

SAFETY DATA SHEET

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

1.1 Product identifier

Product name : UV PRIMER FOR SPUTTERING

Product code : T86VUC502

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

Material uses : Paint or paint related material.

: Industrial use only.

1.3 Details of the supplier of the safety data sheet

SHERWIN-WILLIAMS Italy S.r.l.

Via del Fifico, 12 -40065 Pianoro (BO)

Italia - C.P. 18

Cod. Fisc. e Reg. Impr. Bo 08866930152

e-mail address of person responsible for this SDS : regulatory.SWI@sherwin.com

1.4 Emergency telephone number

National advisory body/Poison Centre

Telephone number : 111 (general public) /0344 892 111 (Medical professional (NHS) only)

Supplier

Telephone number : +39 051 770511

Hours of operation : Emergency contact available 24 hours a day

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

Skin Irrit. 2, H315

Eye Dam. 1, H318

Skin Sens. 1, H317

Carc. 2, H351

STOT SE 3, H336

Aquatic Chronic 2, H411

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

SECTION 2: Hazards identification

Hazard statements : Highly flammable liquid and vapour.
Causes skin irritation.
May cause an allergic skin reaction.
Causes serious eye damage.
May cause drowsiness or dizziness.
Suspected of causing cancer.
Toxic to aquatic life with long lasting effects.

Precautionary statements

Prevention : Wear protective gloves, protective clothing, eye protection, face protection, or hearing protection. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Avoid release to the environment.

Response : Collect spillage. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor.

Storage : Not applicable.

Disposal : Not applicable.

Hazardous ingredients : 1-methoxy-2-propanol
2-methoxy-1-methylethyl acetate
butanone
4-methylpentan-2-one
hexamethylene diacrylate
2,2-dimethyltrimethylene diacrylate

Supplemental label elements : FOR INDUSTRIAL USE ONLY

Special packaging requirements

Not applicable.

2.3 Other hazards

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

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Other hazards which do not result in classification : None known.

SECTION 3: Composition/information on ingredients**3.2 Mixture**

Product/ingredient name	Identifiers	%	Classification	Specific Conc. Limits, M-factors and ATEs	Type
Polyester-Acrylate Oligomer Acrylate Oligomer	- EC: 500-111-9 CAS: 51728-26-8	≥25 - ≤50 ≥10 - ≤25	Eye Irrit. 2, H319 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Aquatic Chronic 2, H411	- -	[1] [1]
1-Methoxy-2-propanol	EC: 203-539-1 CAS: 107-98-2 Index: 603-064-00-3	≥10 - ≤25	Flam. Liq. 3, H226 STOT SE 3, H336	-	[1] [2]
2-methoxy-1-methylethyl acetate	REACH #: 01-2119475791-29 EC: 203-603-9 CAS: 108-65-6 Index: 607-195-00-7	≤10	Flam. Liq. 3, H226 STOT SE 3, H336	-	[1] [2]

SECTION 3: Composition/information on ingredients

Methyl Ethyl Ketone	REACH #: 01-2119457290-43 EC: 201-159-0 CAS: 78-93-3 Index: 606-002-00-3	<10	Flam. Liq. 2, H225 Eye Irrit. 2, H319 STOT SE 3, H336 EUH066	-	[1] [2]
Methyl Isobutyl Ketone	REACH #: 01-2119473980-30 EC: 203-550-1 CAS: 108-10-1 Index: 606-004-00-4	<10	Flam. Liq. 2, H225 Acute Tox. 4, H332 Eye Irrit. 2, H319 Carc. 2, H351 STOT SE 3, H336 EUH066	ATE [Inhalation (vapours)] = 11 mg/l	[1] [2]
1,6-Hexanediol diacrylate	REACH #: 01-2119484737-22 EC: 235-921-9 CAS: 13048-33-4 Index: 607-109-00-8	≤5	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317 Aquatic Acute 1, H400 Aquatic Chronic 2, H411	M [Acute] = 1	[1]
Phosphated Acid Modified Methacrylate	CAS: 1187441-10-6	≤5	Eye Dam. 1, H318 Skin Sens. 1B, H317	-	[1]
2-Propenoic acid, reaction products with pentaerythritol	REACH #: 01-2119490003-49 CAS: 1245638-61-2	≤5	Acute Tox. 4, H302 Skin Irrit. 2, H315 Eye Dam. 1, H318 Skin Sens. 1, H317 Aquatic Chronic 2, H411	ATE [Oral] = 500 mg/kg	[1]
Diacrylate Oligomer	EC: 218-741-5 CAS: 2223-82-7 Index: 607-112-00-4	≤3	Acute Tox. 3, H311 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317	ATE [Dermal] = 300 mg/kg	[1]
Tetramethyl Decynediol	REACH #: 01-2119954390-39 EC: 204-809-1 CAS: 126-86-3	<1	Eye Dam. 1, H318 Skin Sens. 1, H317 Aquatic Chronic 3, H412	-	[1]
Acrylic Acid	REACH #: 01-2119452449-31 EC: 201-177-9 CAS: 79-10-7 Index: 607-061-00-8	≤0.3	Flam. Liq. 3, H226 Acute Tox. 4, H302 Acute Tox. 4, H312 Acute Tox. 4, H332 Skin Corr. 1A, H314 Eye Dam. 1, H318 Aquatic Acute 1, H400 Aquatic Chronic 2, H411 See Section 16 for the full text of the H statements declared above.	ATE [Oral] = 500 mg/kg ATE [Dermal] = 1100 mg/kg ATE [Inhalation (vapours)] = 11 mg/l M [Acute] = 1	[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.

