



CHEMISPHERE

Safety Data Sheet

acc. to 29 CFR 1910.1200 App D

PENETONE 1112A

Version number: 2.0
Replaces version of: 2024-03-14 (1)

Revision: 2024-08-06

SECTION 1: Identification

1.1 Product identifier

Trade name **PENETONE 1112A**
Alternative number(s) XB13870, XB13870PL5, XB13870DR55

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

Relevant identified uses Carbon Remover
Uses advised against Do not use for products which come into direct contact with the skin.

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	1C	Skin Corr. 1C	H314
A.3	serious eye damage/eye irritation	1	Eye Dam. 1	H318

For full text of abbreviations: see SECTION 16.

The most important adverse physicochemical, human health and environmental effects

Skin corrosion produces an irreversible damage to the skin; namely, visible necrosis through the epidermis and into the dermis.

2.2 Label elements

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

- Signal word danger

- Pictograms

GHS05





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- Hazard statements

H314 Causes severe skin burns and eye damage.

- Precautionary statements

P260 Do not breathe dusts or mists.

P280 Wear eye protection/face protection.

P301+P330+P331 If swallowed: Rinse mouth. Do NOT induce vomiting.

P303+P361+P353 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

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.

P310 Immediately call a poison center/doctor.

P321 Specific treatment (see on this label).

P363 Wash contaminated clothing before reuse.

P405 Store locked up.

P501 Dispose of contents/container to industrial combustion plant.

- Hazardous ingredients for labelling MONOETHANOLAMINE 99%

2.3 Other hazards

of no significance

SECTION 3: Composition/information on ingredients

3.1 Substances

Not relevant (mixture)

3.2 Mixtures

Description of the mixture

Name of substance	Identifier	Wt%
Water	CAS No 7732-18-5	≥ 90
MONOETHANOLAMINE 99%	CAS No 141-43-5	25 - < 50
nonylphenol, ethoxylated	CAS No 127087-87-0	10 - < 25
Glycol Ether DM	CAS No 111-77-3	10 - < 25
EB Ethylene Glycol Butyl Ether	CAS No 111-76-2	10 - < 25
Glycol Ether DB	CAS No 112-34-5	10 - < 25

Remarks

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. 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

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, BC-powder, Carbon dioxide (CO₂)

Unsuitable extinguishing media

Water jet

5.2 Special hazards arising from the substance or mixture

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. Use only in well-ventilated areas.

- 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

Control of the effects

Protect against external exposure, such as

frost

- 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.



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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	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	diethylene glycol monobutyl ether	112-34-5	TLV®	10						iv	ACGIH® 2024
US	ethanolamine	141-43-5	REL	3 (10 h)	8 (10 h)	6	15				NIOSH REL
US	ethanolamine	141-43-5	TLV®	3		6					ACGIH® 2024
US	ethanolamine	141-43-5	PEL	3	6						29 CFR 1910.1000
US	ethanolamine (2-aminoethanol)	141-43-5	PEL (CA)	3	8	6	15				Cal/OSHA PEL

Notation

Ceiling-C	ceiling value is a limit value above which exposure should not occur
H	absorbed through the skin
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	2-butoxyethanol	Butoxyacetic acid (BAA)	hydr, crea	BEI®	200 mg/g	ACGIH® 2024

Notation

crea	creatinine
hydr	hydrolysis



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Relevant DNELs of components

Name of substance	CAS No	Endpoint	Threshold level	Protection goal, route of exposure	Used in	Exposure time
MONOETHANOLAMINE 99%	141-43-5	DNEL	1 mg/m ³	human, inhalatory	worker (industry)	chronic - systemic effects
MONOETHANOLAMINE 99%	141-43-5	DNEL	0.51 mg/m ³	human, inhalatory	worker (industry)	chronic - local effects
MONOETHANOLAMINE 99%	141-43-5	DNEL	3 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects
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
Glycol Ether DM	111-77-3	DNEL	50.1 mg/m ³	human, inhalatory	worker (industry)	chronic - systemic effects
Glycol Ether DM	111-77-3	DNEL	2.22 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects

