosive atmospheres

Keep container tightly closed and in a well-ventilated place. Use local and general ventilation. Keep cool. Protect from sunlight.

- Flammability hazards

Keep away from sources of ignition - No smoking. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Take precautionary measures against static discharge. Protect from sunlight.

Control of the effects

Protect against external exposure, such as

Frost

- Ventilation requirements

Use local and general ventilation. Ground/bond container and receiving equipment.

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- Packaging compatibilities

Only packagings which are approved (e.g. acc. to the Dangerous Goods Regulations) may be used.

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	triethanolamine	102-71-6	PEL (CA)		5						Cal/OSHA PEL
US	triethanolamine	102-71-6	TLV®		5						ACGIH® 2019
US	diethylene glycol monobutyl ether	112-34-5	TLV®	10						iv	ACGIH® 2019
US	methanol	67-56-1	TLV®	200		250					ACGIH® 2019
US	methyl alcohol	67-56-1	REL	200 (10 h)	260 (10 h)	250	325				NIOSH REL
US	methyl alcohol	67-56-1	PEL	200	260						29 CFR 1910.1000
US	methyl alcohol (methanol)	67-56-1	PEL (CA)	200	260	250	325	1,000			Cal/OSHA PEL

Notation

Ceiling-C

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

iv

inhalable fraction and vapor

STEL

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)

TWA

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)

Biological limit values						
Country	Name of agent	Parameter	Notation	Identifier	Value	Source
US	methanol	methanol		BEI®	15 mg/l	ACGIH® 2019

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Name of substance	CAS No	End-point	Threshold level	Protection goal, route of exposure	Used in	Exposure time
2-(2-butoxyethoxy)ethanol	112-34-5	DNEL	67.5 mg/m ³	human, inhalatory	worker (industry)	chronic - systemic effects
2-(2-butoxyethoxy)ethanol	112-34-5	DNEL	67.5 mg/m ³	human, inhalatory	worker (industry)	chronic - local effects
2-(2-butoxyethoxy)ethanol	112-34-5	DNEL	101.2 mg/m ³	human, inhalatory	worker (industry)	acute - local effects
2-(2-butoxyethoxy)ethanol	112-34-5	DNEL	83 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects
EDTA, anhydrous	64-02-8	DNEL	1.5 mg/m ³	human, inhalatory	worker (industry)	acute - local effects
EDTA, anhydrous	64-02-8	DNEL	1.5 mg/m ³	human, inhalatory	worker (industry)	chronic - local effects
Alcohols, C9-11 ethoxylated	68439-46-3	DNEL	2,080 mg/kg	human, dermal	worker (industry)	chronic - systemic effects
Alcohols, C9-11 ethoxylated	68439-46-3	DNEL	294 mg/m ³	human, inhalatory	worker (industry)	chronic - systemic effects
sodium metasilicate, anhydrous	6834-92-0	DNEL	6.22 mg/m ³	human, inhalatory	worker (industry)	chronic - systemic effects
sodium metasilicate, anhydrous	6834-92-0	DNEL	1.49 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects
methanol	67-56-1	DNEL	260 mg/m ³	human, inhalatory	worker (industry)	chronic - systemic effects
methanol	67-56-1	DNEL	260 mg/m ³	human, inhalatory	worker (industry)	acute - systemic effects
methanol	67-56-1	DNEL	260 mg/m ³	human, inhalatory	worker (industry)	chronic - local effects
methanol	67-56-1	DNEL	260 mg/m ³	human, inhalatory	worker (industry)	acute - local effects
methanol	67-56-1	DNEL	40 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects
methanol	67-56-1	DNEL	40 mg/kg bw/day	human, dermal	worker (industry)	acute - systemic effects