SECTION 4: First aid measures

4.1 Description of first aid measures

- General** : In all cases of doubt, or when symptoms persist, seek medical attention. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and seek medical advice.
- Eye contact** : Check for and remove any contact lenses. Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. Seek immediate medical attention.
- 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. In case of accidental skin contact, avoid concurrent exposure to the sun or other sources of UV light which may increase the sensitivity of skin.
- 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

There are no data available on the mixture itself. Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]. See Sections 2 and 3 for details.

This takes into account, where known, delayed and immediate effects and also chronic effects of components from short-term and long-term exposure by oral, inhalation and dermal routes of exposure and eye contact.

Acrylate components of the mixture have irritating properties. Prolonged or repeated contact with skin or mucous membrane may result in irritation symptoms, such as redness, blistering, dermatitis etc. May cause allergic skin reactions with repeated exposure.

If splashed in the eyes, the liquid may cause irritation and reversible damage.

The inhalation of airborne droplets or aerosols may cause irritation of the respiratory tract.

Ingestion may cause nausea, weakness and central nervous system effects.

Contains hexamethylene diacrylate, 2-Propenoic acid, reaction products with pentaerythritol, 2,2-dimethyltrimethylene diacrylate, 2,4,7,9-tetramethyldec-5-yne-4,7-diol. May produce an allergic reaction.

The following products have sensitising properties: hexamethylene diacrylate, Phosphated Acid Modified Methacrylate, 2-Propenoic acid, reaction products with pentaerythritol, 2,2-dimethyltrimethylene diacrylate. Cases of hypersensitivity may occur, possibly with cross-sensitisation to other acrylate materials.

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.

See toxicological information (Section 11)

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media : Recommended: alcohol-resistant foam, CO₂ blanket, powders, water spray or mist.

Unsuitable extinguishing media : Do not use water jet.

5.2 Special hazards arising from the substance or mixture

Hazards from the substance or mixture : Fire will produce dense black smoke. Exposure to decomposition products may cause a health hazard.

Hazardous combustion products : Decomposition products may include the following materials: carbon monoxide, carbon dioxide, smoke, oxides of nitrogen.

5.3 Advice for firefighters

Special protective actions for fire-fighters : Cool closed containers exposed to fire with water. Do not release runoff from fire to drains or watercourses.

Special protective equipment for fire-fighters : Fire-fighters should wear positive pressure self-contained breathing apparatus (SCBA) and full turnout gear.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : Exclude sources of ignition and ventilate the area. Avoid breathing vapour or mist. Refer to protective measures listed in sections 7 and 8.

Keep unnecessary and unprotected personnel from entering.

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

: Do not allow to enter drains or watercourses. If the product contaminates lakes, rivers, or sewers, inform the appropriate authorities in accordance with local regulations.

6.3 Methods and material for containment and cleaning up

: 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 (see Section 13). Preferably clean with a detergent. Avoid using solvents.

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.

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).

Persons with a history of skin sensitization problems should not be employed in any process in which this product is used.

7.1 Precautions for safe handling

: Use only in well-ventilated areas.
Keep away from heat, sparks and flame.
Avoid contact with skin and eyes. Avoid the inhalation of dust, particulates, spray or mist arising from the application of this mixture. Avoid inhalation of dust from sanding.
Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed.
Put on appropriate personal protective equipment (see Section 8).

