# SAFETY DATA SHEET

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

### *1.1 Product identifier*

***Product name*** : Magnalux 41V2 Vinyl Ester Glass Flake - Base

***Product code*** : 41V2B

### *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 UK Limited - Protective & Marine
Coatings Division EMEAI
Tower Works
Kestor Street
Bolton
BL2 2AL
United Kingdom
+44 (0) 1204 521771

The Sherwin-Williams Company
Inver France SAS
2 Rue Jean Revaus - BP 80088 - 79102
Thouars CEDEX
France

***e-mail address of person responsible for this SDS*** : hse.pm.emea@sherwin.com

### *1.4 Emergency telephone number*

**National advisory body/Poison Center**

***Telephone number*** : +45 82 12 12 12

**Supplier**

***Telephone number*** : +(44)-870-8200 418

***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. 3, H226
Acute Tox. 4, H332
Skin Irrit. 2, H315
Eye Irrit. 2, H319
Repr. 2, H361d
STOT SE 3, H335
STOT RE 1, H372
Asp. Tox. 1, H304

## SECTION 2: Hazards identification

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

***Hazard statements*** : Flammable liquid and vapor.
May be fatal if swallowed and enters airways.
Causes skin irritation.
Causes serious eye irritation.
Harmful if inhaled.
May cause respiratory irritation.
Suspected of damaging the unborn child.
Causes damage to organs through prolonged or repeated exposure.

**Precautionary statements**

***Prevention*** : Obtain special instructions before use. 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. Do not breathe vapor.

***Response*** : IF SWALLOWED: Immediately call a POISON CENTER or doctor. Do NOT induce vomiting.

***Storage*** : Not applicable.

***Disposal*** : Not applicable.

***Hazardous ingredients*** : styrene
methacrylic acid

***Supplemental label elements*** : Contains methyl methacrylate. May produce an allergic reaction.
Warning! Hazardous respirable droplets may be formed when sprayed. Do not breathe spray or mist. 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*** :

## SECTION 3: Composition/information on ingredients

| Product/ingredient name | Identifiers | % | Classification | Specific Conc. Limits, M-factors and ATEs | Type |
|---|---|---|---|---|---|
| Styrene | REACH #: 01-2119457861-32<br>EC: 202-851-5<br>CAS: 100-42-5<br>Index: 601-026-00-0 | ≥10 - <25 | Flam. Liq. 3, H226<br>Acute Tox. 4, H332<br>Skin Irrit. 2, H315<br>Eye Irrit. 2, H319<br>Repr. 2, H361d<br>STOT SE 3, H335<br>STOT RE 1, H372 (hearing organs)<br>Asp. Tox. 1, H304<br>Aquatic Chronic 3, H412 | ATE [Inhalation (gases)] = 2770 ppm | [1] [2] |
| Methacrylic Acid | EC: 201-204-4<br>CAS: 79-41-4<br>Index: 607-088-00-5 | <3 | Acute Tox. 4, H302<br>Acute Tox. 3, H311<br>Skin Corr. 1A, H314<br>Eye Dam. 1, H318<br>STOT SE 3, H335 | ATE [Oral] = 1060 mg/kg<br>ATE [Dermal] = 500 mg/kg<br>STOT SE 3, H335: C ≥ 1% | [1] [2] |
| Methyl Methacrylate | REACH #: 01-2119452498-28<br>EC: 201-297-1<br>CAS: 80-62-6<br>Index: 607-035-00-6 | <1 | Flam. Liq. 2, H225<br>Skin Irrit. 2, H315<br>Skin Sens. 1, H317<br>STOT SE 3, H335<br><br>**See Section 16 for the full text of the H statements declared above.** | - | [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*** : 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 recognized skin cleanser. Do NOT use solvents or thinners. Wash clothing before reuse.

***Ingestion*** : If swallowed, seek medical advice immediately and show this 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.

## SECTION 4: First aid measures

### *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.

Exposure to component solvent vapor concentrations in excess of the stated occupational exposure limit may result in adverse health effects such as mucous membrane and respiratory system irritation and adverse effects on the kidneys, liver and central nervous system. Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness and, in extreme cases, loss of consciousness.
Solvents may cause some of the above effects by absorption through the skin. Repeated or prolonged contact with the mixture may cause removal of natural fat from the skin, resulting in non-allergic contact dermatitis and absorption through the skin.
If splashed in the eyes, the liquid may cause irritation and reversible damage.

Contains methyl methacrylate. May produce an allergic reaction.