Relevant PNECs of components of the mixture						
Name of substance	CAS No	End-point	Threshold level	Organism	Environmental compartment	Exposure time
2-(2-butoxyethoxy)ethanol	112-34-5	PNEC	200 mg/l	microorganisms	sewage treatment plant (STP)	short-term (single instance)
2-(2-butoxyethoxy)ethanol	112-34-5	PNEC	4 mg/kg	benthic organisms	sediment	short-term (single instance)
2-(2-butoxyethoxy)ethanol	112-34-5	PNEC	56 mg/kg	(top) predators	water	short-term (single instance)
2-(2-butoxyethoxy)ethanol	112-34-5	PNEC	3.9 mg/l	aquatic organisms	water	intermittent release
2-(2-butoxyethoxy)ethanol	112-34-5	PNEC	0.4 mg/kg	pelagic organisms	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-butoxyethoxy)ethanol	112-34-5	PNEC	1.1 mg/l	aquatic organisms	freshwater	short-term (single instance)
2-(2-butoxyethoxy)ethanol	112-34-5	PNEC	0.11 mg/l	aquatic organisms	marine water	short-term (single instance)
2-(2-butoxyethoxy)ethanol	112-34-5	PNEC	200 mg/l	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)
2-(2-butoxyethoxy)ethanol	112-34-5	PNEC	4.4 mg/kg	aquatic organisms	freshwater sediment	short-term (single instance)
2-(2-butoxyethoxy)ethanol	112-34-5	PNEC	0.44 mg/kg	aquatic organisms	marine sediment	short-term (single instance)
2-(2-butoxyethoxy)ethanol	112-34-5	PNEC	0.32 mg/kg	terrestrial organisms	soil	short-term (single instance)
EDTA, anhydrous	64-02-8	PNEC	2.2 mg/l	aquatic organisms	freshwater	short-term (single instance)
EDTA, anhydrous	64-02-8	PNEC	43 mg/l	microorganisms	sewage treatment plant (STP)	short-term (single instance)
EDTA, anhydrous	64-02-8	PNEC	0.72 mg/kg	terrestrial organisms	soil	short-term (single instance)
EDTA, anhydrous	64-02-8	PNEC	1.2 mg/l	aquatic organisms	water	intermittent release
EDTA, anhydrous	64-02-8	PNEC	0.22 mg/l	aquatic organisms	marine water	short-term (single instance)
Alcohols, C9-11 ethoxylated	68439-46-3	PNEC	0.1038 mg/l	aquatic organisms	freshwater	short-term (single instance)
Alcohols, C9-11 ethoxylated	68439-46-3	PNEC	0.1038 mg/l	aquatic organisms	marine water	short-term (single instance)
Alcohols, C9-11 ethoxylated	68439-46-3	PNEC	1.4 mg/l	microorganisms	sewage treatment plant (STP)	short-term (single instance)
Alcohols, C9-11 ethoxylated	68439-46-3	PNEC	13.7 mg/kg	benthic organisms	sediment	short-term (single instance)
Alcohols, C9-11 ethoxylated	68439-46-3	PNEC	13.7 mg/kg	pelagic organisms	sediment	short-term (single instance)
Alcohols, C9-11 ethoxylated	68439-46-3	PNEC	1 mg/kg	terrestrial organisms	soil	short-term (single instance)
Alcohols, C9-11 ethoxylated	68439-46-3	PNEC	0.014 mg/l	aquatic organisms	water	intermittent release
methanol	67-56-1	PNEC	100 mg/l	microorganisms	sewage treatment plant (STP)	short-term (single instance)
methanol	67-56-1	PNEC	77 mg/kg	benthic organisms	sediment	short-term (single instance)
methanol	67-56-1	PNEC	7.7 mg/kg	pelagic organisms	sediment	short-term (single instance)
methanol	67-56-1	PNEC	1,540 mg/l	aquatic organisms	water	intermittent release
methanol	67-56-1	PNEC	20.8 mg/l	aquatic organisms	freshwater	short-term (single instance)
methanol	67-56-1	PNEC	2.08 mg/l	aquatic organisms	marine water	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
methanol	67-56-1	PNEC	100 mg/l	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)
methanol	67-56-1	PNEC	77 mg/kg	aquatic organisms	freshwater sediment	short-term (single instance)
methanol	67-56-1	PNEC	7.7 mg/kg	aquatic organisms	marine sediment	short-term (single instance)
methanol	67-56-1	PNEC	100 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