SECTION 7: Handling and storage

Never use pressure to empty. Container is not a pressure vessel.
Always keep in containers made from the same material as the original one.
Comply with the health and safety at work laws.
Do not allow to enter drains or watercourses.

7.2 Conditions for safe storage, including any incompatibilities

: Store in accordance with local regulations.

Notes on joint storage

Keep away from: oxidising agents, strong alkalis, strong acids.

Additional information on storage conditions

Observe label precautions. Store in a dry, cool and well-ventilated area. Keep away from heat and direct sunlight.

Keep container tightly closed.

Keep away from sources of ignition. No smoking. Prevent unauthorised access.

Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Keep only in the original container.

Contaminated absorbent material may pose the same hazard as the spilt product.

7.3 Specific end use(s)

Recommendations

: Not available.

Industrial sector specific solutions

: Not available.

Good housekeeping standards, regular safe removal of waste materials and regular maintenance of spray booth filters will minimise the risks of spontaneous combustion and other fire hazards.

Before use of this material please refer to the Exposure Scenario(s) if attached for the specific end use, control measures and additional PPE considerations.

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
1-Methoxy-2-propanol	EH40/2005 WELs (United Kingdom (UK), 1/2020). Absorbed through skin. STEL: 560 mg/m ³ 15 minutes. STEL: 150 ppm 15 minutes. TWA: 375 mg/m ³ 8 hours. TWA: 100 ppm 8 hours.
2-methoxy-1-methylethyl acetate	EH40/2005 WELs (United Kingdom (UK), 1/2020). Absorbed through skin. STEL: 548 mg/m ³ 15 minutes. TWA: 50 ppm 8 hours. TWA: 274 mg/m ³ 8 hours. STEL: 100 ppm 15 minutes.
Methyl Ethyl Ketone	EH40/2005 WELs (United Kingdom (UK), 1/2020). Absorbed through skin. STEL: 899 mg/m ³ 15 minutes. STEL: 300 ppm 15 minutes. TWA: 600 mg/m ³ 8 hours. TWA: 200 ppm 8 hours.
Methyl Isobutyl Ketone	EH40/2005 WELs (United Kingdom (UK), 1/2020). Absorbed through skin. STEL: 416 mg/m ³ 15 minutes. STEL: 100 ppm 15 minutes.

SECTION 8: Exposure controls/personal protection

Acrylic Acid

TWA: 208 mg/m³ 8 hours.

TWA: 50 ppm 8 hours.

EH40/2005 WELs (United Kingdom (UK), 1/2020).STEL: 59 mg/m³ 1 minutes.

STEL: 20 ppm 1 minutes.

TWA: 29 mg/m³ 8 hours.

TWA: 10 ppm 8 hours.

Biological exposure indices

Product/ingredient name	Exposure indices
butanone	EH40/2005 BMGVs (United Kingdom (UK), 8/2018) BGV: 70 µmol/l, butan-2-one [in urine]. Sampling time: post shift.
4-methylpentan-2-one	EH40/2005 BMGVs (United Kingdom (UK), 8/2018) BGV: 20 µmol/l, 4-methylpentan-2-one [in urine]. Sampling time: post shift.

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.
- : Regular monitoring of all work areas should be carried out at all times, including areas that may not be equally ventilated.

DNELs/DMELs

Product/ingredient name	Type	Exposure	Value	Population	Effects
1-Methoxy-2-propanol	DNEL	Short term Inhalation	553.5 mg/m ³	Workers	Local
	DNEL	Long term Inhalation	369 mg/m ³	Workers	Systemic
	DNEL	Long term Dermal	183 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	43.9 mg/m ³	General population [Consumers]	Systemic
	DNEL	Long term Dermal	78 mg/kg bw/day	General population [Consumers]	Systemic
	DNEL	Long term Oral	33 mg/kg bw/day	General population [Consumers]	Systemic
2-methoxy-1-methylethyl acetate	DNEL	Long term Inhalation	33 mg/m ³	General population [Consumers]	Local
	DNEL	Long term Oral	36 mg/kg bw/day	General population [Consumers]	Systemic
	DNEL	Long term Dermal	320 mg/kg	General population [Consumers]	Systemic
	DNEL	Long term Inhalation	33 mg/m ³	General population [Consumers]	Systemic