### *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, $CO_2$, 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. CAUTION: May re-ignite itself after fire is extinguished. Material supports combustion. In case of fire and/or explosion do not breathe fumes. 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 vapor or mist. Refer to protective measures listed in sections 7 and 8.

Keep unnecessary and unprotected personnel from entering.

***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".

## SECTION 6: Accidental release measures

***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 materials 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). The waste should NOT be confined. 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).

***7.1 Precautions for safe handling*** : Prevent the creation of flammable or explosive concentrations of vapors in air and avoid vapor concentrations higher than the occupational exposure limits.
In addition, the product should only be used in areas from which all naked lights and other sources of ignition have been excluded. Electrical equipment should be protected to the appropriate standard.
Mixture may charge electrostatically: always use earthing leads when transferring from one container to another.
Operators should wear antistatic footwear and clothing and floors should be of the conducting type.
Keep away from heat, sparks and flame. No sparking tools should be used.
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).
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.
Avoid confinement. Do not allow to dry out. Avoid shock and friction. Explosive when dry.
**Information on fire and explosion protection**
Vapors are heavier than air and may spread along floors. Vapors may form explosive mixtures with air. Use explosion-proof electrical (ventilating and lighting) equipment.

***7.2 Conditions for safe storage, including any incompatibilities*** : Store in accordance with local regulations.
**Notes on joint storage**
Keep away from reducing agents, heavy metal compounds and alkaline and acidic materials.
**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 unauthorized 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 spilled product.

***7.3 Specific end use(s)***

## SECTION 7: Handling and storage

***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 |
|---|---|
| Styrene | **Working Environment Authority (Denmark, 6/2022). Absorbed through skin. Carcinogen.**<br>CEIL: 25 ppm<br>CEIL: 105 mg/m³ |
| Methacrylic Acid | **Working Environment Authority (Denmark, 6/2022).**<br>TWA: 20 ppm 8 hours.<br>TWA: 70 mg/m³ 8 hours.<br>STEL: 140 mg/m³ 15 minutes.<br>STEL: 40 ppm 15 minutes. |
| Methyl Methacrylate | **Working Environment Authority (Denmark, 6/2022). Absorbed through skin.**<br>TWA: 25 ppm 8 hours.<br>TWA: 102 mg/m³ 8 hours.<br>STEL: 100 ppm 15 minutes. |

**Biological exposure indices**

No exposure indices known.

**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 |
|---|---|---|---|---|---|
| Styrene | DNEL | Short term Inhalation | 182.75 mg/m³ | General population [Consumers] | Local |
| | DNEL | Long term Dermal | 343 mg/kg | General population [Consumers] | Systemic |
| | DNEL | Long term Inhalation | 10.6 mg/m³ | General population [Consumers] | Systemic |
| | DNEL | Short term | 174.25 mg/ | General | Systemic |

## SECTION 8: Exposure controls/personal protection

| | | | | | |
|---|---|---|---|---|---|
| | | Inhalation | $m^3$ | population [Consumers] | |
| | DNEL | Short term Inhalation | 306 mg/$m^3$ | Workers | Local |
| | DNEL | Long term Inhalation | 85 mg/$m^3$ | Workers | Systemic |
| | DNEL | Short term Inhalation | 289 mg/$m^3$ | Workers | Systemic |
| | DNEL | Long term Dermal | 406 mg/kg | Workers | Systemic |
| Methyl Methacrylate | DNEL | Long term Inhalation | 208 mg/$m^3$ | Workers | Local |
| | DNEL | Long term Dermal | 1.5 mg/$cm^2$ | Workers | Local |
| | DNEL | Long term Inhalation | 208 mg/$m^3$ | Workers | Systemic |
| | DNEL | Long term Dermal | 13.67 mg/ kg bw/day | Workers | Systemic |
| | DNEL | Short term Dermal | 1.5 mg/$cm^2$ | Workers | Local |
| | DNEL | Long term Inhalation | 104 mg/$m^3$ | General population | Local |
| | DNEL | Long term Dermal | 1.5 mg/$cm^2$ | General population | Local |
| | DNEL | Long term Inhalation | 74.3 mg/$m^3$ | General population | Systemic |
| | DNEL | Long term Dermal | 8.2 mg/kg bw/day | General population | Systemic |
| | DNEL | Short term Dermal | 1.5 mg/$cm^2$ | General population | Local |

