# SAFETY DATA SHEET

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

### *1.1 Product identifier*

***Product name*** : ACROLON C237 Acrylic Urethane Sheen Finish - Additive

***Product code*** : C237A

### *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*** : Not available.

**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
Eye Irrit. 2, H319
Skin Sens. 1, H317
STOT SE 3, H335
STOT SE 3, H336
Asp. Tox. 1, H304
Aquatic Chronic 3, H412

## 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.
May cause an allergic skin reaction.
Causes serious eye irritation.
Harmful if inhaled.
May cause respiratory irritation.
May cause drowsiness or dizziness.
Harmful to aquatic life with long lasting effects.

**Precautionary statements**

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

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

***Storage*** : Not applicable.

***Disposal*** : Not applicable.

***Hazardous ingredients*** : Hexamethylene Diisocyanate Polymer
Hydrocarbons, C9, aromatics
2-methoxy-1-methylethyl acetate
Xylene, mixed isomers
Ethylbenzene
Hexamethylene Diisocyanate (max.)

***Supplemental label elements*** : Contains isocyanates. May produce an allergic reaction. 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 |
|---|---|---|---|---|---|
| Hexamethylene Diisocyanate Polymer | EC: 500-060-2<br>CAS: 28182-81-2 | ≥50 - ≤75 | Acute Tox. 4, H332<br>Skin Sens. 1, H317<br>STOT SE 3, H335 | ATE [Inhalation (dusts and mists)] = 4.625 mg/l | [1] |
| Hydrocarbons, C9, aromatics | REACH #: 01-2119455851-35<br>EC: 918-668-5<br>CAS: - | ≥10 - <20 | Flam. Liq. 3, H226<br>STOT SE 3, H335<br>STOT SE 3, H336<br>Asp. Tox. 1, H304<br>Aquatic Chronic 2, H411<br>EUH066 | - | [1] |
| 2-methoxy-1-methylethyl acetate | REACH #: 01-2119475791-29<br>EC: 203-603-9<br>CAS: 108-65-6<br>Index: 607-195-00-7 | ≥10 - ≤25 | Flam. Liq. 3, H226<br>STOT SE 3, H336 | - | [1] [2] |
| Xylene, mixed isomers | REACH #: 01-2119488216-32<br>EC: 215-535-7<br>CAS: 1330-20-7<br>Index: 601-022-00-9 | <10 | Flam. Liq. 3, H226<br>Acute Tox. 4, H312<br>Acute Tox. 4, H332<br>Skin Irrit. 2, H315<br>Eye Irrit. 2, H319<br>STOT SE 3, H335<br>STOT SE 3, H336<br>STOT RE 2, H373<br>Asp. Tox. 1, H304<br>Aquatic Chronic 3, H412 | ATE [Dermal] = 1100 mg/kg<br>ATE [Inhalation (gases)] = 6700 ppm | [1] [2] |
| Ethylbenzene | REACH #: 01-2119489370-35<br>EC: 202-849-4<br>CAS: 100-41-4<br>Index: 601-023-00-4 | ≤3 | Flam. Liq. 2, H225<br>Acute Tox. 4, H332<br>Eye Irrit. 2, H319<br>STOT SE 3, H336<br>STOT RE 2, H373 (hearing organs)<br>Asp. Tox. 1, H304<br>Aquatic Chronic 3, H412 | ATE [Inhalation (vapours)] = 11 mg/l | [1] [2] |
| Hexamethylene Diisocyanate (max.) | REACH #: 01-2119457571-37<br>EC: 212-485-8<br>CAS: 822-06-0<br>Index: 615-011-00-1 | ≤0.41 | Acute Tox. 4, H302<br>Acute Tox. 1, H330<br>Skin Irrit. 2, H315<br>Eye Irrit. 2, H319<br>Resp. Sens. 1, H334<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.** | ATE [Oral] = 500 mg/kg<br>ATE [Inhalation (dusts and mists)] = 0.005 mg/l<br>Resp. Sens. 1, H334: C ≥ 0.5%<br>Skin Sens. 1, H317: C ≥ 0.5% | [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

## SECTION 3: Composition/information on ingredients

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.