SECTION 8: Exposure controls/personal protection

Methyl Ethyl Ketone	DNEL	Long term Inhalation	550 mg/m ³	Workers	Local
	DNEL	Long term Dermal	796 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	275 mg/m ³	Workers	Systemic
	DNEL	Long term Dermal	1161 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	600 mg/m ³	Workers	Systemic
	DNEL	Long term Dermal	412 mg/kg bw/day	General population [Consumers]	Systemic
	DNEL	Long term Inhalation	106 mg/m ³	General population [Consumers]	Systemic
Methyl Isobutyl Ketone	DNEL	Long term Oral	31 mg/kg bw/day	General population [Consumers]	Systemic
	DNEL	Short term Inhalation	208 mg/m ³	Workers	Systemic
	DNEL	Short term Inhalation	208 mg/m ³	Workers	Local
	DNEL	Long term Inhalation	83 mg/m ³	Workers	Systemic
	DNEL	Long term Inhalation	83 mg/m ³	Workers	Local
	DNEL	Long term Dermal	11.8 mg/kg bw/day	Workers	Systemic
	DNEL	Short term Inhalation	155.2 mg/m ³	General population [Consumers]	Systemic
1,6-Hexanediol diacrylate	DNEL	Short term Inhalation	155.2 mg/m ³	General population [Consumers]	Local
	DNEL	Long term Inhalation	14.7 mg/m ³	General population [Consumers]	Systemic
	DNEL	Long term Inhalation	14.7 mg/m ³	General population [Consumers]	Local
	DNEL	Long term Dermal	4.2 mg/kg bw/day	General population [Consumers]	Systemic
	DNEL	Long term Oral	4.2 mg/kg bw/day	General population [Consumers]	Systemic
	DNEL	Long term Inhalation	24.5 mg/m ³	Workers	Systemic
	DNEL	Long term Dermal	2.77 mg/kg	Workers	Systemic

PNECs

Product/ingredient name	Compartment Detail	Value	Method Detail
1-Methoxy-2-propanol	Fresh water	10 mg/l	-
	Fresh water sediment	52.3 mg/kg	-
	Marine water sediment	5.2 mg/kg	-
	Soil	4.59 mg/kg	-
	Sewage Treatment Plant	100 mg/l	-
2-methoxy-1-methylethyl acetate	Fresh water	0.635 mg/kg	-
	Marine water	0.0635 mg/l	-

SECTION 8: Exposure controls/personal protection

Methyl Ethyl Ketone	Fresh water sediment	3.29 mg/kg	-
	Marine water sediment	0.329 mg/kg	-
	Soil	0.29 mg/kg	-
	Sewage Treatment Plant	100 mg/l	-
	Fresh water	55.8 mg/l	-
	Marine water	55.8 mg/l	-
Methyl Isobutyl Ketone	Sewage Treatment Plant	709 mg/l	-
	Sediment	284.7 mg/kg dwt	-
	Soil	22.5 mg/kg	-
	Secondary Poisoning	1000 mg/kg	-
	Fresh water	0.6 mg/l	-
	Marine water	0.06 mg/l	-
	Sewage Treatment Plant	27.5 mg/l	-
	Fresh water sediment	8.27 mg/kg dwt	-
	Marine water sediment	0.83 mg/kg dwt	-
	Soil	1.3 mg/kg dwt	-

8.2 Exposure controls

Appropriate engineering controls

- : Provide adequate ventilation. Where reasonably practicable, this should be achieved by the use of local exhaust ventilation and good general extraction. If these are not sufficient to maintain concentrations of particulates and solvent vapours below the OEL, suitable respiratory protection must be worn.
- : Users are advised to consider national Occupational Exposure Limits or other equivalent values.

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

- : Use safety eyewear designed to protect against splash of liquids.

Skin protection

Hand protection

Gloves

- : Wear suitable gloves tested to EN374.
- : Gloves for short term exposure/splash protection (less than 10 min): Nitrile >0.12 mm
Gloves for splash protection need to be changed immediately when in contact with chemicals.
Gloves for repeated or prolonged exposure (breakthrough time > 120 min): Nitrile >0.56 mm
Gloves for repeated or prolonged exposure (breakthrough time > 120 min): Nitrile >0.56 mm with textile undergloves
Due to many conditions (e.g. temperature, abrasion) the practical usage of a chemical protective glove in practice may be much shorter than the permeation time determined through testing.
The recommendation for the type or types of glove to use when handling this product is based on information from the following source: Radtech Europe.
There is no one glove material or combination of materials that will give unlimited resistance to any individual or combination of chemicals.
The breakthrough time must be greater than the end use time of the product.
The instructions and information provided by the glove manufacturer on use, storage, maintenance and replacement must be followed.
Gloves should be replaced regularly and if there is any sign of damage to the glove material.
Always ensure that gloves are free from defects and that they are stored and used correctly.

