



CHEMISPHERE

Safety Data Sheet

acc. to 29 CFR 1910.1200 App D

Penair M5704A

Version number: 4.0
Replaces version of: 2024-02-20 (3)

Revision: 2024-08-06

SECTION 1: Identification

1.1 Product identifier

Trade name **Penair M5704A**
Alternative number(s) XB14000, XB14000PL5, XB14000DR55
MIL-PRF-85704C Type
NSN 6850-00-181-7594/7597 (5/55 gal).

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

Relevant identified uses Gas Turbine Compressor Cleaning

1.3 Details of the supplier of the safety data sheet

Chemisphere
2101 Clifton Ave
St. Louis MO 63139
United States
Telephone: 314-644-1300
Fax: 314-644-7194
Website: www.ChemisphereCorp.com
Email: jbrooks@chemispherecorp.com

1.4 Emergency telephone number

Emergency information service CHEMTREC: 800-424-9300 (24 Hour)

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.2	skin corrosion/irritation	2	Skin Irrit. 2	H315
A.3	serious eye damage/eye irritation	2	Eye Irrit. 2	H319
A.6	carcinogenicity	2	Carc. 2	H351
A.8R	specific target organ toxicity - single exposure (respiratory tract irritation)	3	STOT SE 3	H335
A.8D	specific target organ toxicity - single exposure (narcotic effects, drowsiness)	3	STOT SE 3	H336
A.10	aspiration hazard	1	Asp. Tox. 1	H304
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

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



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2.2 Label elements

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

- Signal word danger

- Pictograms

GHS07, GHS08



- Hazard statements

H227	Combustible liquid.
H304	May be fatal if swallowed and enters airways.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H351	Suspected of causing cancer.

- Precautionary statements

P202	Do not handle until all safety precautions have been read and understood.
P210	Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P261	Avoid breathing dust/fume/gas/mist/vapors/spray.
P271	Use only outdoors or in a well-ventilated area.
P280	Wear protective gloves/eye protection/face protection.
P301+P310	If swallowed: Immediately call a poison center/doctor.
P302+P352	If on skin: Wash with plenty of water.
P304+P340	If inhaled: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338	If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P312	Call a poison center/doctor if you feel unwell.
P321	Specific treatment (see on this label).
P331	Do NOT induce vomiting.
P362	Take off contaminated clothing and wash before reuse.
P370+P378	In case of fire: Use sand, carbon dioxide or powder extinguisher to extinguish.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.
P403+P235	Store in a well-ventilated place. Keep cool.
P405	Store locked up.
P501	Dispose of contents/container to industrial combustion plant.

- Hazardous ingredients for labelling Aromatic 150, Cocoamide DEA, Diethanolamine 99%

2.3 Other hazards

This material is combustible, but will not ignite readily.

SECTION 3: Composition/information on ingredients

3.1 Substances

Not relevant (mixture)



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3.2 Mixtures

Description of the mixture

Name of substance	Identifier		Wt%
Aromatic 150	CAS No	64742-94-5	50 - < 75
Water	CAS No	7732-18-5	25 - < 50
Polyoxyethylene-polyoxypropylene block copolymer	CAS No	9003-11-6	10 - < 25
nonylphenol, ethoxylated	CAS No	127087-87-0	10 - < 25
EB Ethylene Glycol Butyl Ether	CAS No	111-76-2	10 - < 25
Diethylene Glycol	CAS No	111-46-6	10 - < 25
Cocoamide DEA	CAS No	68603-42-9	5 - < 10
Glycerin USP Kosher	CAS No	56-81-5	0.1 - < 1
Diethanolamine 99%	CAS No	111-42-2	0.1 - < 1
Methanol	CAS No	67-56-1	0.1 - < 1

Remarks

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. In case of respiratory tract irritation, consult a physician. 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

Narcotic effects.

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

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.

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.



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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. 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.

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.