***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. 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.

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.
If splashed in the eyes, the liquid may cause irritation and reversible damage.
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. 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.
Based on the properties of the isocyanate components and considering toxicological data on similar mixtures, this mixture may cause acute irritation and/or sensitization of the respiratory system, leading to an asthmatic condition, wheezing and tightness of the chest. Sensitized persons may subsequently show asthmatic symptoms when exposed to atmospheric concentrations well below the OEL. Repeated exposure may lead to permanent respiratory disability. Repeated or prolonged contact with irritants may cause dermatitis.

Contains Hexamethylene Diisocyanate Polymer, hexamethylene-di-isocyanate. May produce an allergic reaction.

### *4.3 Indication of any immediate medical attention and special treatment needed*

***Notes to physician*** : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

***Specific treatments*** : No specific treatment.

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. 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, hydrogen cyanide, monomeric isocyanates.

### *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".

***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). Place in a suitable container. The contaminated area should be cleaned immediately with a suitable decontaminant. One possible (flammable) decontaminant comprises (by volume): water (45 parts), ethanol or isopropyl alcohol (50 parts) and concentrated (d: 0,880) ammonia solution (5 parts). A non-flammable alternative is sodium carbonate (5 parts) and water (95 parts). Add the same decontaminant to the remnants and let stand for several days until no further reaction in an unsealed container. Once this stage is reached, close container and dispose of according to local regulations (see section 13).

***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 asthma, allergies or chronic or recurrent respiratory disease should not be employed in any process in which this product is used.**

**Examination of lung function should be carried out on a regular basis on persons spraying this mixture.**

***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.
Care should be taken when re-opening partly-used containers. Precautions should be taken to minimize exposure to atmospheric humidity or water. $CO_2$ will be formed, which, in closed containers, could result in pressurization. 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.
**Information on fire and explosion protection**
Vapors are heavier than air and may spread along floors. Vapors may form explosive mixtures with air.

When operators, whether spraying or not, have to work inside the spray booth, ventilation is unlikely to be sufficient to control particulates and solvent vapors in all cases. In such circumstances, they should wear a compressed-air-fed respirator during the spraying process and until the particulate and solvent vapor concentrations have fallen below the exposure limits.

***7.2 Conditions for safe storage, including any incompatibilities*** : Store in accordance with local regulations.
**Notes on joint storage**
Keep away from: oxidizing 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 unauthorized access.
Containers that have been opened must be carefully resealed and kept upright to prevent leakage.

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

Store in closed original container at temperatures between 5°C and 25°C.

***Storage code*** : 3

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

***Recommendations*** : Not available.

## SECTION 7: Handling and storage

***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 |
|---|---|
| 2-methoxy-1-methylethyl acetate | **TRGS 900 OEL (Germany, 6/2022).**<br>TWA: 270 mg/m³ 8 hours.<br>PEAK: 270 mg/m³ 15 minutes.<br>TWA: 50 ppm 8 hours.<br>PEAK: 50 ppm 15 minutes.<br>**DFG MAC-values list (Germany, 7/2022).**<br>TWA: 50 ppm 8 hours.<br>PEAK: 50 ppm, 4 times per shift, 15 minutes.<br>TWA: 270 mg/m³ 8 hours.<br>PEAK: 270 mg/m³, 4 times per shift, 15 minutes. |
| Xylene, mixed isomers | **TRGS 900 OEL (Germany, 6/2022). [xylene] Absorbed through skin.**<br>TWA: 220 mg/m³ 8 hours.<br>PEAK: 440 mg/m³ 15 minutes.<br>TWA: 50 ppm 8 hours.<br>PEAK: 100 ppm 15 minutes.<br>**DFG MAC-values list (Germany, 7/2022). [Xylene (all isomers)] Absorbed through skin.**<br>TWA: 50 ppm 8 hours.<br>PEAK: 100 ppm, 4 times per shift, 15 minutes.<br>TWA: 220 mg/m³ 8 hours.<br>PEAK: 440 mg/m³, 4 times per shift, 15 minutes. |
| Ethylbenzene | **TRGS 900 OEL (Germany, 6/2022). Absorbed through skin.**<br>TWA: 88 mg/m³ 8 hours.<br>PEAK: 176 mg/m³ 15 minutes.<br>TWA: 20 ppm 8 hours.<br>PEAK: 40 ppm 15 minutes.<br>**DFG MAC-values list (Germany, 7/2022). Absorbed through skin.**<br>PEAK: 40 ppm, 4 times per shift, 15 minutes.<br>PEAK: 176 mg/m³, 4 times per shift, 15 minutes.<br>TWA: 88 mg/m³ 8 hours.<br>TWA: 20 ppm 8 hours. |
| Hexamethylene Diisocyanate (max.) | **TRGS 900 OEL (Germany, 6/2022). Inhalation sensitizer.**<br>TWA: 0.035 mg/m³ 8 hours.<br>CEIL: 0.07 mg/m³<br>TWA: 0.005 ppm 8 hours.<br>CEIL: 0.01 ppm<br>PEAK: 0.035 mg/m³ 15 minutes.<br>PEAK: 0.005 ppm 15 minutes.<br>**DFG MAC-values list (Germany, 7/2022). Skin sensitizer. Inhalation sensitizer.**<br>TWA: 0.005 ppm 8 hours. |