SECTION 8: Exposure controls/personal protection

The performance or effectiveness of the glove may be reduced by physical/chemical damage and poor maintenance.

Barrier creams may help to protect the exposed areas of the skin but should not be applied once exposure has occurred.

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.

Body protection

- : Personnel should wear protective clothing.
- : 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.

Respiratory protection

- : Application methods:
Brush or roller. Approved/certified respirator with organic vapour cartridge. Filter type: A2 P2 (EN14387).
Manual spraying. Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary.

Environmental exposure controls

- : Do not allow to enter drains or watercourses.

Before use of this material please refer to the Exposure Scenario(s) if attached for the specific end use, control measures and additional PPE considerations. The information contained in this safety data sheet does not constitute the user's own assessment of workplace risks, as required by other health and safety legislation. The provisions of the national health and safety at work regulations apply to the use of this product at work.

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	: Liquid.
Colour	: Colourless.
Odour	: Ester.
Odour threshold	: Not available.
pH	: Not relevant/applicable due to nature of the product. insoluble in water.
Melting point/freezing point	: Not relevant/applicable due to nature of the product.
Initial boiling point and boiling range	: 78°C
Flash point	: Closed cup: -4°C [Pensky-Martens Closed Cup]
Evaporation rate	: 5.6 (butyl acetate = 1)
Flammability	: Flammable liquid.
Lower and upper explosion limit	: LEL: 1.3% (2-methoxy-1-methylethyl acetate) UEL: 13.74% (1-Methoxy-2-propanol)
Vapour pressure	: 12.1 kPa (90.6 mm Hg)
Relative vapour density	: 2.48 [Air = 1]
Relative density	: 1.07

SECTION 9: Physical and chemical properties**Solubility(ies)** :

Media	Result
cold water	Not soluble

Partition coefficient: n-octanol/ water : Not relevant/applicable due to nature of the product.**Auto-ignition temperature** :

Ingredient name	°C	°F	Method
1-Methoxy-2-propanol	286	546.8	
Phosphated Acid Modified Methacrylate	340	644	
Methyl Isobutyl Ketone	447	836.6	
Methyl Ethyl Ketone	475	887	

Decomposition temperature : Not relevant/applicable due to nature of the product.**Viscosity** : Kinematic (40°C): >20.5 mm²/s**Explosive properties** : Under normal conditions of storage and use, hazardous reactions will not occur.**Oxidising properties** : Under normal conditions of storage and use, hazardous reactions will not occur.**Particle characteristics****Median particle size** : Not relevant/applicable due to nature of the product.**9.2 Other information****Heat of combustion** : 8.883 kJ/g**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** : Hazardous reactions or instability may occur under certain conditions of storage or use.**10.3 Possibility of hazardous reactions** : Under normal conditions of storage and use, hazardous reactions will not occur.**10.4 Conditions to avoid** : This mixture contains materials which are unstable under the following conditions: exposure to heat, strong UV sources. These could cause the product to polymerise exothermically. Unintentional contact with them should be avoided.**10.5 Incompatible materials** : Keep away from: free radical initiators, peroxides, strong alkalis, reactive metals.**10.6 Hazardous decomposition products** : Decomposition products may include the following materials: carbon monoxide, carbon dioxide, smoke, oxides of nitrogen.**Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees.****SECTION 11: Toxicological information****11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008**

There are no data available on the mixture itself. Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]. See Sections 2 and 3 for details.

This takes into account, where known, delayed and immediate effects and also chronic effects of components from short-term and long-term exposure by oral, inhalation and dermal routes of exposure and eye contact.

Acrylate components of the mixture have irritating properties. Prolonged or repeated contact with skin or mucous membrane may result in irritation symptoms, such as redness, blistering, dermatitis etc. May cause allergic skin reactions with repeated exposure.

SECTION 11: Toxicological information

If splashed in the eyes, the liquid may cause irritation and reversible damage.
The inhalation of airborne droplets or aerosols may cause irritation of the respiratory tract.
Ingestion may cause nausea, weakness and central nervous system effects.

Contains hexamethylene diacrylate, 2-Propenoic acid, reaction products with pentaerythritol, 2,2-dimethyltrimethylene diacrylate, 2,4,7,9-tetramethyldec-5-yne-4,7-diol. May produce an allergic reaction.