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	diethanolamine	111-42-2	REL	3 (10 h)	15 (10 h)						NIOSH REL
US	diethanolamine	111-42-2	PEL (CA)	0.46	2					H	Cal/OSHA PEL



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Occupational exposure limit values (Workplace Exposure Limits)

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US	diethanolamine	111-42-2	TLV®		1					iv, H	ACGIH® 2024
US	2-butoxyethanol	111-76-2	TLV®	20							ACGIH® 2024
US	2-butoxyethanol	111-76-2	REL	5 (10 h)	24 (10 h)					H	NIOSH REL
US	2-butoxyethanol	111-76-2	PEL	50	240					H	29 CFR 1910.1000
US	2-butoxyethanol (EGBE) (glycol monobutyl ether)	111-76-2	PEL (CA)	20	97					H	Cal/OSHA PEL
US	glycerine	56-81-5	REL							mist, appx-D	NIOSH REL
US	glycerine	56-81-5	PEL		15					mist, dust	29 CFR 1910.1000
US	glycerine	56-81-5	PEL		5					mist, r	29 CFR 1910.1000
US	methanol	67-56-1	TLV®	200		250				H	ACGIH® 2024
US	methyl alcohol	67-56-1	PEL	200	260						29 CFR 1910.1000
US	methyl alcohol	67-56-1	REL	200 (10 h)	260 (10 h)	250	325			H	NIOSH REL
US	methyl alcohol (methanol)	67-56-1	PEL (CA)	200	260	250	325	1,000		H	Cal/OSHA PEL

Notation

appx-D	see Appendix D - Substances with No Established RELs
Ceiling-C	ceiling value is a limit value above which exposure should not occur
dust	as dust
H	absorbed through the skin
iv	inhalable fraction and vapor
mist	as mists
r	respirable fraction
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)



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Biological limit values

Country	Name of agent	Parameter	Notation	Identifier	Value	Source
US	2-butoxyethanol	Butoxyacetic acid (BAA)	hydr, crea	BEI®	200 mg/g	ACGIH® 2024
US	methanol	methanol		BEI®	15 mg/l	ACGIH® 2024

Notation

crea creatinine
hydr hydrolysis

Relevant DNELs of components

Name of substance	CAS No	Endpoint	Threshold level	Protection goal, route of exposure	Used in	Exposure time
EB Ethylene Glycol Butyl Ether	111-76-2	DNEL	98 mg/m ³	human, inhalatory	worker (industry)	chronic - systemic effects
EB Ethylene Glycol Butyl Ether	111-76-2	DNEL	1,091 mg/m ³	human, inhalatory	worker (industry)	acute - systemic effects
EB Ethylene Glycol Butyl Ether	111-76-2	DNEL	246 mg/m ³	human, inhalatory	worker (industry)	acute - local effects
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
Glycerin USP Kosher	56-81-5	DNEL	56 mg/m ³	human, inhalatory	worker (industry)	chronic - local effects
Diethanolamine 99%	111-42-2	DNEL	0.75 mg/m ³	human, inhalatory	worker (industry)	chronic - systemic effects
Diethanolamine 99%	111-42-2	DNEL	0.5 mg/m ³	human, inhalatory	worker (industry)	chronic - local effects
Diethanolamine 99%	111-42-2	DNEL	0.13 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects
Methanol	67-56-1	DNEL	130 mg/m ³	human, inhalatory	worker (industry)	chronic - systemic effects
Methanol	67-56-1	DNEL	130 mg/m ³	human, inhalatory	worker (industry)	acute - systemic effects
Methanol	67-56-1	DNEL	130 mg/m ³	human, inhalatory	worker (industry)	chronic - local effects
Methanol	67-56-1	DNEL	130 mg/m ³	human, inhalatory	worker (industry)	acute - local effects
Methanol	67-56-1	DNEL	20 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects
Methanol	67-56-1	DNEL	20 mg/kg bw/day	human, dermal	worker (industry)	acute - systemic effects



