

SAFETY DATA SHEET

Date of issue/Date of revision

: 28 April 2025

Version

: 3.01



SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Product name : SIGMAWELD 190/199 LT BINDER

Product code : 000001159102

Other means of identification

00381613; 00381650

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

Product use : Professional applications, Used by spraying.

**Use of the substance/
mixture** : Coating.

Uses advised against : Product is not intended, labelled or packaged for consumer use.

1.3 Details of the supplier of the safety data sheet

Sigma Paint Saudi Arabia Ltd.
PO Box 7509
Dammam 31472
Saudi Arabia
Tel: 00966 138 47 31 00
Fax: 00966 138 47 17 34

**e-mail address of person
responsible for this SDS** : ndpic@sfd.a.gov.sa

**1.4 Emergency telephone
number** : 00966 138473100 extn 1001

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Product definition : Mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Flam. Liq. 2, H225

Eye Irrit. 2, H319

Repr. 1B, H360FD

STOT SE 3, H336

Aquatic Chronic 3, H412

The product is classified as hazardous according to Regulation (EC) 1272/2008 as amended.

See Section 16 for the full text of the H statements declared above.

See Section 11 for more detailed information on health effects and symptoms.

2.2 Label elements

Hazard pictograms

:



Signal word

: Danger

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SECTION 2: Hazards identification

Hazard statements	: Highly flammable liquid and vapour. Causes serious eye irritation. May cause drowsiness or dizziness. May damage fertility. May damage the unborn child. Harmful to aquatic life with long lasting effects.
<u>Precautionary statements</u>	
Prevention	: Do not handle until all safety precautions have been read and understood. Wear protective gloves, protective clothing and eye or face protection. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
Response	: IF exposed or concerned: Get medical advice or attention.
Storage	: Store in a well-ventilated place. Keep container tightly closed.
Disposal	: Dispose of contents and container in accordance with all local, regional, national and international regulations. P202, P280, P210, P308 + P313, P403 + P233, P501
Hazardous ingredients	: propan-2-ol and trimethyl borate
Supplemental label elements	: Not applicable.
Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles	: Restricted to professional users.
<u>Special packaging requirements</u>	
Containers to be fitted with child-resistant fastenings	: Not applicable.
Tactile warning of danger	: Not applicable.

2.3 Other hazards

Product meets the criteria for PBT or vPvB according to Regulation (EC) No. 1907/2006, Annex XIII	: This mixture does not contain any substances that are assessed to be a PBT or a vPvB.
Other hazards which do not result in classification	: Prolonged or repeated contact may dry skin and cause irritation.

SECTION 3: Composition/information on ingredients

3.2 Mixtures : Mixture

Product/ingredient name	Identifiers	%	Classification	Specific Conc. Limits, M-factors and ATEs	Type
propan-2-ol	REACH #: 01-2119457558-25 EC: 200-661-7 CAS: 67-63-0 Index: 603-117-00-0	≥25 - ≤50	Flam. Liq. 2, H225 Eye Irrit. 2, H319 STOT SE 3, H336	-	[1] [2]
1-methoxy-2-propanol	REACH #: 01-2119457435-35	≥10 - ≤25	Flam. Liq. 3, H226 STOT SE 3, H336	-	[1] [2]

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SECTION 3: Composition/information on ingredients

