

SAFETY DATA SHEET



WEICON HP Epoxy Hardener

Section 1. Identification

GHS product identifier	: WEICON HP Epoxy Hardener
Product code	: 103902
Other means of identification	: Not available.
Color	: Yellow. [Light]
Product type	: Liquid.

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

Identified uses

Hardener for resins.

Uses advised against

Not applicable.

Supplier's details	: WEICON GmbH & Co. KG Königsberger Str. 255, 48157 Münster, Germany phone:+49 251 93220, email: info@weicon.de, URL: www.weicon.de
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e-mail address of person responsible for this SDS	: msds@weicon.de
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Emergency telephone number (with hours of operation)	: +1 202 464 2554 TRANSPORT (24 Hours/Day): +1 202 464 2554
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Section 2. Hazards identification

OSHA/HCS status	: This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
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Classification of the substance or mixture	: SKIN CORROSION - Category 1B SERIOUS EYE DAMAGE - Category 1 SKIN SENSITIZATION - Category 1 TOXIC TO REPRODUCTION - Category 2 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 1
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GHS label elements

Hazard pictograms



Signal word	: Danger
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Hazard statements	: H314 - Causes severe skin burns and eye damage. H317 - May cause an allergic skin reaction. H361 - Suspected of damaging fertility or the unborn child. H372 - Causes damage to organs through prolonged or repeated exposure.
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Precautionary statements

Prevention	: P201 - Obtain special instructions before use. P260 - Do not breathe vapor. P280 - Wear protective gloves, protective clothing and eye or face protection.
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Response	: Not applicable.
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Section 2. Hazards identification

Storage	: Not applicable.
Disposal	: P501 - Dispose of waste according to applicable legislation.
Hazards not otherwise classified	: None known.
Hazards identified when used	: No known significant effects or critical hazards.

Section 3. Composition/information on ingredients

Substance/mixture	: Mixture
Other means of identification	: Not available.

Ingredient name	Synonyms	%	Identifiers
2-Propenenitrile, polymer with 1,3-butadiene, 1-cyano-1-methyl-4-oxo-4-[[2-(1-piperazinyl)ethyl]amino]butyl-terminated	2-Propenenitrile, polymer with 1,3-butadiene, 1-cyano-1-methyl-4-oxo-4-[[2-(1-piperazinyl)ethyl]amino]butyl terminated; Pentanoic acid, 4,4'-azobis [4-cyano-, polymer with 1,3-butadiene, 1-piperazineethanamine and 2-propenenitrile; 2-Propenenitrile polymer with 1,3-butadiene, 1-cyano-1-methyl-4-oxo-4-[[2-(1-piperazinyl)ethyl]amino]butyl-terminated; BUTADIENE ACRYLONITRILE COPOLYMER; 2-Propenenitril Polymer mit 1,3-butadiene, 1-cyano-1-methyl-4-oxo-4-[[2-(1-piperazinyl)ethyl]amino]butyl-terminiert	≥15 - ≤40	CAS: 68683-29-4
crystalline silica, respirable powder	alpha-quartz; Silica, crystalline (quartz); Silica, Crystalline Quartz; SILICA, CRYSTALLINE, QUARTZ; Silica-Crystalline, Quartz; Silica - Crystalline Quartz; Silica-Crystalline : Quartz; Silica, crystalline - quartz	≥15 - ≤40	CAS: 14808-60-7
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, reaction products with m-phenylenebis(methylamine)	phenol, 4,4'-(1-methylethylidene) bis-, polymer with 1,3-benzenedimethanamine and 2-(chloromethyl)oxirane; 1,3-benzenedimethanamine, polymer with (chloromethyl) oxirane and 4,4'-(1-methylethylidene)bis[phenol]; Phenol, 4,4'-(1-methylethylidene) bis-, polymer with 1,3-benzenedimethanamine and (chloromethyl)oxirane; Phenol, 4,4'-(1-methylethylidene)bis-, oligomeric reaction products with 2-(chloromethyl)oxirane, reaction products with 1,3-benzenedimethanamine; 4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropan,	≥5 - ≤10	CAS: 113930-69-1