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Relevant PNECs of components						
Name of substance	CAS No	Endpoint	Threshold level	Organism	Environmental compartment	Exposure time
EB Ethylene Glycol Butyl Ether	111-76-2	PNEC	8.8 mg/l	aquatic organisms	freshwater	short-term (single instance)
EB Ethylene Glycol Butyl Ether	111-76-2	PNEC	0.88 mg/l	aquatic organisms	marine water	short-term (single instance)
EB Ethylene Glycol Butyl Ether	111-76-2	PNEC	463 mg/l	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)
EB Ethylene Glycol Butyl Ether	111-76-2	PNEC	34.6 mg/kg	aquatic organisms	freshwater sediment	short-term (single instance)
EB Ethylene Glycol Butyl Ether	111-76-2	PNEC	3.46 mg/kg	aquatic organisms	marine sediment	short-term (single instance)
EB Ethylene Glycol Butyl Ether	111-76-2	PNEC	2.33 mg/kg	terrestrial organisms	soil	short-term (single instance)
Glycerin USP Kosher	56-81-5	PNEC	0.885 mg/l	aquatic organisms	freshwater	short-term (single instance)
Glycerin USP Kosher	56-81-5	PNEC	0.088 mg/l	aquatic organisms	marine water	short-term (single instance)
Glycerin USP Kosher	56-81-5	PNEC	1,000 mg/l	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)
Glycerin USP Kosher	56-81-5	PNEC	3.3 mg/kg	aquatic organisms	freshwater sediment	short-term (single instance)
Glycerin USP Kosher	56-81-5	PNEC	0.33 mg/kg	aquatic organisms	marine sediment	short-term (single instance)
Glycerin USP Kosher	56-81-5	PNEC	0.141 mg/kg	terrestrial organisms	soil	short-term (single instance)
Diethanolamine 99%	111-42-2	PNEC	0.021 mg/l	aquatic organisms	freshwater	short-term (single instance)
Diethanolamine 99%	111-42-2	PNEC	0.002 mg/l	aquatic organisms	marine water	short-term (single instance)
Diethanolamine 99%	111-42-2	PNEC	100 mg/l	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)
Diethanolamine 99%	111-42-2	PNEC	0.096 mg/kg	aquatic organisms	freshwater sediment	short-term (single instance)
Diethanolamine 99%	111-42-2	PNEC	0.009 mg/kg	aquatic organisms	marine sediment	short-term (single instance)
Diethanolamine 99%	111-42-2	PNEC	1.63 mg/kg	terrestrial organisms	soil	short-term (single instance)

8.2 Exposure controls

Appropriate engineering controls
General ventilation.



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Individual protection measures (personal protective equipment)

Eye/face protection

Wear eye/face protection. Use safety goggle with side protection. Wear face-shield.

Skin protection

- Hand protection

Wear suitable gloves.

- Other protection measures

Wash hands thoroughly after handling. Protective clothing against liquid chemicals. Footwear protecting against chemicals.

Respiratory protection

In case of inadequate ventilation wear respiratory protection.

Environmental exposure controls

Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance

Physical state	liquid
Color	Clear amber
Particle	not relevant (liquid)
Odor	mild solvent

Other safety parameters

pH (value)	~9
Melting point/freezing point	30 °F
Initial boiling point and boiling range	100 °C
Flash point	145 °F
Evaporation rate	not determined
Flammability (solid, gas)	not relevant, (fluid)
Vapor pressure	≤3.7 kPa at 37.8 °C
Density	not determined
Vapor density	this information is not available
Relative density	0.95 (air = 1)



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Solubility(ies)	not determined
Partition coefficient	
- n-octanol/water (log KOW)	this information is not available
Auto-ignition temperature	220 °C (auto-ignition temperature (liquids and gases))
Viscosity	not determined
Explosive properties	none
Oxidizing properties	none

9.2 Other information

Liquid content	100 %
Solid content	0.5 %
Temperature class (USA, acc. to NEC 500)	T2D (maximum permissible surface temperature on the equipment: 215°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.