**PNECs**

| Product/ingredient name | Compartment Detail | Value | Method Detail |
|---|---|---|---|
| Styrene | Fresh water | 0.028 mg/l | - |
| | Marine water | 0.0028 mg/l | - |
| | Fresh water sediment | 0.614 mg/kg | - |
| | Marine water sediment | 0.0614 mg/kg | - |
| | Soil | 0.2 mg/kg | - |
| | Sewage Treatment Plant | 5 mg/l | - |
| Methyl Methacrylate | Fresh water | 0.94 mg/l | - |
| | Fresh water sediment | 5.74 mg/kg dwt | - |
| | Fresh water sediment | 2.22 mg/kg wwt | - |
| | Marine water | 0.94 mg/l | - |
| | Marine water sediment | 5.74 mg/kg dwt | - |
| | Marine water sediment | 2.22 mg/kg wwt | - |
| | Sewage Treatment Plant | 10 mg/l | - |
| | Soil | 1.47 mg/kg dwt | - |
| | Soil | 1.31 mg/kg wwt | - |

### *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 vapors below the OEL, suitable respiratory protection must be worn. Use explosion-proof ventilation equipment.

: Users are advised to consider national Occupational Exposure Limits or other equivalent values.

**Individual protection measures**

## SECTION 8: Exposure controls/personal protection

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

**Skin protection**

***Hand protection*** : Wear suitable gloves tested to EN374.

***Gloves*** : 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.
For long term exposure or spills (breakthrough time >480 min): Use PE laminate gloves as under gloves.
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.

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.
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 antistatic clothing made of natural fibers or of high-temperature-resistant synthetic fibers. Wash clothing before reuse.

: 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 vapor 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.

***Color*** : Colorless.

***Odor*** : None

***Odor 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*** : 145°C

***Flash point*** : Closed cup: 28°C [Pensky-Martens Closed Cup]

***Evaporation rate*** : 0.49 (butyl acetate = 1)

***Flammability*** : Flammable liquid.

***Lower and upper explosion limit*** : LEL: 1.1% (Styrene)
UEL: 6.1% (Styrene)

***Vapor pressure*** : 0.63 kPa (4.7 mm Hg)

***Relative vapor density*** : 2.99 [Air = 1]

***Relative density*** : 1.21

***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 |
|---|---|---|---|
| Methacrylic Acid | 400 | 752 | |
| Styrene | 490 | 914 | |

***Decomposition temperature*** : Not relevant/applicable due to nature of the product.

***Viscosity*** : Kinematic (40°C): -1 $mm^2/s$

***Explosive properties*** : Under normal conditions of storage and use, hazardous reactions will not occur.

***Oxidizing 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.

## 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.

## SECTION 10: Stability and reactivity

***10.4 Conditions to avoid*** : When exposed to high temperatures may produce hazardous decomposition products.
SADT (Self-Accelerating Decomposition Temperature) is the lowest temperature at which self-accelerating decomposition may occur with a substance in the packaging as used for transport. A dangerous self-accelerating decomposition reaction and, under certain circumstances, explosion or fire can be caused by thermal decomposition at or above the SADT. Contact with incompatible substances can cause decomposition at or below the SADT.
Avoid shock and friction.

***10.5 Incompatible materials*** : Keep away from rust, iron and copper. Contact with incompatible materials, such as acids, alkalis, heavy metal compounds and reducing agents, will result in hazardous decomposition. Do not mix with peroxide accelerators.

***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.

Exposure to component solvent vapor concentrations in excess of the stated occupational exposure limit may result in adverse health effects such as mucous membrane and respiratory system irritation and adverse effects on the kidneys, liver and central nervous system. Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness and, in extreme cases, loss of consciousness.
Solvents may cause some of the above effects by absorption through the skin. Repeated or prolonged contact with the mixture may cause removal of natural fat from the skin, resulting in non-allergic contact dermatitis and absorption through the skin.
If splashed in the eyes, the liquid may cause irritation and reversible damage.

Contains methyl methacrylate. May produce an allergic reaction.

**Acute toxicity**

| Product/ingredient name | Result | Species | Dose | Exposure |
|---|---|---|---|---|
| Styrene | LC50 Inhalation Gas. | Rat | 2770 ppm | 4 hours |
| | LC50 Inhalation Vapor | Rat | 11800 mg/m³ | 4 hours |
| | LD50 Oral | Rat | 2650 mg/kg | - |
| Methacrylic Acid | LD50 Dermal | Rabbit | 500 mg/kg | - |
| | LD50 Oral | Rat | 1060 mg/kg | - |
| Methyl Methacrylate | LC50 Inhalation Vapor | Rat | 78000 mg/m³ | 4 hours |
| | LD50 Dermal | Rabbit | >5 g/kg | - |
| | LD50 Oral | Rat | 7872 mg/kg | - |