Section 3. Composition/information on ingredients

3-aminomethyl-3,5,5-trimethylcyclohexylamine	<p>reaction products with m-phenylenebis(methylamine)</p> <p>Cyclohexanemethanamine, 5-amino-1,3,3-trimethyl-; Isophorone diamine; 3-(Aminomethyl)-3,5,5-trimethylcyclohexan-1-amine; 5-Amino-1,3,3-trimethylcyclohexanemethanamine; 1-amino-3-aminomethyl-3,5,5-trimethylcyclohexane; 1,3,3-trimethyl-1-aminomethyl-5-aminocyclohexane; 1-amino-3-aminomethyl-3,3,5-trimethylcyclohexane; 5-amino-1,3,3-trimethylcyclohexanemethylamine; Aminomethyl-5 trimethyl-3,5,5 cyclohexylamine; 3-Aminomethyl-3,5,5-trimethyl cyclohexylamine and preparations containing it; 3-(aminomethyl)-3,5,5-trimethylcyclohexylamine</p>	≥1 - ≤5	CAS: 2855-13-2
benzyl alcohol	Benzenemethanol; .alpha.-Hydroxytoluene; Phenylcarbinol; Phenylmethanol; E 1519; α-hydroxytoluene; Phenylmethyl alcohol; toluenol, alpha-; (hydroxymethyl)benzene; BENZENECARBINOL; alpha-Hydroxytoluene	≥1 - ≤5	CAS: 100-51-6
2,4,6-tris(dimethylaminomethyl)phenol	Phenol, 2,4,6-tris[(dimethylamino)methyl]-; Phenol, 2,4,6-tris(dimethylaminomethyl)-; 2,4,6-tris((dimethylamino)methyl)phenol; Phenol, 2,4,6-tris{(dimethylamino)methyl}-; 2,4,6-Tris[(dimethylamino)methyl]phenol; 2,4,6-Tri(dimethylaminomethyl)phenol; 2,4,6-Tris(N,N-dimethylaminomethyl)phenol; 2,4,6-Tridimethylaminomethylphenol; TRIS (2,4,6-DIMETHYLAMINOMONOMETHYL)PHENOL; TRIS (2,4,6-DIMETHYLAMINOMETHYL)PHENOL; TRIS[(DIMETHYLAMINO)METHYL]PHENOL, 2,4,6-	≥1 - ≤5	CAS: 90-72-2
Fatty acids, tall-oil, reaction products with bisphenol A, epichlorohydrin, glycidyl tolyl ether and triethylenetetramine	Polycondensation products of N1, N1'-(ethane-1,2-diyl)di(ethane-1,2-diamine) / [addition products of (chloromethyl)oxirane and 4,4'-(propane-2,2-diyl)diphenol] / tall oil fatty acid / N1,N1-bis(2-aminoethyl)ethane-1,2-diamine / N1-[2-(piperazin-1-yl)ethyl]ethane-1,2-diamine / 2,2'-(piperazine-1,4-diyl)di(ethane-1-amine) / [(methylphenoxy)	≥1 - ≤5	CAS: 186321-96-0

Section 3. Composition/information on ingredients

2-piperazin-1-ylethylamine	methyl]oxirane; Fatty acids, tall-oil reaction products with bisphenol A, epichlorohydrin, glycidyl tolyl ether and triethylenetetramine 1-Piperazineethanamine; 1-(2-Aminoethyl)piperazine; N-(Aminoethyl)piperazine; 2-(1-Piperazinyl) ethylamine; Piperazine, 1-(2-aminoethyl)-; 1-(2-AMINOETHYL)-PIPERAZINE; N-AMINOETHYLPIPERAZINE; 1-(2-AMINOETHYL)PIPERAZIN; 2-(Piperazin-1-yl)ethylamine; 1-Aminoethylpiperazine; PIPERAZINE, N-AMINOETHYL-	≥0.5 - ≤1.5	CAS: 140-31-8
3-aminopropyltriethoxysilane	1-Propanamine, 3-(triethoxysilyl)-; aminopropyltriethoxysilane; 3-(Triethoxysilyl) propylamine; gamma-Aminopropyltriethoxysilane; 1-Propanamine, 3-triethoxysilyl-; γ-Aminopropyltriethoxysilane; Aminoalkylalkoxysilane [alkyl (C1-3), alkoxy (C1-2)]; 1-Propylamine, 3-(triethoxysilyl)-; 3-(Triethoxysilyl)-1-propanamine; UC-A 1100; NUCA 1100	≥0.5 - ≤1.5	CAS: 919-30-2
benzyl alcohol	Benzenemethanol; .alpha.-Hydroxytoluene; Phenylcarbinol; Phenylmethanol; E 1519; α-hydroxytoluene; Phenylmethyl alcohol; toluenol, alpha-; (hydroxymethyl)benzene; BENZENECARBINOL; alpha-Hydroxytoluene	≥0.5 - ≤1.5	CAS: 100-51-6
3-aminomethyl-3,5,5-trimethylcyclohexylamine	Cyclohexanemethanamine, 5-amino-1,3,3-trimethyl-; Isophorone diamine; 3-(Aminomethyl)-3,5,5-trimethylcyclohexan-1-amine; 5-Amino-1,3,3-trimethylcyclohexanemethanamine; 1-amino-3-aminomethyl-3,5,5-trimethylcyclohexane; 1,3,3-trimethyl-1-aminomethyl-5-aminocyclohexane; 1-amino-3-aminomethyl-3,3,5-trimethylcyclohexane; 5-amino-1,3,3-trimethylcyclohexanemethylamine; Aminomethyl-5 trimethyl-3,5,5 cyclohexylamine; 3-Aminomethyl-3,5,5-trimethyl cyclohexylamine and preparations containing it; 3-(aminomethyl)-3,5,5-trimethylcyclohexylamine	≥0.1 - ≤1	CAS: 2855-13-2
Orange, sweet, ext.	Orange, sweet, extract; Sweet orange, peel, tincture; Oils,	≥0.1 - ≤1	CAS: 8028-48-6