tetraethyl silicate	EC: 203-539-1 CAS: 107-98-2 Index: 603-064-00-3 REACH #: 01-2119496195-28 EC: 201-083-8 CAS: 78-10-4 Index: 014-005-00-0	≥5.0 - ≤10	Flam. Liq. 3, H226 Acute Tox. 4, H332 Eye Irrit. 2, H319 STOT SE 3, H335	ATE [Inhalation (vapours)] = 11 mg/l	[1] [2]
methanol	REACH #: 01-2119433307-44 EC: 200-659-6 CAS: 67-56-1 Index: 603-001-00-X	≥1.0 - <3.0	Flam. Liq. 2, H225 Acute Tox. 3, H301 Acute Tox. 3, H311 Acute Tox. 3, H331 STOT SE 1, H370	ATE [Oral] = 100 mg/kg ATE [Dermal] = 300 mg/kg ATE [Inhalation (vapours)] = 3 mg/l STOT SE 1, H370: C ≥ 10% STOT SE 2, H371: 3% ≤ C < 10%	[1] [2]
trimethyl borate	EC: 204-468-9 CAS: 121-43-7 Index: 005-005-00-1	<1.0	Flam. Liq. 3, H226 Acute Tox. 4, H312 Eye Irrit. 2, H319 Repr. 1B, H360FD (oral) STOT SE 1, H370 (optic nerve)	ATE [Dermal] = 1980 mg/kg	[1] [2]
zinc chloride	EC: 231-592-0 CAS: 7646-85-7 Index: 030-003-00-2	≤0.10	Acute Tox. 4, H302 Skin Corr. 1B, H314 Eye Dam. 1, H318 STOT SE 3, H335 Aquatic Acute 1, H400 Aquatic Chronic 1, H410 See Section 16 for the full text of the H statements declared above.	ATE [Oral] = 350 mg/kg STOT SE 3, H335: C ≥ 5% M [Acute] = 10 M [Chronic] = 10	[1] [2]

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment, are PBTs, vPvBs or Substances of equivalent concern, or have been assigned a workplace exposure limit and hence require reporting in this section.

Type

[1] Substance classified with a health or environmental hazard

[2] Substance with a workplace exposure limit

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

SUB codes represent substances without registered CAS Numbers.

SECTION 4: First aid measures

4.1 Description of first aid measures

- Eye contact** : Remove contact lenses, irrigate copiously with clean, fresh water, holding the eyelids apart for at least 10 minutes and seek immediate medical advice.
- Inhalation** : Remove to fresh air. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel.
- Skin contact** : Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water or use recognised skin cleanser. Do NOT use solvents or thinners.

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SECTION 4: First aid measures

- Ingestion** : If swallowed, seek medical advice immediately and show the container or label. Keep person warm and at rest. Do NOT induce vomiting.
- 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.

4.2 Most important symptoms and effects, both acute and delayed

Potential acute health effects

- Eye contact** : Causes serious eye irritation.
- Inhalation** : Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness.
- Skin contact** : Defatting to the skin. May cause skin dryness and irritation.
- Ingestion** : Can cause central nervous system (CNS) depression.

Over-exposure signs/symptoms

- Eye contact** : Adverse symptoms may include the following:
pain or irritation
watering
redness
- Inhalation** : Adverse symptoms may include the following:
nausea or vomiting
headache
drowsiness/fatigue
dizziness/vertigo
unconsciousness
reduced foetal weight
increase in foetal deaths
skeletal malformations
- Skin contact** : Adverse symptoms may include the following:
irritation
dryness
cracking
reduced foetal weight
increase in foetal deaths
skeletal malformations
- Ingestion** : Adverse symptoms may include the following:
reduced foetal weight
increase in foetal deaths
skeletal malformations

4.3 Indication of any immediate medical attention and special treatment needed

- Notes to physician** : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
- Specific treatments** : No specific treatment.

SECTION 5: Firefighting measures

5.1 Extinguishing media

- Suitable extinguishing media** : Use dry chemical, CO₂, water spray (fog) or foam.
- Unsuitable extinguishing media** : Do not use water jet.

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SECTION 5: Firefighting measures

5.2 Special hazards arising from the substance or mixture

- Hazards from the substance or mixture** : Highly flammable liquid and vapour. Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. This material is harmful to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.
- Hazardous combustion products** : Decomposition products may include the following materials:
carbon oxides
metal oxide/oxides

5.3 Advice for firefighters

- Special precautions 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. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.
- 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. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

SECTION 6: Accidental release measures

6.1 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 spilt material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
- For emergency responders** : If specialised 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".