## SECTION 8: Exposure controls/personal protection

| | |
|---|---|
| | CEIL: 0.01 ml/m³<br>TWA: 0.035 mg/m³ 8 hours.<br>CEIL: 0.07 mg/m³<br>PEAK: 0.035 mg/m³, 4 times per shift, 15 minutes.<br>PEAK: 0.005 ppm, 4 times per shift, 15 minutes. |

**Biological exposure indices**

| Product/ingredient name | Exposure indices |
|---|---|
| xylene | **DFG BEI-values list (Germany, 7/2022) [Xylene (all isomers)] Notes: danger from percutaneous absorption (see p. 211 and p. 228).**<br>BEI: 2000 mg/l, methylhippuric acid (toluric acid) (all isomers) [in urine]. Sampling time: end of exposure or end of shift.<br>**TRGS 903 - BEI Values (Germany, 2/2022) [Xylene (all isomers)]**<br>BEI: 2000 mg/l, methylhippuric acid [in urine]. Sampling time: end of exposure or end of shift. |
| ethylbenzene | **DFG BEI-values list (Germany, 7/2022) Notes: danger from percutaneous absorption (see p. 211 and p. 228).**<br>BEI: 250 mg/g creatinine, mandelic acid plus phenyl glyoxylic acid [in urine]. Sampling time: end of exposure or end of shift.<br>**TRGS 903 - BEI Values (Germany, 2/2022)**<br>BEI: 250 mg/g creatinine, mandelic acid plus phenylglyoxylic acid [in urine]. Sampling time: end of exposure or end of shift. |
| hexamethylene-di-isocyanate | **DFG BEI-values list (Germany, 7/2022)**<br>BEI: 15 µg/g creatinine, hexamethylenediamine (after hydrolysis) [in urine]. Sampling time: end of exposure or end of shift.<br>**TRGS 903 - BEI Values (Germany, 2/2022)**<br>BEI: 15 mg/g creatinine, hexamethylendiamine (after hydrolysis) [in urine]. Sampling time: end of exposure or end of 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 |
|---|---|---|---|---|---|
| 2-methoxy-1-methylethyl acetate | DNEL | Long term Inhalation | 33 mg/m³ | 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/m³ | General population [Consumers] | Systemic |
| | DNEL | Long term | 550 mg/m³ | Workers | Local |

## SECTION 8: Exposure controls/personal protection

| | | | | | |
|---|---|---|---|---|---|
| | | Inhalation | | | |
| | DNEL | Long term Dermal | 796 mg/kg bw/day | Workers | Systemic |
| | DNEL | Long term Inhalation | 275 mg/m³ | Workers | Systemic |
| Xylene, mixed isomers | DNEL | Long term Dermal | 212 mg/m³ | Workers | Systemic |
| | DNEL | Long term Dermal | 125 mg/kg | General population | Systemic |
| | DNEL | Long term Inhalation | 221 mg/m³ | Workers | Systemic |
| | DNEL | Short term Inhalation | 289 mg/m³ | Workers | Systemic |
| | DNEL | Short term Inhalation | 442 mg/m³ | Workers | Local |
| | DNEL | Long term Inhalation | 65.3 mg/m³ | General population | Systemic |
| | DNEL | Short term Inhalation | 260 mg/m³ | General population | Local |
| | DNEL | Short term Inhalation | 174 mg/m³ | General population | Systemic |
| | DNEL | Long term Oral | 1.5 mg/kg | General population | Systemic |