**Acute toxicity estimates**

## SECTION 11: Toxicological information

| Route | ATE value |
|---|---|
| Oral | 44540.06 mg/kg |
| Dermal | 21009.46 mg/kg |
| Inhalation (gases) | 12872.38 ppm |
| Inhalation (vapors) | 54.84 mg/l |

**Irritation/Corrosion**

| Product/ingredient name | Result | Species | Score | Exposure | Observation |
|---|---|---|---|---|---|
| Styrene | Eyes - Mild irritant | Human | - | 50 ppm | - |
| | Eyes - Moderate irritant | Rabbit | - | 24 hours 100 mg | - |
| | Eyes - Severe irritant | Rabbit | - | 100 mg | - |
| | Skin - Mild irritant | Rabbit | - | 500 mg | - |
| | Skin - Moderate irritant | Rabbit | - | 100 % | - |

***Conclusion/Summary*** : Not available.

**Sensitization**

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 |
|---|---|---|---|
| Styrene | Category 3 | - | Respiratory tract irritation |
| Methacrylic Acid | Category 3 | - | Respiratory tract irritation |
| Methyl Methacrylate | Category 3 | - | Respiratory tract irritation |

**Specific target organ toxicity (repeated exposure)**

| Product/ingredient name | Category | Route of exposure | Target organs |
|---|---|---|---|
| Styrene | Category 1 | - | hearing organs |

**Aspiration hazard**

| Product/ingredient name | Result |
|---|---|
| Styrene | ASPIRATION HAZARD - Category 1 |

### 11.2 Information on other hazards

#### 11.2.1 Endocrine disrupting properties

Not available.

#### 11.2.2 Other information

## SECTION 11: Toxicological 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.

| Product/ingredient name | Result | Species | Exposure |
|---|---|---|---|
| Styrene | Acute EC50 78000 µg/l Marine water | Algae - *Skeletonema costatum* | 96 hours |
| | Acute EC50 4700 µg/l Fresh water | Daphnia - *Daphnia magna* | 48 hours |
| | Acute LC50 52 mg/l Marine water | Crustaceans - *Artemia salina* | 48 hours |
| | Acute LC50 4020 µg/l Fresh water | Fish - *Pimephales promelas* | 96 hours |
| Methacrylic Acid | Chronic NOEC 53 mg/l Fresh water | Daphnia - *Daphnia magna* - Neonate | 21 days |
| Methyl Methacrylate | Acute LC50 130000 µg/l Fresh water | Fish - *Pimephales promelas* - Adult | 96 hours |

### *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 |
|---|---|---|---|
| No data available | | | |

### *12.3 Bioaccumulative potential*

| Product/ingredient name | $LogP_{ow}$ | BCF | Potential |
|---|---|---|---|
| Styrene | - | 13.49 | 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 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.

***Hazardous waste*** : Yes.

***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 minimized 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. Vapor 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 spilled 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)/ Label(s)** | 3  | 3  | 3  |
| **14.4 Packing group** | III | III | III |
| **14.5 Environmental hazards** | No. | No. | No. |
| | | | |

## SECTION 14: Transport information

| | | | |
|---|---|---|---|
| **Additional information** | **Tunnel code** D/E | **Emergency schedules** F-E, S-E | - |

***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.

**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 authorization**

**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] |
|---|---|---|
| Magnalux 41V2 Vinyl Ester Glass Flake - Base | ≥90 | 3 |

**Labeling** : Not applicable.

**Other EU regulations**

***VOC content*** ***(2010/75/EU)*** : 24.8 **w/w**
301 **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**

***Danish fire class*** : II-1

**Executive Order No. 1795/2015**

| Ingredient name | Annex I Section A | Annex I Section B |
|---|---|---|
| glass, oxide, chemicals | Listed | - |
| styrene | Listed | - |
| titanium dioxide | Listed | - |

***MAL-code 93*** : 5-6

***Protection based on MAL*** : **According to the regulations on work involving coded products, the following stipulations apply to the use of personal protective equipment:**

**General:** Gloves must be worn for all work that may result in soiling. Apron/ coveralls/protective clothing must be worn when soiling is so great that regular work clothes do not adequately protect skin against contact with the product. A face shield must be worn in work involving spattering if a full mask is not required. In this

## SECTION 15: Regulatory information

case, other recommended use of eye protection is not required.

In all spraying operations in which there is return spray, the following must be worn: respiratory protection and arm protectors/apron/coveralls/protective clothing as appropriate or as instructed.