Section 3. Composition/information on ingredients

	orange; orange, sweet; Orange peel, sweet, extract (Citrus Sinensis (L.) Osbeck); Blood orange oil (Citrus sinensis (L.) Osbeck 'Blood orange'); Citrus sinensis (L.) Osbeck 'Blood orange' oil; Sweet orange peel tincture; CITRUS AURANTIUM DULCIS PEEL EXTRACT; CITRUS AURANTIUM DULCIS SEED EXTRACT; CITRUS AURANTIUM DULCIS FLOWER EXTRACT		
Reaction mass of (1-phenylethyl)phenols and bis-(1-phenylethyl)phenols		≥0.1 - ≤1	-
decamethylcyclotetrasiloxane	Cyclopentasiloxane, 2,2,4,4,6,6,8,8,10,10-decamethyl-; Cyclopentasiloxane, decamethyl-; D5; 2,2,4,4,6,6,8,8,10,10-decamethylcyclotetrasiloxane; CYCLOPENTASILOXANE; decamethylcyclotetrasiloxane {D5}; decamethyl-1,3,5,7,9,2,4,6,8,10-pentaoxapentasiloxane; Belsil CM 040; 2,2,4,4,6,6-Hexaethylcyclotrisiloxane; Cyclic polyalkyl (C1-20) siloxane; Cyclopentasiloxane, decamethyl	≤0.1	CAS: 541-02-6
octamethylcyclotetrasiloxane	D4; Cyclotetrasiloxane, 2,2,4,4,6,6,8,8-octamethyl-; Cyclotetrasiloxane, octamethyl-; siloxanes and silicones, di-Me, reaction products with chlorotrimethylsilane, iso-Pr alc., silica and sodium silicate, mixture with octamethylcyclotetrasiloxane and dodecamethylcyclohexasiloxane; 2,2,4,4,6,6,8,8-Octamethylcyclotetrasiloxane; OCTAMETHYLTETRAILOXANE; CYCLOMETHICONE; CYCLOTETRAILOXANE; Cyclohexasiloxane, dodecamethyl-; Cyclic polyalkyl (C1-20) siloxane; 2,2,4,4,6,6,8,8-Octamethyl-1,3,5,7,2,4,6,8-tetraoxatetrasiloxane	≤0.1	CAS: 556-67-2

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

- Eye contact** : Get medical attention immediately. Call a poison center or physician. Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician.
- Inhalation** : Get medical attention immediately. Call a poison center or physician. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
- Skin contact** : Get medical attention immediately. Call a poison center or physician. Wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion** : Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Chemical burns must be treated promptly by a physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/effects, acute and delayed

Potential acute health effects

- Eye contact** : Causes serious eye damage.
- Inhalation** : No known significant effects or critical hazards.
- Skin contact** : Causes severe burns. May cause an allergic skin reaction.
- Ingestion** : No known significant effects or critical hazards.

Over-exposure signs/symptoms

- Eye contact** : Adverse symptoms may include the following:
pain
watering
redness
- Inhalation** : Adverse symptoms may include the following:
reduced fetal weight
increase in fetal deaths
skeletal malformations
- Skin contact** : Adverse symptoms may include the following:
pain or irritation
redness
blistering may occur
reduced fetal weight
increase in fetal deaths
skeletal malformations
- Ingestion** : Adverse symptoms may include the following:
stomach pains
reduced fetal weight
increase in fetal deaths
skeletal malformations

Section 4. First aid measures

Indication of immediate medical attention and special treatment needed, if necessary

- Notes to physician** : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
- Specific treatments** : No specific treatment.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media : Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media : None known.

Specific hazards arising from the chemical : In a fire or if heated, a pressure increase will occur and the container may burst.

Hazardous thermal decomposition products : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
nitrogen oxides
halogenated compounds
metal oxide/oxides

Special protective actions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Do not breathe vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

Small spill : Stop leak if without risk. Move containers from spill area. Absorb with an inert material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Section 6. Accidental release measures

- Large spill** : Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations.