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

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.



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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

Name of substance	CAS No	Exposure route	ATE
nonylphenol, ethoxylated	127087-87-0	oral	500 mg/kg
nonylphenol, ethoxylated	127087-87-0	inhalation: vapor	11 mg/l/4h
EB Ethylene Glycol Butyl Ether	111-76-2	oral	1,414 mg/kg
EB Ethylene Glycol Butyl Ether	111-76-2	inhalation: vapor	11 mg/l/4h
Diethylene Glycol	111-46-6	oral	500 mg/kg
Diethylene Glycol	111-46-6	inhalation: vapor	11 mg/l/4h
Diethylene Glycol	111-46-6	inhalation: dust/mist	>4.6 mg/l/4h
Diethanolamine 99%	111-42-2	oral	1,100 mg/kg
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

Causes skin irritation.

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

Suspected of causing cancer.

IARC Monographs on the Evaluation of Carcinogenic Risks to Humans

Name of substance	CAS No	Classification	Number
EB Ethylene Glycol Butyl Ether	111-76-2	3	
Diethanolamine 99%	111-42-2	2B	



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IARC Monographs on the Evaluation of Carcinogenic Risks to Humans

Name of substance	CAS No	Classification	Number
Cocoamide DEA	68603-42-9	2B	

Legend

- 2B Possibly carcinogenic to humans
3 Not classifiable as to carcinogenicity in humans

Reproductive toxicity

Shall not be classified as a reproductive toxicant.

Specific target organ toxicity - single exposure

May cause respiratory irritation. May cause drowsiness or dizziness.

Specific target organ toxicity - repeated exposure

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

Aspiration hazard

May be fatal if swallowed and enters airways.

SECTION 12: Ecological information

12.1 Toxicity

Toxic to aquatic life with long lasting effects.

Aquatic toxicity (acute) of components

Name of substance	CAS No	Endpoint	Value	Species	Exposure time
Aromatic 150	64742-94-5	LL50	5 mg/l	fish	96 h
Aromatic 150	64742-94-5	EL50	1.4 mg/l	aquatic invertebrates	48 h
EB Ethylene Glycol Butyl Ether	111-76-2	LC50	1,474 mg/l	fish	96 h
EB Ethylene Glycol Butyl Ether	111-76-2	EC50	1,550 mg/l	aquatic invertebrates	48 h
EB Ethylene Glycol Butyl Ether	111-76-2	ErC50	1,840 mg/l	algae	72 h
Diethylene Glycol	111-46-6	LC50	75,222 mg/l	fish	96 h
Glycerin USP Kosher	56-81-5	LC50	54,000 mg/l	fish	96 h
Diethanolamine 99%	111-42-2	LC50	460 mg/l	fish	96 h
Diethanolamine 99%	111-42-2	EC50	30.1 mg/l	aquatic invertebrates	48 h
Diethanolamine 99%	111-42-2	ErC50	9.5 mg/l	algae	72 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
Methanol	67-56-1	ErC50	22,000 mg/l	algae	96 h



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Aquatic toxicity (chronic) of components					
Name of substance	CAS No	Endpoint	Value	Species	Exposure time
Aromatic 150	64742-94-5	EL50	0.89 mg/l	aquatic invertebrates	21 d
EB Ethylene Glycol Butyl Ether	111-76-2	EC50	297 mg/l	aquatic invertebrates	21 d
Diethylene Glycol	111-46-6	LC50	>1,500 mg/l	fish	28 d
Diethylene Glycol	111-46-6	EC50	33,911 mg/l	aquatic invertebrates	21 d
Diethanolamine 99%	111-42-2	EC50	11.82 mg/l	aquatic invertebrates	21 d

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.

12.7 Other adverse effects

Data are not available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

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

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 assigned

14.2 UN proper shipping name not assigned

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

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



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14.7 Information for each of the UN Model Regulations

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

Not subject to transport regulations.