Physical state	liquid
Color	yellow
Odor	fresh

Other safety parameters

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pH (value)	12.81 (25 °C) (base)
Melting point/freezing point	not determined
Initial boiling point and boiling range	90 °C
Flash point	61 °C at 101.3 kPa closed cup
Evaporation rate	not determined
Flammability (solid, gas)	not relevant, (fluid)
Explosive limits	not determined
Vapor pressure	31.69 hPa at 25 °C
Density	not determined
Vapor density	this information is not available
Relative density	1.05 at 25 °C (water = 1)
Solubility(ies)	
- Water solubility	miscible in any proportion
Partition coefficient	
- n-octanol/water (log KOW)	this information is not available
Auto-ignition temperature	210 °C
Viscosity	not determined
Explosive properties	none
Oxidizing properties	none
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". The mixture contains reactive substance(s). Risk of ignition.

If heated:

Risk of ignition

10.2 Chemical stability

See below "Conditions to avoid".

10.3 Possibility of hazardous reactions

No known hazardous reactions.

10.4 Conditions to avoid

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

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Hints to prevent fire or explosion

Use explosion-proof electrical/ventilating/lighting/equipment. Use only non-sparking tools. Take precautionary measures against static discharge.

10.5 Incompatible materials

Oxidizers

Release of flammable materials with:

Light metals (due to the release of hydrogen in an acid/alkaline medium)

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.

Acute toxicity estimate (ATE) of components of the mixture			
Name of substance	CAS No	Exposure route	ATE
EDTA, anhydrous	64-02-8	oral	1,913 mg/kg
EDTA, anhydrous	64-02-8	inhalation: dust/mist	1.5 mg/l/4h
Alcohols, C9-11 ethoxylated	68439-46-3	oral	1,200 mg/kg
Alcohols, C9-11 ethoxylated	68439-46-3	dermal	2,000 mg/kg
sodium metasilicate, anhydrous	6834-92-0	oral	1,349 mg/kg
sodium metasilicate, anhydrous	6834-92-0	inhalation: vapor	2.06 mg/l/4h
sodium metasilicate, anhydrous	6834-92-0	inhalation: dust/mist	0.5 mg/l/4h
methanol	67-56-1	oral	100 mg/kg
methanol	67-56-1	dermal	300 mg/kg
methanol	67-56-1	inhalation: vapor	3 mg/l/4h

Skin corrosion/irritation

Shall not be classified as corrosive/irritant to skin.

Serious eye damage/eye irritation

Causes serious eye damage.

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.

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IARC Monographs on the Evaluation of Carcinogenic Risks to Humans

Name of substance	CAS No	Classification	Number
	102-71-6	3	

Legend

3 Not classifiable as to carcinogenicity in humans

Reproductive toxicity

Shall not be classified as a reproductive toxicant.

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 through prolonged or repeated exposure.

Aspiration hazard

Shall not be classified as presenting an aspiration hazard.

SECTION 12: Ecological information

12.1 Toxicity

Toxic to aquatic life with long lasting effects.

Aquatic toxicity (acute) of components of the mixture

Name of substance	CAS No	Endpoint	Value	Species	Exposure time
2-(2-butoxyethoxy)ethanol	112-34-5	LC50	1,300 mg/l	fish	96 h
2-(2-butoxyethoxy)ethanol	112-34-5	EC50	>100 mg/l	aquatic invertebrates	48 h
2-(2-butoxyethoxy)ethanol	112-34-5	ErC50	>100 mg/l	algae	96 h
EDTA, anhydrous	64-02-8	LC50	121 mg/l	fish	96 h
Alcohols, C9-11 ethoxylated	68439-46-3	LC50	8.5 mg/l	fathead minnow	96 h
Alcohols, C9-11 ethoxylated	68439-46-3	EC50	5.3 mg/l	daphnia magna	48 h
Alcohols, C9-11 ethoxylated	68439-46-3	ErC50	1 - 10 mg/l	algae	96 h
disodium cocoamphodipropionate	68604-71-7	LC50	1 - 100 mg/l	fish	72 h
disodium cocoamphodipropionate	68604-71-7	EC50	0.55 - 48 mg/l	algae	72 h
disodium cocoamphodipropionate	68604-71-7	EC50	6.5 mg/l	daphnia	48 h
sodium metasilicate, anhydrous	6834-92-0	LC50	310 mg/l	fish	96 h
sodium metasilicate, anhydrous	6834-92-0	EC50	1,700 mg/l	aquatic invertebrates	48 h
methanol	67-56-1	LC50	15,400 mg/l	fish	96 h
methanol	67-56-1	EC50	12,700 mg/l	fish	96 h