MAL-code: 5-6
**Application:** When using scraper or knife, brush, roller etc. for pre- and post-treatments in a spray booth where the operator is outside the spray zone and when working in similar new* facilities of the combined-cabin, spray-cabin and spray-booth type where the operator is working inside the spray zone. When spraying in new* booths and cabins with non-atomizing guns.

- Protective clothing must be worn.

During non-atomizing spraying in existing* facilities of the combined-cabin, spray-cabin and spray-booth type where the operator is working inside the spray zone. When spraying in existing* spray booths, if the operator is outside the spray zone. When using scraper or knife, brush, roller, etc. for pre- and post-treatments in cabins or booths of the existing* facility type, if the operator is inside the spray zone. When using scraper or knife, brush, roller, etc. for pre- and post-treatments outside a closed facility, spray booth or spray cabin. During downtimes, cleaning and repair of closed facilities, spray booths or cabins, if there is a risk of contact with wet paint or organic solvents.

- Air-supplied full mask and protective clothing must be worn.

When spraying in new* booths if the operator is outside the spray zone.

- Air-supplied full mask must be worn.

During all spraying where atomization occurs in cabins or spray booths where the operator is inside the spray zone and during spraying outside a closed facility, cabin or booth.

- Air-supplied full mask, protective clothing and hood must be worn.

**Drying:** Items for drying/drying ovens that are temporarily placed on such things as rack trolleys, etc. must be equipped with a mechanical exhaust system to prevent fumes from wet items from passing through workers' inhalation zone.

**Polishing:** When polishing treated surfaces, a mask with dust filter must be worn. When machine grinding, eye protection must be worn. Work gloves must always be worn.

**Caution** The regulations contain other stipulations in addition to the above.

*See Regulations.

**Restrictions on use** : Not to be used by professional users below 18 years of age. See the National Working Environment Authorities Executive Order regarding Young People At Work.

***List of undesirable substances*** : Listed

***Carcinogenic waste*** : Waste containers must be labeled: Contains a substance or substances regulated by Danish working environment legislation on cancer risks.

## SECTION 15: Regulatory information

***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
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. 3, H226 | On basis of test data |
| Acute Tox. 4, H332 | Calculation method |
| Skin Irrit. 2, H315 | Calculation method |
| Eye Irrit. 2, H319 | Calculation method |
| Repr. 2, H361d | Calculation method |
| STOT SE 3, H335 | Calculation method |
| STOT RE 1, H372 | Calculation method |
| Asp. Tox. 1, H304 | Calculation method |

***Full text of abbreviated H statements*** :

| | |
|---|---|
| H225 | Highly flammable liquid and vapor. |
| H226 | Flammable liquid and vapor. |
| H302 | Harmful if swallowed. |
| H304 | May be fatal if swallowed and enters airways. |
| H311 | Toxic 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. |
| H335 | May cause respiratory irritation. |
| H361d | Suspected of damaging the unborn child. |
| H372 | Causes damage to organs through prolonged or repeated exposure. |
| H412 | Harmful to aquatic life with long lasting effects. |

## SECTION 16: Other information

| | | | |
|---|---|---|---|
| ***Full text of classifications [CLP/GHS]*** | : | Acute Tox. 3 | ACUTE TOXICITY - Category 3 |
| | | Acute Tox. 4 | ACUTE TOXICITY - Category 4 |
| | | Aquatic Chronic 3 | AQUATIC HAZARD (LONG-TERM) - Category 3 |
| | | Asp. Tox. 1 | ASPIRATION HAZARD - Category 1 |
| | | 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 |
| | | Repr. 2 | TOXIC TO REPRODUCTION - Category 2 |
| | | Skin Corr. 1A | SKIN CORROSION/IRRITATION - Category 1A |
| | | Skin Irrit. 2 | SKIN CORROSION/IRRITATION - Category 2 |
| | | Skin Sens. 1 | SKIN SENSITIZATION - Category 1 |
| | | STOT RE 1 | SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 1 |
| | | STOT SE 3 | SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) - Category 3 |
| ***Date of printing*** | : | 25, Jan, 2024. | |
| ***Date of issue/ Date of revision*** | : | 25, Jan, 2024 | |
| ***Date of previous issue*** | : | 21, Sep, 2023 | |
| | : | If there is no previous validation date please contact your supplier for more information. | |
| ***Version*** | : | 7 | |

**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 aware of and understand the data contained in this SDS and any hazards associated with the product. This information is provided in good faith and believed to be accurate as of the effective date 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 change the composition, hazards and risks of the product. Products shall 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 use of the product are not under the control of the manufacturer; the customer/buyer/user is responsible to determine 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 responsible for SDSs obtained from any other source.***