6.2 Environmental precautions

- : Avoid dispersal of spilt 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). Water polluting material. May be harmful to the environment if released in large quantities.

6.3 Methods and material for containment and cleaning up

- Small spill** : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
- Large spill** : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach the release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. 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. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilt product.

6.4 Reference to other sections

- : See Section 1 for emergency contact information.
See Section 8 for information on appropriate personal protective equipment.
See Section 13 for additional waste treatment information.

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SECTION 7: Handling and storage

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

7.1 Precautions for safe handling

Protective measures

: Put on appropriate personal protective equipment (see Section 8). 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 ingest. Avoid breathing vapour or mist. Avoid release to the environment. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. 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.

7.2 Conditions for safe storage, including any incompatibilities

: Store between the following temperatures: 0 to 35°C (32 to 95°F). Store in accordance with local regulations. Store in a segregated and approved area. 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. Eliminate all ignition sources. Separate from oxidising materials. 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 unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

7.3 Specific end use(s)

See Section 1.2 for Identified uses.

SECTION 8: Exposure controls/personal protection

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

8.1 Control parameters

Occupational exposure limits

Product/ingredient name	Exposure limit values
propan-2-ol	Abu Dhabi - OSHAD - Occupational air quality threshold limit values (United Arab Emirates, 7/2016) A4. TWA 8 hours: 492 mg/m ³ . TWA 8 hours: 200 ppm. STEL 15 minutes: 984 mg/m ³ . STEL 15 minutes: 400 ppm. Cabinet Decree (12) of 2006 Regarding Regulation Concerning Protection of Air from Pollution (United Arab Emirates, 5/2006) STEL 15 minutes: 500 ppm. TWA 8 hours: 983 mg/m ³ . STEL 15 minutes: 1230 mg/m ³ . TWA 8 hours: 400 ppm.

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SECTION 8: Exposure controls/personal protection

1-methoxy-2-propanol

ACGIH TLV (United States, 1/2024) A4.

TWA 8 hours: 200 ppm.

STEL 15 minutes: 400 ppm.

Abu Dhabi - OSHAD - Occupational air quality threshold limit values (United Arab Emirates, 7/2016)

TWA 8 hours: 369 mg/m³.

TWA 8 hours: 100 ppm.

STEL 15 minutes: 553 mg/m³.

STEL 15 minutes: 150 ppm.

Cabinet Decree (12) of 2006 Regarding Regulation Concerning Protection of Air from Pollution (United Arab Emirates, 5/2006)

STEL 15 minutes: 150 ppm.

TWA 8 hours: 369 mg/m³.

STEL 15 minutes: 553 mg/m³.

TWA 8 hours: 100 ppm.

ACGIH TLV (United States, 1/2024) A4.

TWA 8 hours: 50 ppm.

TWA 8 hours: 184 mg/m³.

STEL 15 minutes: 100 ppm.

STEL 15 minutes: 369 mg/m³.

tetraethyl silicate

Abu Dhabi - OSHAD - Occupational air quality threshold limit values (United Arab Emirates, 7/2016)

TWA 8 hours: 10 ppm.

TWA 8 hours: 85 mg/m³.

Cabinet Decree (12) of 2006 Regarding Regulation Concerning Protection of Air from Pollution (United Arab Emirates, 5/2006)

TWA 8 hours: 85 mg/m³.

TWA 8 hours: 10 ppm.

ACGIH TLV (United States, 1/2024)

TWA 8 hours: 10 ppm.

TWA 8 hours: 85 mg/m³.

methanol

Abu Dhabi - OSHAD - Occupational air quality threshold limit values (United Arab Emirates, 7/2016) Absorbed through skin.

TWA 8 hours: 262 mg/m³.

TWA 8 hours: 200 ppm.

STEL 15 minutes: 328 mg/m³.

STEL 15 minutes: 250 ppm.

Cabinet Decree (12) of 2006 Regarding Regulation Concerning Protection of Air from Pollution (United Arab Emirates, 5/2006)

Absorbed through skin.