Section 7. Handling and storage

Precautions for safe handling

- Protective measures** : Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

- Advice on general occupational hygiene** : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

- Conditions for safe storage, including any incompatibilities** : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
2-Propenenitrile, polymer with 1,3-butadiene, 1-cyano-1-methyl-4-oxo-4-[[2-(1-piperazinyl)ethyl]amino]butyl-terminated crystalline silica, respirable powder	<p>None.</p> <p>NIOSH REL (United States, 10/2020) [SILICA, CRYSTALLINE] NIA. TWA 10 hours: 0.05 mg/m³. Form: respirable dust.</p> <p>CAL OSHA PEL (United States, 1/2025) TWA 8 hours: 0.05 mg/m³.</p> <p>OSHA PEL Z3 (United States, 6/2016) TWA 8 hours: 250 / (%SiO₂+5) mppcf. Form: Respirable. TWA 8 hours: 10 / (%SiO₂+2) mg/m³. Form: Respirable.</p> <p>OSHA PEL (United States, 5/2018) [Silica, crystalline] TWA 8 hours: 50 µg/m³. Form: Respirable dust.</p> <p>OSHA PEL 1989 (United States, 3/1989) TWA 8 hours: 0.1 mg/m³ (as quartz). Form: Respirable dust.</p> <p>ACGIH TLV (United States, 1/2025) [Silica,</p>

Section 8. Exposure controls/personal protection

4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, reaction products with m-phenylenebis(methylamine) 3-aminomethyl-3,5,5-trimethylcyclohexylamine benzyl alcohol	crystalline] A2. TWA 8 hours: 0.025 mg/m ³ . Form: Respirable fraction.
2,4,6-tris(dimethylaminomethyl)phenol Fatty acids, tall-oil, reaction products with bisphenol A, epichlorohydrin, glycidyl tolyl ether and triethylenetetramine 2-piperazin-1-ylethylamine 3-aminopropyltriethoxysilane benzyl alcohol	None. None. OARS WEEL (United States, 9/2024) TWA 8 hours: 10 ppm. None. None.
3-aminomethyl-3,5,5-trimethylcyclohexylamine Orange, sweet, ext. Reaction mass of (1-phenylethyl)phenols and bis-(1-phenylethyl)phenols decamethylcyclotetrasiloxane	None. None. None. OARS WEEL (United States, 9/2024) TWA 8 hours: 10 ppm.
octamethylcyclotetrasiloxane	OARS WEEL (United States, 9/2024) TWA 8 hours: 10 ppm.

Biological exposure indices

No exposure indices known.

Appropriate engineering controls

- : If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Environmental exposure controls

- : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures

- : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection

- : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles and/or face shield. If inhalation hazards exist, a full-face respirator may be required instead.

Skin protection

Hand protection

- : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. Recommended : 1 - 4 hours (breakthrough time): Protective gloves made of nitrile rubber (material thickness of 0,4 mm); EN 374-5 Cat. III ; 4 - 8 hours (breakthrough time): Protective gloves made of Viton®/ butyl rubber (material thickness of 0,7 mm); EN388 Cat.II / EN374 Cat.III / EN374-2

Body protection

- : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Section 8. Exposure controls/personal protection

- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Respiratory protection** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use. Recommended : organic vapor (Type AX) and particulate filter

Section 9. Physical and chemical properties

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

Appearance

- Physical state** : Liquid. [Paste.]
- Color** : Yellow. [Light]
- Odor** : Characteristic.
- Odor threshold** : Not available.
- pH** : Not applicable.
- Melting point/freezing point** : Not available.
- Boiling point or initial boiling point and boiling range** : Not available.
- Flash point** : Closed cup: >100°C (>212°F)
- Evaporation rate** : Not available.
- Flammability** : Not available.
- Lower and upper explosion limit/flammability limit** : Not available.
- Vapor pressure** :

Ingredient name	Vapor Pressure at 20 °C			Vapor pressure at 50 °C		
	mm Hg	kPa	Method	mm Hg	kPa	Method
Orange, sweet, ext.	1.4	0.19				
octamethylcyclotetrasiloxane	0.99008	0.13				
decamethylcyclopentasiloxane	0.25	0.033				
2,4,6-tris(dimethylaminomethyl) phenol	0.056	0.0075	EU A.4			
benzyl alcohol	0.05	0.0067				
benzyl alcohol	0.05	0.0067				
2-piperazin-1-ylethylamine	0.039	0.0052				
3-aminomethyl-3,5,5-trimethylcyclohexylamine	0.01178	0.0016	OECD 104			
3-aminomethyl-3,5,5-trimethylcyclohexylamine	0.01178	0.0016	OECD 104			
m-phenylenebis(methylamine)	0.0052	0.00069	OECD 104			
propylidynetrimethanol	0	0				

- Relative vapor density** : Not available.
- Relative density** : Not available.
- Density** : 1.4 g/cm³ [20°C (68°F)]
- Solubility in water** : Not available.
- Partition coefficient: n-octanol/water** : Not applicable.
- Auto-ignition temperature** :

Section 9. Physical and chemical properties

Ingredient name	°C	°F	Method
Orange, sweet, ext.	235	455	EU A.15
2-piperazin-1-ylethylamine	>300	>572	
decamethylcyclopentasiloxane	372	701.6	ASTM E 659-78
2,4,6-tris(dimethylaminomethyl)phenol	382	719.6	EU A.15
octamethylcyclotetrasiloxane	384 to 387	723.2 to 728.6	ASTM E 659
benzyl alcohol	436	816.8	
benzyl alcohol	436	816.8	
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, reaction products with m-phenylenebis(methylamine)	526	978.8	

Decomposition temperature : Not available.