Relevant PNECs of components

Name of substance	CAS No	Endpoint	Threshold level	Organism	Environmental compartment	Exposure time
MONOETHANOLAMINE 99%	141-43-5	PNEC	0.07 mg/l	aquatic organisms	freshwater	short-term (single instance)
MONOETHANOLAMINE 99%	141-43-5	PNEC	0.007 mg/l	aquatic organisms	marine water	short-term (single instance)
MONOETHANOLAMINE 99%	141-43-5	PNEC	100 mg/l	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)
MONOETHANOLAMINE 99%	141-43-5	PNEC	0.357 mg/kg	aquatic organisms	freshwater sediment	short-term (single instance)
MONOETHANOLAMINE 99%	141-43-5	PNEC	0.036 mg/kg	aquatic organisms	marine sediment	short-term (single instance)
MONOETHANOLAMINE 99%	141-43-5	PNEC	1.29 mg/kg	terrestrial organisms	soil	short-term (single instance)
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)



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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	2.33 mg/kg	terrestrial organisms	soil	short-term (single instance)
Glycol Ether DM	111-77-3	PNEC	12 mg/l	aquatic organisms	freshwater	short-term (single instance)
Glycol Ether DM	111-77-3	PNEC	1.2 mg/l	aquatic organisms	marine water	short-term (single instance)
Glycol Ether DM	111-77-3	PNEC	10,000 mg/l	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)
Glycol Ether DM	111-77-3	PNEC	44.4 mg/kg	aquatic organisms	freshwater sediment	short-term (single instance)
Glycol Ether DM	111-77-3	PNEC	0.44 mg/kg	aquatic organisms	marine sediment	short-term (single instance)
Glycol Ether DM	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. 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, colorless liquid



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Particle	not relevant (liquid)
Odor	characteristic

Other safety parameters

pH (value)	12 – 12.5 (base)
Melting point/freezing point	25 °F
Initial boiling point and boiling range	212 °F
Flash point	not determined
Evaporation rate	not determined
Flammability (solid, gas)	not relevant, (fluid)

Explosive limits

- Lower explosion limit (LEL)	0.85 vol%
- Upper explosion limit (UEL)	24.6 vol%
Vapor pressure	0.8 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	not determined
Viscosity	not determined
Explosive properties	none
Oxidizing properties	none

9.2 Other information

Liquid content	100 %
Solid content	0 %



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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

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.

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

- Acute toxicity estimate (ATE)

Oral 1,999 mg/kg

Acute toxicity estimate (ATE) of components			
Name of substance	CAS No	Exposure route	ATE
MONOETHANOLAMINE 99%	141-43-5	oral	1,089 mg/kg
MONOETHANOLAMINE 99%	141-43-5	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
nonylphenol, ethoxylated	127087-87-0	oral	500 mg/kg
nonylphenol, ethoxylated	127087-87-0	inhalation: vapor	11 mg/l/4h



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Skin corrosion/irritation

Causes severe skin burns and eye damage.

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.

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	

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

Shall not be classified as a specific target organ toxicant (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					
Name of substance	CAS No	Endpoint	Value	Species	Exposure time
MONOETHANOLAMINE 99%	141-43-5	LC50	349 mg/l	fish	96 h
MONOETHANOLAMINE 99%	141-43-5	EC50	27.04 mg/l	aquatic invertebrates	48 h
MONOETHANOLAMINE 99%	141-43-5	ErC50	2.8 mg/l	algae	72 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



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Aquatic toxicity (acute) of components

Name of substance	CAS No	Endpoint	Value	Species	Exposure time
EB Ethylene Glycol Butyl Ether	111-76-2	ErC50	1,840 mg/l	algae	72 h
Glycol Ether DM	111-77-3	LC50	5,741 mg/l	fish	96 h
Glycol Ether DM	111-77-3	EC50	1,192 mg/l	aquatic invertebrates	48 h

Aquatic toxicity (chronic) of components

Name of substance	CAS No	Endpoint	Value	Species	Exposure time
MONOETHANOLAMINE 99%	141-43-5	EC50	2.5 mg/l	aquatic invertebrates	21 d
EB Ethylene Glycol Butyl Ether	111-76-2	EC50	297 mg/l	aquatic invertebrates	21 d
Glycol Ether DM	111-77-3	EC50	>1,000 mg/l	microorganisms	30 min

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

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.