STEL 15 minutes: 250 ppm.

TWA 8 hours: 262 mg/m³.

STEL 15 minutes: 328 mg/m³.

TWA 8 hours: 200 ppm.

ACGIH TLV (United States, 1/2024) Absorbed through skin.

TWA 8 hours: 200 ppm.

TWA 8 hours: 262 mg/m³.

STEL 15 minutes: 250 ppm.

STEL 15 minutes: 328 mg/m³.

trimethyl borate

ACGIH TLV (United States)

STEL: 6 mg/m³.

TWA: 2 mg/m³.

zinc chloride

Abu Dhabi - OSHAD - Occupational air quality threshold limit values (United Arab Emirates, 7/2016)

STEL 15 minutes: 2 mg/m³. Form: fumes.

TWA 8 hours: 1 mg/m³. Form: fumes.

Cabinet Decree (12) of 2006 Regarding Regulation Concerning

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SECTION 8: Exposure controls/personal protection

Protection of Air from Pollution (United Arab Emirates, 5/2006)

TWA 8 hours: 1 mg/m³. Form: fumes.

ACGIH TLV (United States, 1/2024) [Zinc chloride]

TWA 8 hours: 1 mg/m³. Form: Fume.

STEL 15 minutes: 2 mg/m³. Form: Fume.

Recommended monitoring procedures : Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

8.2 Exposure controls

Appropriate engineering controls : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapour or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

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. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Chemical splash goggles.

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. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated. When prolonged or frequently repeated contact may occur, a glove with a protection class of 6 (breakthrough time greater than 480 minutes according to EN 374) is recommended. When only brief contact is expected, a glove with a protection class of 2 or higher (breakthrough time greater than 30 minutes according to EN 374) is recommended. The user must check that the final choice of type of glove selected for handling this product is the most appropriate and takes into account the particular conditions of use, as included in the user's risk assessment.

Gloves : For prolonged or repeated handling, use the following type of gloves:

Recommended: butyl rubber, nitrile rubber

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. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves. Refer to European Standard EN 1149 for further information on material and design requirements and test methods.

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.

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SECTION 8: Exposure controls/personal protection

Respiratory protection	:	
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.

SECTION 9: Physical and chemical properties

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

9.1 Information on basic physical and chemical properties

Appearance

Physical state

Colour

Odour

Odour threshold

Melting point/freezing point

Initial boiling point and boiling range

Flammability

Upper/lower flammability or explosive limits

Flash point

Auto-ignition temperature

Decomposition temperature

pH

Viscosity

Viscosity

Solubility(ies)

Media

Partition coefficient: n-octanol/ water

Vapour pressure

Relative density

Explosive properties

Oxidising properties

Particle characteristics

Median particle size

: Liquid.

: Colourless.

:  Characteristic. [Slight]

: Not available.

: Not determined.

: >37.78°C

: Not determined. There are no data available on the mixture itself.

: Not available.

: Closed cup: 17°C

Ingredient name	°C	°F	Method
1-methoxy-2-propanol	270	518	

: Stable under recommended storage and handling conditions (see Section 7).

: Not applicable. insoluble in water.

: Dynamic (room temperature): Not available.
Kinematic (room temperature): Not available.
Kinematic (40°C): >21 mm²/s

: 30 - <40 s (ISO 6mm)

:

Media	Result
cold water	Not soluble

: Not applicable.

Ingredient name	Vapour Pressure at 20°C			Vapour pressure at 50°C		
	mm Hg	kPa	Method	mm Hg	kPa	Method
methanol	126.96329	16.9				

: 0.88

: The product itself is not explosive, but the formation of an explosible mixture of vapour or dust with air is possible.

: Product does not present an oxidizing hazard.

: Not applicable.

Conforms to Regulation (EC) No. 1907/2006 (REACH), Annex II, as amended by Commission Regulation (EU) 2020/878

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SECTION 9: Physical and chemical properties

9.2 Other information

Explosive properties	: The product itself is not explosive, but the formation of an explosible mixture of vapour or dust with air is possible.
Oxidising properties	: Product does not present an oxidizing hazard.