**PNECs**

| Product/ingredient name | Compartment Detail | Value | Method Detail |
|---|---|---|---|
| 2-methoxy-1-methylethyl acetate | Fresh water | 0.635 mg/kg | - |
| | Marine water | 0.0635 mg/l | - |
| | 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 | - |

### *8.2 Exposure controls*

**Persons with a history of asthma, allergies, chronic or recurrent respiratory disease should not be exposed to any process in which this product is used.**

**Examination of lung function should be carried out on a regular basis on persons spraying this mixture.**

***Appropriate engineering controls*** : Provide adequate ventilation. Where reasonably practicable, this should be achieved by the use of local exhaust ventilation and good general extraction. Air-fed protective respiratory equipment must be worn by the spray operator, even when good ventilation is provided. In other operations, if local exhaust ventilation and good general extraction are not sufficient to maintain concentrations of particulates and solvent vapors below the OEL, suitable respiratory protection must be worn. (See Occupational exposure controls.)

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

## SECTION 8: Exposure controls/personal protection

***Gloves*** : Gloves for short term exposure/splash protection (less than 10 min): Nitrile >0.35 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.

: 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*** : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

***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*** : Paint

## SECTION 9: Physical and chemical properties

***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*** : 136°C

***Flash point*** : Closed cup: 32°C [Pensky-Martens Closed Cup]

***Evaporation rate*** : 0.8 (butyl acetate = 1)

***Flammability*** : Flammable liquid.

***Lower and upper explosion limit*** : LEL: 0.7% (Light Aromatic Hydrocarbons)
UEL: 13.1% (2-methoxy-1-methylethyl acetate)

***Vapor pressure*** : 0.95 kPa (7.1 mm Hg)

***Relative vapor density*** : 3.66 [Air = 1]

***Relative density*** : 1.04

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

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

***Viscosity*** : Kinematic (40°C): <20.5 $mm^2/s$

***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.

***9.2 Other information***

***Heat of combustion*** : 11.675 kJ/g

## SECTION 10: Stability and reactivity

***10.1 Reactivity*** : The product reacts slowly with water, resulting in the production of carbon dioxide.

***10.2 Chemical stability*** : Stable under recommended storage and handling conditions (see Section 7).

***10.3 Possibility of hazardous reactions*** : In closed containers, pressure buildup could result in distortion, expansion and, in extreme cases, bursting of the container.

***10.4 Conditions to avoid*** : In a fire, hazardous decomposition products may be produced.

***10.5 Incompatible materials*** : Keep away from: oxidizing agents, strong alkalis, strong acids, amines, alcohols, water. Uncontrolled exothermic reactions occur with amines and alcohols.

***10.6 Hazardous decomposition products*** : Decomposition products may include the following materials: carbon monoxide, carbon dioxide, smoke, oxides of nitrogen, hydrogen cyanide, monomeric isocyanates.

***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.
If splashed in the eyes, the liquid may cause irritation and reversible damage.
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. 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.
Based on the properties of the isocyanate components and considering toxicological data on similar mixtures, this mixture may cause acute irritation and/or sensitization of the respiratory system, leading to an asthmatic condition, wheezing and tightness of the chest. Sensitized persons may subsequently show asthmatic symptoms when exposed to atmospheric concentrations well below the OEL. Repeated exposure may lead to permanent respiratory disability. Repeated or prolonged contact with irritants may cause dermatitis.

Contains Hexamethylene Diisocyanate Polymer, hexamethylene-di-isocyanate. May produce an allergic reaction.