SECTION 14: Transport information

14.1 UN number

DOT

UN 3267



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14.2 UN proper shipping name

DOT Corrosive liquid, basic, organic, n.o.s. (MONOETHANOLAMINE 99%)

14.3 Transport hazard class(es)

DOT 8

14.4 Packing group

DOT III

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. .

14.7 Information for each of the UN Model Regulations

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

Particulars in the shipper's declaration UN3267, Corrosive liquid, basic, organic, n.o.s., 8, III

Danger label(s) 8



Special provisions (SP) IB3, T7, TP1, TP28

ERG No 153

International Maritime Dangerous Goods Code (IMDG) - Additional information

Marine pollutant -

Danger label(s) 8+3



Special provisions (SP) 274

Excepted quantities (EQ) E2

Limited quantities (LQ) 1 L

EmS F-E, S-C

Stowage category C

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

Danger label(s) 8+3



Excepted quantities (EQ) E2



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Limited quantities (LQ)

0,5 L

SECTION 15: Regulatory information

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

National regulations (United States)

Toxic Substance Control Act (TSCA)

all ingredients are listed (ACTIVE) or exempt from listing

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
Glycol Ether DM			CA TACs

- Toxic or Hazardous Substance List (MA-TURA)

Name of substance	CAS No	DEP CODE	PBT / HHS / LHS	PBT / HHS Threshold	De Minimis Concentration Threshold
Glycol Ether DM		1022			1.0 %

- Hazardous Substances List (MN-ERTK)

none of the ingredients are listed

- Hazardous Substance List (NJ-RTK)

Name of substance	CAS No	Remarks	Classifications
Glycol Ether DM			
EB Ethylene Glycol Butyl Ether	111-76-2		CA F2
MONOETHANOLAMINE 99%	141-43-5		CO F2
Glycol Ether DB			



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Legend

CA Carcinogenic
CO Corrosive
F2 Flammable - Second Degree

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

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

Legend

E Environmental hazard

- Hazardous Substance List (RI-RTK)

none of the ingredients are listed

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	/	none
Health	3	major injury likely unless prompt action is taken and medical treatment is given
Flammability	0	material that will not burn under typical fire conditions
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	0	material that will not burn under typical fire conditions
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
AU	AIIC	all ingredients are listed
CA	DSL	all ingredients are listed
CN	IECSC	all ingredients are listed
EU	ECSI	all ingredients are listed
EU	REACH Reg.	all ingredients are listed
JP	CSCL-ENCS	not 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	not all ingredients are listed
TW	TCSI	all ingredients are listed
US	TSCA	all ingredients are listed (ACTIVE)

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
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
8.1		Occupational exposure limit values (Workplace Exposure Limits):	yes



CHEMISPHERE

Safety Data Sheet

acc. to 29 CFR 1910.1200 App D

PENETONE 1112A

Version number: 2.0
Replaces version of: 2024-03-14 (1)

Revision: 2024-08-06

Section	Former entry (text/value)	Actual entry (text/value)	Safety-relevant
		change in the listing (table)	

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
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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
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
EINECS	European Inventory of Existing Commercial Chemical Substances
ELINCS	European List of Notified Chemical Substances
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
ERG No	Emergency Response Guidebook - Number
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
NIOSH REL	National Institute for Occupational Safety and Health (NIOSH): Recommended Exposure Limits (RELs)



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Abbr.	Descriptions of used abbreviations
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
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).

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

Code	Text
H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.

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