No additional information.

SECTION 10: Stability and reactivity

10.1 Reactivity	: No specific test data related to reactivity available for this product or its ingredients.
10.2 Chemical stability	: The product is stable.
10.3 Possibility of hazardous reactions	: Under normal conditions of storage and use, hazardous reactions will not occur.
10.4 Conditions to avoid	: When exposed to high temperatures may produce hazardous decomposition products. Refer to protective measures listed in sections 7 and 8.
10.5 Incompatible materials	: Keep away from the following materials to prevent strong exothermic reactions: oxidising agents, strong alkalis, strong acids.
10.6 Hazardous decomposition products	: Depending on conditions, decomposition products may include the following materials: carbon oxides metal oxide/oxides

SECTION 11: Toxicological information

11.1 Information on toxicological effects

The mixture has been assessed following the conventional method of the CLP Regulation (EC) No 1272/2008 and is classified for toxicological properties accordingly.

Causes serious eye irritation.
May damage fertility.
May damage the unborn child.
May cause drowsiness or dizziness.

Acute toxicity

Product/ingredient name	Result	Dose / Exposure
propan-2-ol	Rat - Oral - LD50 <i>Toxic effects:</i> Behavioral - Altered sleep time (including change in righting reflex) Behavioral - Somnolence (general depressed activity) Rabbit - Dermal - LD50 <i>Toxic effects:</i> Behavioral - Somnolence (general depressed activity)Behavioral - IrritabilityGastrointestinal - Nausea or vomiting Rat - Inhalation - LC50 Vapour	5045 mg/kg 12800 mg/kg 72600 mg/m³ [4 hours]
1-methoxy-2-propanol	Rabbit - Dermal - LD50 Rat - Oral - LD50 Rat - Inhalation - LC50 Vapour	13 g/kg 5.2 g/kg >7000 ppm [6 hours]
tetraethyl silicate	Rat - Oral - LD50 Rabbit - Dermal - LD50 Rat - Inhalation - LC50 Dusts and mists	6270 mg/kg 5.878 g/kg 10 to 16 mg/l [4 hours]
methanol	Rabbit - Dermal - LD50	15800 mg/kg

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trimethyl borate	<i>Toxic effects:</i> Eye - Visual field changes Rat - Oral - LD50 Rat - Inhalation - LC50 Vapour	5600 mg/kg 64000 ppm [4 hours]
zinc chloride	Rabbit - Dermal - LD50 Rat - Oral - LD50 Rat - Oral - LD50	1.98 g/kg 6140 mg/kg 0.35 g/kg

Acute toxicity estimates

Route	ATE value
Oral	9125.42 mg/kg
Dermal	27376.26 mg/kg
Inhalation (vapours)	115.6 mg/l

Conclusion/Summary : Based on available data, the classification criteria are not met.

Irritation/Corrosion

Conclusion/Summary

Skin : Based on available data, the classification criteria are not met.

Eyes : Causes serious eye irritation.

Respiratory : Based on available data, the classification criteria are not met.

Respiratory or skin sensitization

Conclusion/Summary

Skin : Based on available data, the classification criteria are not met.

Respiratory : Based on available data, the classification criteria are not met.

Mutagenicity

Based on available data, the classification criteria are not met.

Carcinogenicity

Based on available data, the classification criteria are not met.

Reproductive toxicity

May damage fertility.

May damage the unborn child.

Specific target organ toxicity (single exposure)

Product/ingredient name	Category	Route of exposure	Target organs
propan-2-ol	Category 3	-	Narcotic effects
1-methoxy-2-propanol	Category 3	-	Narcotic effects
tetraethyl silicate	Category 3	-	Respiratory tract irritation
methanol	Category 1	-	-
trimethyl borate	Category 1	-	optic nerve
zinc chloride	Category 3	-	Respiratory tract irritation

Conclusion/Summary (Product) :

May cause drowsiness or dizziness.