Reportable quantity (RQ) 5,000,000 lbs (2,270,000 kg) (Methanol)

International Maritime Dangerous Goods Code (IMDG) - Additional information

Marine pollutant -
Danger label(s) 6.1



Special provisions (SP) 223, 274
Excepted quantities (EQ) E1
Limited quantities (LQ) 5 L
EmS F-A, S-A
Stowage category A

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

Danger label(s) 6.1



Special provisions (SP) A3, A4, A137
Excepted quantities (EQ) E1
Limited quantities (LQ) 2 L

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 of substance	CAS No	Remarks	Effective date
Methanol	67-56-1		1987-01-01
Diethanolamine 99%	111-42-2		1987-01-01



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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)
Diethanolamine 99%	111-42-2		3	100 (45,4)

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

Right to Know Hazardous Substance List

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

Name of substance	CAS No	Functionality	Authoritative Lists
Methanol	67-56-1		CA TACs IRIS Neurotoxics NTP OHAT - Repr. or Dev. Toxicants OEHA RELs Prop 65

- Toxic or Hazardous Substance List (MA-TURA)

Name of substance	CAS No	DEP CODE	PBT / HHS / LHS	PBT / HHS Threshold	De Minimis Concentration Threshold
Methanol	67-56-1				1.0 %

- Hazardous Substance List (NJ-RTK)

Name of substance	CAS No	Remarks	Classifications
Methanol	67-56-1		TE F3
EB Ethylene Glycol Butyl Ether	111-76-2		CA F2
Glycerin USP Kosher	56-81-5		
Diethanolamine 99%	111-42-2		CO

Legend

- CA Carcinogenic
CO Corrosive
F2 Flammable - Second Degree
F3 Flammable - Third Degree
TE Teratogenic



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

Name acc. to inventory	CAS No	Classification
METHANOL	67-56-1	E

Legend

E Environmental hazard

- Hazardous Substance List (RI-RTK)

Name of substance	CAS No	References
Methanol	67-56-1	T, F

Legend

F Flammability (NFPA®)

T Toxicity (ACGIH®)

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

Proposition 65 List of chemicals			
Name acc. to inventory	CAS No	Remarks	Type of the toxicity
methanol	67-56-1		developmental
diethanolamine	111-42-2		cancer
coconut oil diethanolamine condensate (cocamide diethanolamine)			cancer

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	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	-	



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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	2	material that, under emergency conditions, can cause temporary incapacitation or residual injury
Instability	0	material that is normally stable, even under fire conditions
Special hazard		

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
8.1		Occupational exposure limit values (Workplace Exposure Limits): change in the listing (table)	yes

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 U.S. Department of Transportation
ACGIH®	American Conference of Governmental Industrial Hygienists
ACGIH® 2024	From ACGIH®, 2024 TLVs® and BEIs® Book. Copyright 2024. 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
ATE	Acute Toxicity Estimate
Cal/OSHA PEL	California Division of Occupational Safety and Health (Cal/OSHA): Permissible Exposure Limits (PELs)
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
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



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Abbr.	Descriptions of used abbreviations
EL50	Effective Loading 50 %: the EL50 corresponds to the loading rate required to produce a response in 50% of the test organisms
EmS	Emergency Schedule
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
GHS	"Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Nations
HHS	Higher hazard substance
IARC	International Agency for Research on Cancer
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
LC50	Lethal Concentration 50%: the LC50 corresponds to the concentration of a tested substance causing 50 % lethality during a specified time interval
LHS	Lower hazard substance
LL50	Lethal Loading 50 %: the LL50 corresponds to the loading rate causing 50 % lethality
NFPA®	National Fire Protection Association (United States)
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
STEL	Short-term exposure limit
TLV®	Threshold Limit Values
TWA	Time-weighted average

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
H227	Combustible liquid.
H304	May be fatal if swallowed and enters airways.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H351	Suspected of causing cancer.

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