Viscosity : Dynamic (room temperature): Not available.
Kinematic (room temperature): Not available.
Kinematic (40°C (104°F)): Not available.

Particle characteristics

Median particle size : Not applicable.

Section 10. Stability and reactivity

Reactivity : No specific test data related to reactivity available for this product or its ingredients.

Chemical stability : The product is stable.

Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

Conditions to avoid : No specific data.

Incompatible materials : No specific data.

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name

benzyl alcohol

Result

Rat - Oral - LD50

1230 mg/kg

Toxic effects: Behavioral - Somnolence (general depressed activity) Behavioral - Excitement Behavioral - Coma

Mouse - Oral - LD50

1360 mg/kg

Rabbit - Oral - LD50

1040 mg/kg

Toxic effects: Behavioral - Somnolence (general depressed activity)

Mouse - Oral - LD50

1360 mg/kg

Toxic effects: Behavioral - Somnolence (general depressed activity) Behavioral - Ataxia Lung, Thorax, or Respiration - Respiratory depression

Section 11. Toxicological information

Rat - Oral - LD50

1660 mg/kg

Toxic effects: Behavioral - Somnolence (general depressed activity) Behavioral - Ataxia Lung, Thorax, or Respiration - Respiratory depression

Rabbit - Oral - LD50

1040 mg/kg

Toxic effects: Behavioral - Somnolence (general depressed activity) Behavioral - Ataxia Lung, Thorax, or Respiration - Respiratory depression

Rabbit - Dermal - LD50

2000 mg/kg

Rat - Oral - LD50

1.5 ml/kg

Rat - Oral - LD50

1.57 g/kg

Toxic effects: Gastrointestinal - Hypermotility, diarrhea Kidney, Ureter, and Bladder - Changes in tubules (including acute renal failure, acute tubular necrosis)

Rabbit - Dermal - LD50

4.29 g/kg

Toxic effects: Gastrointestinal - Ulceration or bleeding from stomach Kidney, Ureter, and Bladder - Other changes Skin After topical exposure - Primary irritation

Rat - Oral - LD50

1230 mg/kg

Toxic effects: Behavioral - Somnolence (general depressed activity) Behavioral - Excitement Behavioral - Coma

Rabbit - Dermal - LD50

2000 mg/kg

Rat - Inhalation - LC50 Vapor

36 g/m³ [4 hours]

Toxic effects: Behavioral - Excitement Lung, Thorax, or Respiration - Dyspnea Other - Hair

3-aminopropyltriethoxysilane

benzyl alcohol

octamethylcyclotetrasiloxane

Conclusion/Summary [Product] : Not available.

Skin corrosion/irritation

Product/ingredient name

benzyl alcohol

Result

Man - Skin - Mild irritant

Duration of treatment/exposure: 48 hours

Amount/concentration applied: 16 mg

Pig - Skin - Moderate irritant

Amount/concentration applied: 100 %

Rabbit - Skin - Moderate irritant

Duration of treatment/exposure: 24 hours

Amount/concentration applied: 100 mg

Rabbit - Skin - Severe irritant

Duration of treatment/exposure: 24 hours

Amount/concentration applied: 5 mg

Rabbit - Skin - Severe irritant

Duration of treatment/exposure: 24 hours

Amount/concentration applied: 5 mg

Man - Skin - Mild irritant

Duration of treatment/exposure: 48 hours

Amount/concentration applied: 16 mg

Pig - Skin - Moderate irritant

Amount/concentration applied: 100 %

Rabbit - Skin - Moderate irritant

2-piperazin-1-ylethylamine

3-aminopropyltriethoxysilane

benzyl alcohol

Section 11. Toxicological information

Duration of treatment/exposure: 24 hours

Amount/concentration applied: 100 mg

Conclusion/Summary [Product] : Not available.

Serious eye damage/eye irritation

Product/ingredient name

2-piperazin-1-ylethylamine

Result

Rabbit - Eyes - Moderate irritant

Duration of treatment/exposure: 24 hours

Amount/concentration applied: 20 mg

Conclusion/Summary [Product] : Not available.

Respiratory corrosion/irritation

Not available.

Conclusion/Summary [Product] : Not available.

Respiratory or skin sensitization

Not available.

Skin

Conclusion/Summary [Product] : Not available.

Respiratory

Conclusion/Summary [Product] : Not available.

Germ cell mutagenicity

Not available.

Conclusion/Summary [Product] : Not available.

Carcinogenicity

Not available.

Conclusion/Summary [Product] : Not available.

Classification

Product/ingredient name	OSHA	IARC	NTP
crystalline silica, respirable powder	+	1	Known to be a human carcinogen.