The following products have sensitising properties: hexamethylene diacrylate, Phosphated Acid Modified Methacrylate, 2-Propenoic acid, reaction products with pentaerythritol, 2,2-dimethyltrimethylene diacrylate. Cases of hypersensitivity may occur, possibly with cross-sensitisation to other acrylate materials.

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
1-Methoxy-2-propanol	LD50 Dermal	Rabbit	13 g/kg	-
	LD50 Oral	Rat	6600 mg/kg	-
2-methoxy-1-methylethyl acetate	LD50 Dermal	Rabbit	>5 g/kg	-
	LD50 Oral	Rat	8532 mg/kg	-
Methyl Ethyl Ketone	LD50 Dermal	Rabbit	6480 mg/kg	-
	LD50 Oral	Rat	2737 mg/kg	-
Methyl Isobutyl Ketone	LD50 Oral	Rat	2080 mg/kg	-
1,6-Hexanediol diacrylate	LD50 Oral	Rat	5 g/kg	-
Acrylic Acid	LD50 Dermal	Rabbit	640 mg/kg	-
	LD50 Oral	Rat	33500 µg/kg	-

Acute toxicity estimates

Route	ATE value
Oral	12531.33 mg/kg
Dermal	23809.52 mg/kg
Inhalation (vapours)	220 mg/l

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
1-Methoxy-2-propanol	Eyes - Mild irritant	Rabbit	-	24 hours 500 mg	-
	Skin - Mild irritant	Rabbit	-	500 mg	-
Methyl Ethyl Ketone	Skin - Mild irritant	Rabbit	-	24 hours 14 mg	-
	Skin - Moderate irritant	Rabbit	-	24 hours 500 mg	-
Methyl Isobutyl Ketone	Eyes - Moderate irritant	Rabbit	-	24 hours 100 µL	-
	Eyes - Severe irritant	Rabbit	-	40 mg	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 mg	-
1,6-Hexanediol diacrylate	Skin - Severe irritant	Rabbit	-	24 hours 500 mg	-
Diacrylate Oligomer	Skin - Severe irritant	Rabbit	-	500 mg	-
Tetramethyl Decynediol	Eyes - Severe irritant	Rabbit	-	0.1 MI	-
	Skin - Mild irritant	Rabbit	-	0.5 g	-
Acrylic Acid	Eyes - Severe irritant	Rabbit	-	1 mg	-
	Eyes - Severe irritant	Rabbit	-	24 hours 250	-

SECTION 11: Toxicological information

	Skin - Severe irritant	Rabbit	-	ug 24 hours 5	-
	Skin - Severe irritant	Rabbit	-	mg 500 mg	-

Conclusion/Summary : Not available.

Sensitisation

No data available

Conclusion/Summary : Not available.

Mutagenicity

No data available

Carcinogenicity

No data available

Reproductive toxicity

No data available

Teratogenicity

No data available

Specific target organ toxicity (single exposure)

Product/ingredient name	Category	Route of exposure	Target organs
1-Methoxy-2-propanol	Category 3	-	Narcotic effects
2-methoxy-1-methylethyl acetate	Category 3	-	Narcotic effects
Methyl Ethyl Ketone	Category 3	-	Narcotic effects
Methyl Isobutyl Ketone	Category 3	-	Narcotic effects

Specific target organ toxicity (repeated exposure)

No data available

Aspiration hazard

No data available

11.2 Information on other hazards

11.2.1 Endocrine disrupting properties

Not available.

11.2.2 Other information

Not available.

SECTION 12: Ecological information

12.1 Toxicity

There are no data available on the mixture itself.
Do not allow to enter drains or watercourses.

Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]. See Sections 2 and 3 for details.

SECTION 12: Ecological information

Product/ingredient name	Result	Species	Exposure
Methyl Ethyl Ketone	Acute EC50 >500000 µg/l Marine water Acute EC50 5091000 µg/l Fresh water	Algae - <i>Skeletonema costatum</i> Daphnia - <i>Daphnia magna</i> - Larvae	96 hours 48 hours
Methyl Isobutyl Ketone	Acute LC50 3220000 µg/l Fresh water Acute LC50 505000 µg/l Fresh water Chronic NOEC 78 mg/l Fresh water Chronic NOEC 168 mg/l Fresh water	Fish - <i>Pimephales promelas</i> Fish - <i>Pimephales promelas</i> Daphnia - <i>Daphnia magna</i> Fish - <i>Pimephales promelas</i> - Embryo	96 hours 96 hours 21 days 33 days
Acrylic Acid	Chronic NOEC 3.8 mg/l Fresh water	Daphnia - <i>Daphnia magna</i> - Neonate	21 days

12.2 Persistence and degradability

Product/ingredient name	Test	Result	Dose	Inoculum
No data available				

Conclusion/Summary : Not available.