Specific target organ toxicity (repeated exposure)

Based on available data, the classification criteria are not met.

Based on available data, the classification criteria are not met.

Information on likely routes of exposure : Not available.

Potential acute health effects

Inhalation : Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness.

Ingestion : Can cause central nervous system (CNS) depression.

Skin contact : Defatting to the skin. May cause skin dryness and irritation.

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Eye contact : Causes serious eye irritation.

Symptoms related to the physical, chemical and toxicological characteristics

Inhalation : Adverse symptoms may include the following:
nausea or vomiting
headache
drowsiness/fatigue
dizziness/vertigo
unconsciousness
reduced foetal weight
increase in foetal deaths
skeletal malformations

Ingestion : Adverse symptoms may include the following:
reduced foetal weight
increase in foetal deaths
skeletal malformations

Skin contact : Adverse symptoms may include the following:
irritation
dryness
cracking
reduced foetal weight
increase in foetal deaths
skeletal malformations

Eye contact : Adverse symptoms may include the following:
pain or irritation
watering
redness

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Short term exposure

Potential immediate effects : No known significant effects or critical hazards.

Potential delayed effects : No known significant effects or critical hazards.

Long term exposure

Potential immediate effects : No known significant effects or critical hazards.

Potential delayed effects : No known significant effects or critical hazards.

Potential chronic health effects

General : Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis.

Carcinogenicity : No known significant effects or critical hazards.

Mutagenicity : No known significant effects or critical hazards.

Reproductive toxicity : May damage fertility. May damage the unborn child.

Other information : Not available.

Prolonged or repeated contact may dry skin and cause irritation. Contains . methanol . Cannot be made non-poisonous. May be fatal or cause blindness if swallowed. Repeated exposure to high vapor concentrations may cause irritation of the respiratory system and permanent brain and nervous system damage. Inhalation of vapour/aerosol concentrations above the recommended exposure limits causes headaches, drowsiness and nausea and may lead to unconsciousness or death. Avoid contact with skin and clothing.

11.2 Information on other hazards

11.2.1 Endocrine disrupting properties

The product does not meet the criteria to be considered as having endocrine disrupting properties according to the criteria set out in either Regulation (EC) No. 1907/2006 or Regulation (EC) No 1272/2008.

11.2.2 Other information

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Not available.

SECTION 12: Ecological information

12.1 Toxicity

Product/ingredient name	Result	Species	Dose / Exposure
propan-2-ol	Acute - EC50 - Fresh water	Daphnia - Water flea - <i>Daphnia magna</i>	10.1 g/l [48 hours]
1-methoxy-2-propanol	Acute - LC50 - Fresh water	Fish - Goldfish	>4500 mg/l [96 hours]
	Acute - LC50	Daphnia - Daphnia	23300 mg/l [48 hours]
methanol	Acute - LC50 - Fresh water	Fish - Trout	13 mg/l [96 hours]
zinc chloride	Acute - LC50	Fish	0.4 to 2.2 mg/l [96 hours]
	Chronic - EC10 - Fresh water	Daphnia - Water flea - <i>Daphnia magna</i> - Juvenile (Fledgling, Hatchling, Weanling)	58 µg/l [21 days]
	Acute - EC50 - Fresh water	Algae - Green algae - <i>Raphidocelis subcapitata</i> - Exponential growth phase	22 µg/l [72 hours]
	Chronic - EC10 - Fresh water	Algae - Green algae - <i>Raphidocelis subcapitata</i> - Exponential growth phase	10 µg/l [72 hours]
	Acute - LC50 - Fresh water	Daphnia - Water flea - <i>Daphnia galeata</i> - Neonate	0.14 mg/l [48 hours]

Conclusion/Summary : Harmful to aquatic life with long lasting effects.

12.2 Persistence and degradability

Based on available data, the classification criteria are not met.