Reproductive toxicity

Not available.

Conclusion/Summary [Product] : Not available.

Specific target organ toxicity (single exposure)

Not available.

Section 11. Toxicological information

Specific target organ toxicity (repeated exposure)

Product/ingredient name

crystalline silica, respirable powder
2-piperazin-1-ylethylamine

Result

SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (inhalation) - Category 1
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 1

Aspiration hazard

Product/ingredient name

Orange, sweet, ext.

Result

ASPIRATION HAZARD - Category 1

Information on the likely routes of exposure

Not available.

Potential acute health effects

- Eye contact** : Causes serious eye damage.
Inhalation : No known significant effects or critical hazards.
Skin contact : Causes severe burns. May cause an allergic skin reaction.
Ingestion : No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

- Eye contact** : Adverse symptoms may include the following:
 pain
 watering
 redness
- Inhalation** : Adverse symptoms may include the following:
 reduced fetal weight
 increase in fetal deaths
 skeletal malformations
- Skin contact** : Adverse symptoms may include the following:
 pain or irritation
 redness
 blistering may occur
 reduced fetal weight
 increase in fetal deaths
 skeletal malformations
- Ingestion** : Adverse symptoms may include the following:
 stomach pains
 reduced fetal weight
 increase in fetal deaths
 skeletal malformations

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

Section 11. Toxicological information

Not available.

Conclusion/Summary [Product] : Not available.

General : Causes damage to organs through prolonged or repeated exposure. Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.

Carcinogenicity : No known significant effects or critical hazards.

Mutagenicity : No known significant effects or critical hazards.

Reproductive toxicity : Suspected of damaging fertility or the unborn child.

Numerical measures of toxicity

Acute toxicity estimates

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapors) (mg/l)	Inhalation (dusts and mists) (mg/l)
WEICON WAL06 Epoxy Hardener	7346.0	14491.7	N/A	909.1	380.7
3-aminomethyl-3,5,5-trimethylcyclohexylamine	500	1100	N/A	N/A	N/A
benzyl alcohol	1200	N/A	N/A	N/A	N/A
2,4,6-tris(dimethylaminomethyl)phenol	500	N/A	N/A	N/A	N/A
2-piperazin-1-ylethylamine	500	300	N/A	N/A	N/A
3-aminopropyltriethoxysilane	N/A	4290	N/A	11	N/A
benzyl alcohol	1620	N/A	N/A	N/A	4.178
3-aminomethyl-3,5,5-trimethylcyclohexylamine	1030	N/A	N/A	N/A	N/A
octamethylcyclotetrasiloxane	N/A	N/A	N/A	36	N/A

Section 12. Ecological information

Toxicity

Product/ingredient name

Result

benzyl alcohol

Acute - LC50 - Fresh water

Fish - Fathead minnow - *Pimephales promelas* - Juvenile (Fledgling, Hatchling, Weanling)

Age: 4 to 8 weeks; Size: 1.1 to 3.1 cm

460 mg/l [96 hours]

Effect: Mortality

Acute - LC50 - Fresh water

Fish - Bluegill - *Lepomis macrochirus*

10 ppm [96 hours]

Effect: Mortality

2-piperazin-1-ylethylamine

Acute - LC50 - Fresh water

Fish - Fathead minnow - *Pimephales promelas*

Age: 31 days; Size: 21 mm; Weight: 0.147 g

2190 mg/l [96 hours]

Effect: Mortality

benzyl alcohol

Acute - LC50 - Fresh water

Fish - Bluegill - *Lepomis macrochirus*

10 ppm [96 hours]

Effect: Mortality

3-aminomethyl-3,5,5-trimethylcyclohexylamine

Acute - EC50 - Fresh water

Daphnia - Water flea - *Daphnia magna*

Age: <24 hours

17.4 mg/l [48 hours]

Effect: Intoxication

octamethylcyclotetrasiloxane

Chronic - NOEC - Fresh water

Daphnia - Water flea - *Daphnia magna*

Age: <24 hours

Section 12. Ecological information

7.9 µg/l [21 days]

Effect: Mortality**Chronic - NOEC**

STDMETH

Algae - Green algae - *Selenastrum capricornutum*

1 to 29 µg/l [96 hours]

Effect: Population**Chronic - NOEC - Fresh water**Fish - Rainbow trout,donaldson trout - *Oncorhynchus mykiss* - EmbryoAge: ≤24 hours

4.4 µg/l [33 days]

Effect: Mortality**Conclusion/Summary [Product]** : Not available.**Persistence and degradability**

Not available.