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
Methyl Ethyl Ketone	-	-	Readily
Methyl Isobutyl Ketone	-	-	Readily

12.3 Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
Acrylic Acid	-	3.162	Low

12.4 Mobility in soil**Soil/water partition coefficient (K_{oc})** : Not available.**Mobility** : Not available.**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

Not available.

12.7 Other adverse effects

No known significant effects or critical hazards.

SECTION 13: Disposal considerations**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.

SECTION 13: Disposal considerations

European waste catalogue (EWC) : waste paint and varnish containing organic solvents or other hazardous substances 08 01 11*

Disposal considerations : Do not allow to enter drains or watercourses.
Dispose of according to all federal, state and local applicable regulations.
If this product is mixed with other wastes, the original waste product code may no longer apply and the appropriate code should be assigned.
For further information, contact your local waste authority.

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.

Disposal considerations : Using information provided in this safety data sheet, advice should be obtained from the relevant waste authority on the classification of empty containers. Empty containers must be scrapped or reconditioned. Dispose of containers contaminated by the product in accordance with local or national legal provisions.

European waste catalogue (EWC) : packaging containing residues of or contaminated by hazardous substances 15 01 10*

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. Marine pollutant (Acrylate Oligomer, 1,6-Hexanediol diacrylate)	PAINT
14.3 Transport Hazard Class(es)/ Label(s)	3 	3 	3 
14.4 Packing group	II	II	II
14.5 Environmental hazards	Yes.	Yes.	Yes. The environmentally hazardous substance mark is not required.
Additional information	The environmentally hazardous substance mark is not required when transported in sizes of ≤5 L or ≤5 kg. Special provisions 640 (C) Tunnel code D/E	The marine pollutant mark is not required when transported in sizes of ≤5 L or ≤5 kg. Emergency schedules F-E, S-E	The environmentally hazardous substance mark may appear if required by other transportation regulations.

14.6 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.

SECTION 14: Transport information

14.7 Maritime transport in bulk according to IMO instruments : Not applicable.

Multi-modal shipping descriptions are provided for informational purposes and do not consider container sizes. The presence of a shipping description for a particular mode of transport (sea, air, etc.), does not indicate that the product is packaged suitably for that mode of transport. All packaging must be reviewed for suitability prior to shipment, and compliance with the applicable regulations is the sole responsibility of the person offering the product for transport. People loading and unloading dangerous goods must be trained on all of the risks deriving from the substances and on all actions in case of emergency situations.

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

EU Regulation (EC) No. 1907/2006 (REACH)**Annex XIV - List of substances subject to authorisation****Annex XIV**

None of the components are listed.

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles

Product/ingredient name	%	Designation [Usage]
UV PRIMER FOR SPUTTERING	≥90	3
decamethylcyclopentasiloxane	≤0.1	70
formaldehyde	<0.1	72

Labelling : Not applicable.

Other EU regulations

VOC content (2010/75/EU) : 28.8 w/w
309 g/l

Explosive precursors : Not applicable.

Seveso Directive

This product may add to the calculation for determining whether a site is within the scope of the Seveso Directive on major accident hazards.

National regulations

Product/ingredient name	List name	Name on list	Classification	Notes
Formaldehyde (max.)	UK Occupational Exposure Limits EH40 - WEL	formaldehyde; methanal	Carc.	-

15.2 Chemical safety assessment : No Chemical Safety Assessment has been carried out.

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]
DMEL = Derived Minimal Effect Level
DNEL = Derived No Effect Level
EUH statement = CLP-specific Hazard statement
PBT = Persistent, Bioaccumulative and Toxic
PNEC = Predicted No Effect Concentration
RRN = REACH Registration Number
vPvB = Very Persistent and Very Bioaccumulative

SECTION 16: Other information

N/A = Not available

Key literature references and sources for data

: Regulation (EC) No. 1272/2008 [CLP]
 ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road
 IATA = International Air Transport Association
 IMDG = International Maritime Dangerous Goods
 Conforms to Regulation (EC) No. 1907/2006 (REACH), Annex II, as amended by Commission Regulation (EU) 2020/878
 Directive 2012/18/EU, and relative amendments & additions
 Directive 2008/98/EC, and relative amendments & additions
 Directive 2009/161/EU, and relative amendments & additions
 CEPE Guidelines

Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Classification	Justification
Flam. Liq. 2, H225	On basis of test data
Skin Irrit. 2, H315	Calculation method
Eye Dam. 1, H318	Calculation method
Skin Sens. 1, H317	Calculation method
Carc. 2, H351	Calculation method
STOT SE 3, H336	Calculation method
Aquatic Chronic 2, H411	Calculation method

Full text of abbreviated H statements

: H225 Highly flammable liquid and vapour.
 H226 Flammable liquid and vapour.
 H302 Harmful if swallowed.
 H311 Toxic in contact with skin.
 H312 Harmful in contact with skin.
 H314 Causes severe skin burns and eye damage.
 H315 Causes skin irritation.
 H317 May cause an allergic skin reaction.
 H318 Causes serious eye damage.
 H319 Causes serious eye irritation.
 H332 Harmful if inhaled.
 H336 May cause drowsiness or dizziness.
 H351 Suspected of causing cancer.
 H400 Very toxic to aquatic life.
 H411 Toxic to aquatic life with long lasting effects.
 H412 Harmful to aquatic life with long lasting effects.
 EUH066 Repeated exposure may cause skin dryness or cracking.

Full text of classifications [CLP/GHS]

: Acute Tox. 3 ACUTE TOXICITY - Category 3
 Acute Tox. 4 ACUTE TOXICITY - Category 4
 Aquatic Acute 1 SHORT-TERM (ACUTE) AQUATIC HAZARD - Category 1
 Aquatic Chronic 2 LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 2
 Aquatic Chronic 3 LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 3
 Carc. 2 CARCINOGENICITY - Category 2
 Eye Dam. 1 SERIOUS EYE DAMAGE/EYE IRRITATION - Category 1
 Eye Irrit. 2 SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2
 Flam. Liq. 2 FLAMMABLE LIQUIDS - Category 2
 Flam. Liq. 3 FLAMMABLE LIQUIDS - Category 3
 Skin Corr. 1A SKIN CORROSION/IRRITATION - Category 1A
 Skin Irrit. 2 SKIN CORROSION/IRRITATION - Category 2
 Skin Sens. 1 SKIN SENSITISATION - Category 1
 Skin Sens. 1B SKIN SENSITISATION - Category 1B
 STOT SE 3 SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE - Category 3

SECTION 16: Other information

Date of printing : 24, Sep, 2023.

Date of issue/ Date of revision : 24, Sep, 2023

Date of previous issue : 17, Jun, 2023

: If there is no previous validation date please contact your supplier for more information.

Version : 8

Notice to reader

In accordance with Regulation (EC) 1907/2006, REACH Regulation, Articles 31, 37, any required hazard-related information on the use of substances received as downstream user will be sent forward. Consequently, the safety data sheets for some products will contain a SUMI - Safe Use of Mixture Information - attached to the safety data sheet.

SUMI(s) will be added to the SDS for products if both the following conditions are met:

- ***The product is classified as hazardous for health***
- ***The product contains one or more REACH-registered substances for which extended safety data sheets (exposure scenarios) have been provided***

It is recommended that each customer or recipient of this Safety Data Sheet (SDS) study it carefully and consult resources, as necessary or appropriate, to become make themselves aware of and understand the data contained in this SDS and any hazards that may be associated with the product. This information is provided in good faith and believed to be accurate as of the effective date mentioned herein. However, no warranty, express or implied, is given. The information presented here applies only to the product as shipped. The addition of any material can may change later the composition, hazards and risks of the product. Products shall should not be repackaged, modified, or tinted except as specifically instructed by the manufacturer, including but not limited to, the incorporation of products not specified by the manufacturer, or the use or addition of products in proportions not specified by the manufacturer. Regulatory requirements are subject to change and may differ between various locations and jurisdictions. The customer/buyer/user is responsible to ensure that his activities comply with all country, federal, state, provincial or local laws. The conditions for the use of the product are not under the manufacturer's control of the manufacturer; the customer/buyer/user is responsible to for determine determining the conditions necessary for the safe use of this product. The customer/buyer/user should not use the product for any purpose other than the purpose shown in the applicable section of this SDS, without first referring to the supplier and obtaining written handling instructions. Due to the proliferation of sources for information such as manufacturer-specific SDS, the manufacturer cannot be held responsible for SDSs obtained from any other source.