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Aquatic toxicity (acute) of components of the mixture					
Name of substance	CAS No	Endpoint	Value	Species	Exposure time
methanol	67-56-1	ErC50	22,000 mg/l	algae	96 h

Aquatic toxicity (chronic) of components of the mixture					
Name of substance	CAS No	Endpoint	Value	Species	Exposure time
EDTA, anhydrous	64-02-8	EC50	625 mg/l	aquatic invertebrates	24 h
sodium metasilicate, anhydrous	6834-92-0	EC50	>100 mg/l	microorganisms	3 h

12.2 Persistence and degradability

Data are not available.

12.3 Bioaccumulative potential

Data are not available.

12.4 Mobility in soil

Data are not available.

12.5 Results of PBT and vPvB assessment

Data are not available.

12.6 Other adverse effects

Endocrine disrupting potential

None of the ingredients are listed.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Waste treatment-relevant information

Solvent reclamation/regeneration.

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

Only packagings which are approved (e.g. acc. to DOT) may be used. 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.

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SECTION 14: Transport information

14.1 UN number	3082
14.2 UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
14.3 Transport hazard class(es)	
Class	9 (environmentally hazardous)
14.4 Packing group	III (substance presenting low danger)
14.5 Environmental hazards	hazardous to the aquatic environment
14.6 Special precautions for user	
There is no additional information.	
14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code	
The cargo is not intended to be carried in bulk.	


Information for each of the UN Model Regulations

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

Not regulated under DOT until packaged in single containers larger than 119 gallons each - liquid, or 882 lbs each - solid.

Index number	3082
Proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
- Particulars in the shipper's declaration	UN3082, Environmentally hazardous substance, liquid, n.o.s., 9, III
- Reportable quantity (RQ)	4,448,399 lbs (2,019,573 kg) (diethanolamine) (methanol)
Class	9
Packing group	III
Danger label(s)	9, fish and tree
	
Environmental hazards	YES (hazardous to the aquatic environment)
Special provisions (SP)	8, 146, 173, 335, IB3, T4, TP1, TP29
ERG No	171

International Maritime Dangerous Goods Code (IMDG)

UN number	3082
Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
Class	9
Marine pollutant	YES (hazardous to the aquatic environment)
Packing group	III
Danger label(s)	9, fish and tree
	
Special provisions (SP)	274, 335, 969
Excepted quantities (EQ)	E1
Limited quantities (LQ)	5 L


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EmS	F-A, S-F
Stowage category	A
International Civil Aviation Organization (ICAO-IATA/DGR)	
UN number	3082
Proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Class	9
Environmental hazards	yes (hazardous to the aquatic environment)
Packing group	III
Danger label(s)	9, fish and tree
	
Special provisions (SP)	A97, A158, A197
Excepted quantities (EQ)	E1
Limited quantities (LQ)	30 kg

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)

Toxics Release Inventory: Specific Toxic Chemical Listings

Name acc. to inventory	CAS No	Remarks	Effective date
methanol	67-56-1		1986-12-31

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

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

Name of substance	CAS No	Remarks	Statutory code	Final RQ pounds (Kg)
methanol	67-56-1		3 4	5000 (2270)

Legend

3

"3" indicates that the source is section 112 of the Clean Air Act

4

"4" indicates that the source is section 3001 of the Resource Conservation and Recovery Act (RCRA)

Clean Air Act

none of the ingredients are listed

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New Jersey Worker and Community Right to Know Act

Right to Know Hazardous Substance List			
Name acc. to inventory	CAS No	Remarks	Classifications
triethanolamine	102-71-6		
methyl alcohol (methanol) (methanol)	67-56-1		TE F3