Conclusion/Summary [Product] : Not available.**Bioaccumulative potential**

Product/ingredient name	LogP _{ow}	BCF	Potential
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, reaction products with m-phenylenebis (methylamine)	-	4.77	Low
3-aminomethyl-3,5,5-trimethylcyclohexylamine	0.99	-	Low
benzyl alcohol	0.87	-	Low
2,4,6-tris (dimethylaminomethyl)phenol	0.219	-	Low
2-piperazin-1-ylethylamine	-1.48	-	Low
3-aminopropyltriethoxysilane	1.7	3.4 [OECD 305 C]	Low
benzyl alcohol	0.87	-	Low
3-aminomethyl-3,5,5-trimethylcyclohexylamine	0.99	-	Low
Orange, sweet, ext.	2.78 to 4.88	1.502 to 2.597	Low
decamethylcyclopentasiloxane	8.023	7060 [OECD 305]	High
octamethylcyclotetrasiloxane	6.488	13400 [EPA OTS 797.1520]	High

Mobility in soil**Soil/Water partition coefficient** : Not available.**Other adverse effects**








No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods

: The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

	DOT Classification	TDG Classification	Mexico Classification	IMDG	IATA
UN number	Not available.	UN3082	UN3082	UN1760	UN1760
UN proper shipping name	Not available.	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, reaction products with m-phenylenebis (methylamine), Fatty acids, tall-oil, reaction products with bisphenol A, epichlorohydrin, glycidyl tolyl ether and triethylenetetramine)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, reaction products with m-phenylenebis (methylamine), Fatty acids, tall-oil, reaction products with bisphenol A, epichlorohydrin, glycidyl tolyl ether and triethylenetetramine)	CORROSIVE LIQUID, N.O.S. (4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, reaction products with m-phenylenebis (methylamine), 3-aminomethyl-3,5,5-trimethylcyclohexylamine)	CORROSIVE LIQUID, N.O.S. (4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, reaction products with m-phenylenebis (methylamine), 3-aminomethyl-3,5,5-trimethylcyclohexylamine)
Transport hazard class(es)	Not available.	9  	9  	8  	8 
Packing group	-	III	III	II	II
Environmental hazards	No.	Yes.	Yes.	Yes.	Yes. The environmentally hazardous substance mark is not required.

Additional information

TDG Classification

: Product classified as per the following sections of the Transportation of Dangerous Goods Regulations: 2.43-2.45 (Class 9), 2.7 (Marine pollutant mark). Non-bulk packages of this product are not regulated as dangerous goods when transported by road or rail.

Mexico Classification

: This product is not regulated as a dangerous good when transported in sizes of ≤5 L or ≤5 kg, provided the packagings meet the general provisions of 4.1.1.1, 4.1.1.2 and 4.1.1.4 to 4.1.1.8.

Section 14. Transport information

- IMDG** : The marine pollutant mark is not required when transported in sizes of ≤5 L or ≤5 kg.
- IATA** : The environmentally hazardous substance mark may appear if required by other transportation regulations.

Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Transport in bulk according to IMO instruments : Not available.

Section 15. Regulatory information

U.S. Federal regulations

TSCA 8(a) PAIR: Siloxanes and Silicones, di-Me, reaction products with silica

TSCA 8(a) CDR Exempt/Partial exemption: Not determined

TSCA 12(b) - Chemical export notification

Not applicable.

Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs) : Not listed

Clean Air Act Section 602 Class I Substances : Not listed

Clean Air Act Section 602 Class II Substances : Not listed

DEA List I Chemicals (Precursor Chemicals) : Not listed

DEA List II Chemicals (Essential Chemicals) : Not listed

SARA 302/304

Composition/information on ingredients

No products were found.

SARA 304 RQ : Not applicable.

SARA 311/312

Classification : SKIN CORROSION - Category 1B
 SERIOUS EYE DAMAGE - Category 1
 SKIN SENSITIZATION - Category 1
 TOXIC TO REPRODUCTION - Category 2
 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 1

Composition/information on ingredients

Name	%	Classification
2-Propenenitrile, polymer with 1,3-butadiene, 1-cyano-1-methyl-4-oxo-4-[[2-(1-piperazinyl)ethyl]amino]butyl-terminated	≥15 - ≤40	SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2A SKIN SENSITIZATION - Category 1
crystalline silica, respirable powder	≥15 - ≤40	SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 1
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, reaction products with m-phenylenebis(methylamine)	≥5 - ≤10	SKIN CORROSION - Category 1B SERIOUS EYE DAMAGE - Category 1 SKIN SENSITIZATION - Category 1
3-aminomethyl-3,5,5-trimethylcyclohexylamine	≥1 - ≤5	ACUTE TOXICITY (oral) - Category 4 ACUTE TOXICITY (dermal) - Category 4