12.3 Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
propan-2-ol	0.05	-	Low
1-methoxy-2-propanol	<1	-	Low
tetraethyl silicate	3.18	-	Low
methanol	-0.77	-	Low
trimethyl borate	-1.9	-	Low

12.4 Mobility in soil

Soil/water partition coefficient

Product/ingredient name	logK _{oc}	K _{oc}
propan-2-ol	0.54	3.4364
1-methoxy-2-propanol	1.02	10.447
tetraethyl silicate	1.72	52.828
methanol	0.44	2.75443
trimethyl borate	1.27	18.6762

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SECTION 12: Ecological information

12.5 Results of PBT and vPvB assessment

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

12.6 Endocrine disrupting properties

The product does not meet the criteria to be considered as having endocrine disrupting properties according to the criteria set out in either Regulation (EC) No. 1907/2006 or Regulation (EC) No 1272/2008.

12.7 Other adverse effects

No known significant effects or critical hazards.

SECTION 13: Disposal considerations

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

13.1 Waste treatment methods

Product

Methods of disposal : The generation of waste should be avoided or minimised 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.

Hazardous waste : Yes.

European waste catalogue (EWC)

Waste code	Waste designation
08 01 11*	waste paint and varnish containing organic solvents or other hazardous substances

Packaging

Methods of disposal : The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

Type of packaging	European waste catalogue (EWC)
Container	15 01 06 mixed packaging

Special precautions : 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. Vapour from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

SECTION 14: Transport information

	ADR/RID	IMDG	IATA
14.1 UN number or ID number	UN1263	UN1263	UN1263
14.2 UN proper shipping name	PAINT	PAINT	PAINT
14.3 Transport hazard class(es)	3	3	3
14.4 Packing group	II	II	II
14.5 Environmental hazards	No.	No.	No.
Marine pollutant substances	Not applicable.	Not applicable.	Not applicable.

ADR/RID : None identified.
Tunnel code : (D/E)
IMDG : None identified.
IATA : None identified.

14.7 Transport in bulk according to IMO instruments : Not applicable.

Not listed.

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SECTION 16: Other information

Indicates information that has changed from previously issued version.

Abbreviations and acronyms	: ATE = Acute Toxicity Estimate CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008] DNEL = Derived No Effect Level EUH statement = CLP-specific Hazard statement PNEC = Predicted No Effect Concentration RRN = REACH Registration Number	
Full text of abbreviated H statements	: H225 Highly flammable liquid and vapour. H226 Flammable liquid and vapour. H301 Toxic if swallowed. H302 Harmful if swallowed. H311 Toxic in contact with skin. H312 Harmful in contact with skin. H314 Causes severe skin burns and eye damage. H318 Causes serious eye damage. H319 Causes serious eye irritation. H331 Toxic if inhaled. H332 Harmful if inhaled. H335 May cause respiratory irritation. H336 May cause drowsiness or dizziness. H360FD May damage fertility. May damage the unborn child. H370 Causes damage to organs. H400 Very toxic to aquatic life. H410 Very toxic to aquatic life with long lasting effects. H412 Harmful to aquatic life with long lasting effects.	
Full text of classifications [CLP/GHS]	: Acute Tox. 3 Acute Tox. 4 Aquatic Acute 1 Aquatic Chronic 1 Aquatic Chronic 3 Eye Dam. 1 Eye Irrit. 2 Flam. Liq. 2 Flam. Liq. 3 Repr. 1B Skin Corr. 1B STOT SE 1 STOT SE 3	ACUTE TOXICITY - Category 3 ACUTE TOXICITY - Category 4 SHORT-TERM (ACUTE) AQUATIC HAZARD - Category 1 LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 1 LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 3 SERIOUS EYE DAMAGE/EYE IRRITATION - Category 1 SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2 FLAMMABLE LIQUIDS - Category 2 FLAMMABLE LIQUIDS - Category 3 REPRODUCTIVE TOXICITY - Category 1B SKIN CORROSION/IRRITATION - Category 1B SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE - Category 1 SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE - Category 3

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