Legend

F3 Flammable - Third Degree
TE Teratogenic

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

Proposition 65 List of chemicals					
Name of substance	Name acc. to inventory	CAS No	Wt%	Remarks	Type of the toxicity
methanol	methanol	67-56-1	0.1124		developmental

VOC content

Regulated Volatile Organic Compounds (VOC-EPA): 2.994 %
Regulated Volatile Organic Compounds (VOC-Cal ARB): 2.994 %

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	3	major injury likely unless prompt action is taken and medical treatment is given
Flammability	2	material that must be moderately heated or exposed to relatively high ambient temperatures 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	2	material that must be moderately heated or exposed to relatively high ambient temperatures before ignition can occur
Health	3	material that, under emergency conditions, can cause serious or permanent injury
Instability	0	material that is normally stable, even under fire conditions
Special hazard		

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National inventories

Country	Inventory	Status
CA	DSL	all ingredients are listed
EU	REACH Reg.	not all ingredients are listed
US	TSCA	all ingredients are listed

Legend

DSL Domestic Substances List (DSL)
REACH Reg. REACH registered substances
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

Abbreviations and acronyms

Abbr.	Descriptions of used abbreviations
29 CFR 1910.1000	29 CFR 1910.1000, Tables Z-1, Z-2, Z-3 - Occupational Safety and Health Standards: Toxic and Hazardous Substances (permissible exposure limits)
49 CFR US DOT	49 CFR § 40 U.S. Department of Transportation
ACGIH® 2019	From ACGIH®, 2019 TLVs® and BEIs® Book. Copyright 2019. 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
Cal/OSHA PEL	California Division of Occupational Safety and Health (Cal/OSHA): Permissible Exposure Limits (PELs)
Cal ARB	California Air Resources Board
CAS	Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)
Ceiling-C	Ceiling value
DGR	Dangerous Goods Regulations (see IATA/DGR)
DNEL	Derived No-Effect Level
DOT	Department of Transportation (USA)
EC50	Effective Concentration 50 %. The EC50 corresponds to the concentration of a tested substance causing 50 % changes in response (e.g. on growth) during a specified time interval
EmS	Emergency Schedule
EPA	Environmental Protection Agency. An agency of the federal government of the United States charged with protecting human health and the environment
ErC50	≡ EC50: in this method, that concentration of test substance which results in a 50 % reduction in either growth (EbC50) or growth rate (ErC50) relative to the control
ERG No	Emergency Response Guidebook - Number
Eye Dam.	Seriously damaging to the eye
Eye Irrit.	Irritant to the eye
Flam. Liq.	Flammable liquid
GHS	"Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Nations
IATA	International Air Transport Association
IATA/DGR	Dangerous Goods Regulations (DGR) for the air transport (IATA)

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Abbr.	Descriptions of used abbreviations
ICAO	International Civil Aviation Organization
IMDG	International Maritime Dangerous Goods Code
LC50	Lethal Concentration 50%: the LC50 corresponds to the concentration of a tested substance causing 50 % lethality during a specified time interval
MARPOL	International Convention for the Prevention of Pollution from Ships (abbr. of "Marine Pollutant")
NIOSH REL	National Institute for Occupational Safety and Health (NIOSH): Recommended Exposure Limits (RELs)
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
PEL	Permissible exposure limit
PNEC	Predicted No-Effect Concentration
ppm	Parts per million
RTECS	Registry of Toxic Effects of Chemical Substances (database of NIOSH with toxicological information)
Skin Corr.	Corrosive to skin
Skin Irrit.	Irritant to skin
STEL	Short-term exposure limit
STOT RE	Specific target organ toxicity - repeated exposure
STOT SE	Specific target organ toxicity - single exposure
TLV®	Threshold Limit Values
TWA	Time-weighted average
VOC	Volatile Organic Compounds
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).

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

Code	Text
H225	Highly flammable liquid and vapor.
H227	Combustible liquid.
H301	Toxic if swallowed.
H302	Harmful if swallowed.
H311	Toxic in contact with skin.
H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.

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Code	Text
H319	Causes serious eye irritation.
H320	Causes eye irritation.
H331	Toxic if inhaled.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H370	Causes damage to organs.
H373	May cause damage to organs through prolonged or repeated exposure.

Disclaimer

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