Section 15. Regulatory information

benzyl alcohol	≥1 - ≤5	SKIN CORROSION - Category 1B SERIOUS EYE DAMAGE - Category 1 SKIN SENSITIZATION - Category 1 ACUTE TOXICITY (oral) - Category 4 EYE IRRITATION - Category 2A
2,4,6-tris(dimethylaminomethyl) phenol	≥1 - ≤5	SKIN SENSITIZATION - Category 1B ACUTE TOXICITY (oral) - Category 4 SKIN CORROSION - Category 1C SERIOUS EYE DAMAGE - Category 1
Fatty acids, tall-oil, reaction products with bisphenol A, epichlorohydrin, glycidyl tolyl ether and triethylenetetramine 2-piperazin-1-ylethylamine	≥1 - ≤5	SKIN IRRITATION - Category 2 SERIOUS EYE DAMAGE - Category 1 SKIN SENSITIZATION - Category 1
3-aminopropyltriethoxysilane	≥0.5 - ≤1.5	ACUTE TOXICITY (oral) - Category 4 ACUTE TOXICITY (dermal) - Category 3 SKIN CORROSION - Category 1B SERIOUS EYE DAMAGE - Category 1 SKIN SENSITIZATION - Category 1 TOXIC TO REPRODUCTION - Category 2 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 1
benzyl alcohol	≥0.5 - ≤1.5	ACUTE TOXICITY (inhalation) - Category 4 SKIN CORROSION - Category 1B SERIOUS EYE DAMAGE - Category 1 SKIN SENSITIZATION - Category 1B
3-aminomethyl-3,5,5-trimethylcyclohexylamine	≥0.1 - ≤1	ACUTE TOXICITY (oral) - Category 4 SKIN CORROSION - Category 1B SERIOUS EYE DAMAGE - Category 1 SKIN SENSITIZATION - Category 1A
Orange, sweet, ext.	≥0.1 - ≤1	FLAMMABLE LIQUIDS - Category 3 SKIN IRRITATION - Category 2 SKIN SENSITIZATION - Category 1 ASPIRATION HAZARD - Category 1
Reaction mass of (1-phenylethyl) phenols and bis-(1-phenylethyl) phenols	≥0.1 - ≤1	SKIN IRRITATION - Category 2 SKIN SENSITIZATION - Category 1A
decamethylcyclotetrasiloxane	≤0.1	FLAMMABLE LIQUIDS - Category 4
octamethylcyclotetrasiloxane	≤0.1	FLAMMABLE LIQUIDS - Category 3 TOXIC TO REPRODUCTION - Category 2

State regulations

Massachusetts

: The following components are listed: SILICA, CRYSTALLINE, QUARTZ; TITANIUM DIOXIDE; BENZYL ALCOHOL; 1-(2-AMINOETHYL)-PIPERAZINE; BENZYL ALCOHOL

New York

: None of the components are listed.

New Jersey

: The following components are listed: SILICA, QUARTZ; TITANIUM DIOXIDE; ISOPHORONEDIAMINE; N-AMINOETHYLPIPERAZINE

Pennsylvania

: The following components are listed: QUARTZ DUST; TITANIUM OXIDE; BENZENEMETHANOL; 1-PIPERAZINEETHANAMINE; BENZENEMETHANOL

California Prop. 65

⚠ WARNING: This product can expose you to chemicals including Silica, crystalline and Titanium dioxide, which are known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

Ingredient name	No significant risk level	Maximum acceptable dosage level
Silica, crystalline	-	-
Titanium dioxide	-	-

Section 15. Regulatory information

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

Inventory list

Australia	:	Not determined.
Canada	:	Not determined.
China	:	Not determined.
Eurasian Economic Union	:	Russian Federation inventory: Not determined.
Japan	:	Japan inventory (CSCL): Not determined. Japan inventory (ISHL): Not determined.
New Zealand	:	Not determined.
Philippines	:	Not determined.
Republic of Korea	:	Not determined.
Taiwan	:	Not determined.
Thailand	:	Not determined.
Turkey	:	Not determined.
United States	:	Not determined.
Viet Nam	:	Not determined.

Section 16. Other information

Hazardous Material Information System (U.S.A.)

Health	*	3
Flammability		1
Physical hazards		0

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National Fire Protection Association (U.S.A.)



Procedure used to derive the classification

Section 16. Other information

Classification	Justification
SKIN CORROSION - Category 1B	Calculation method
SERIOUS EYE DAMAGE - Category 1	Calculation method
SKIN SENSITIZATION - Category 1	Calculation method
TOXIC TO REPRODUCTION - Category 2	Calculation method
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 1	Calculation method

History

Date of printing : 2/3/2026
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Key to abbreviations : ATE = Acute Toxicity Estimate
 BCF = Bioconcentration Factor
 DOT = Department of Transportation
 GHS = Globally Harmonized System of Classification and Labelling of Chemicals
 IATA = International Air Transport Association
 IBC = Intermediate Bulk Container
 IMDG = International Maritime Dangerous Goods
 IMO = International Maritime Organization
 LogPow = logarithm of the octanol/water partition coefficient
 MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
 N/A = Not available
 SGG = Segregation Group
 TDG = Transportation of Dangerous Goods
 UN = United Nations

References : Not available.

 Indicates information that has changed from previously issued version.

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