**Acute toxicity**

| Product/ingredient name | Result | Species | Dose | Exposure |
|---|---|---|---|---|
| Hexamethylene Diisocyanate Polymer | LC50 Inhalation Dusts and mists | Rat | 18500 mg/m³ | 1 hours |
| Hydrocarbons, C9, aromatics | LD50 Oral | Rat | 8400 mg/kg | - |
| 2-methoxy-1-methylethyl acetate | LD50 Dermal | Rabbit | >5 g/kg | - |
| | LD50 Oral | Rat | 8532 mg/kg | - |
| Xylene, mixed isomers | LC50 Inhalation Gas. | Rat | 6700 ppm | 4 hours |
| | LD50 Oral | Rat | 4300 mg/kg | - |
| Ethylbenzene | LD50 Dermal | Rabbit | >5000 mg/kg | - |
| | LD50 Oral | Rat | 3500 mg/kg | - |
| Hexamethylene Diisocyanate (max.) | LC50 Inhalation Dusts and mists | Rat | 124 mg/m³ | 4 hours |

**Acute toxicity estimates**

| Route | ATE value |
|---|---|
| Dermal | 11798.59 mg/kg |
| Inhalation (gases) | 71864.16 ppm |
| Inhalation (vapors) | 666.78 mg/l |
| Inhalation (dusts and mists) | 1.24 mg/l |

**Irritation/Corrosion**

## SECTION 11: Toxicological information

| Product/ingredient name | Result | Species | Score | Exposure | Observation |
|---|---|---|---|---|---|
| Hexamethylene Diisocyanate Polymer | Eyes - Moderate irritant | Rabbit | - | 100 milligrams | - |
| | Skin - Moderate irritant | Rabbit | - | 500 milligrams | - |
| Hydrocarbons, C9, aromatics | Eyes - Mild irritant | Rabbit | - | 24 hours 100 uL | - |
| Xylene, mixed isomers | Eyes - Mild irritant | Rabbit | - | 87 mg | - |
| | Eyes - Severe irritant | Rabbit | - | 24 hours 5 mg | - |
| | Skin - Mild irritant | Rat | - | 8 hours 60 uL | - |
| | Skin - Moderate irritant | Rabbit | - | 100 % | - |
| | Skin - Moderate irritant | Rabbit | - | 24 hours 500 mg | - |
| Ethylbenzene | Eyes - Severe irritant | Rabbit | - | 500 mg | - |
| | Skin - Mild irritant | Rabbit | - | 24 hours 15 mg | - |

***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 |
|---|---|---|---|
| Hexamethylene Diisocyanate Polymer | Category 3 | - | Respiratory tract irritation |
| Hydrocarbons, C9, aromatics | Category 3 | - | Respiratory tract irritation |
| | Category 3 | | Narcotic effects |
| 2-methoxy-1-methylethyl acetate | Category 3 | - | Narcotic effects |
| Xylene, mixed isomers | Category 3 | - | Respiratory tract irritation |
| | Category 3 | | Narcotic effects |
| Ethylbenzene | Category 3 | - | Narcotic effects |
| Hexamethylene Diisocyanate (max.) | Category 3 | - | Respiratory tract irritation |

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

| Product/ingredient name | Category | Route of exposure | Target organs |
|---|---|---|---|
| Xylene, mixed isomers | Category 2 | - | - |
| Ethylbenzene | Category 2 | - | hearing organs |

**Aspiration hazard**

## SECTION 11: Toxicological information

| Product/ingredient name | Result |
|---|---|
| Hydrocarbons, C9, aromatics | ASPIRATION HAZARD - Category 1 |
| Xylene, mixed isomers | ASPIRATION HAZARD - Category 1 |
| Ethylbenzene | ASPIRATION HAZARD - Category 1 |

### 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.

| Product/ingredient name | Result | Species | Exposure |
|---|---|---|---|
| Xylene, mixed isomers | Acute LC50 8500 µg/l Marine water | Crustaceans - *Palaemonetes pugio* | 48 hours |
| | Acute LC50 13400 µg/l Fresh water | Fish - *Pimephales promelas* | 96 hours |
| Ethylbenzene | Acute EC50 4900 µg/l Marine water | Algae - *Skeletonema costatum* | 72 hours |
| | Acute EC50 7700 µg/l Marine water | Algae - *Skeletonema costatum* | 96 hours |
| | Acute EC50 6.53 mg/l Marine water | Crustaceans - *Artemia sp.* - Nauplii | 48 hours |
| | Acute EC50 2.93 mg/l Fresh water | Daphnia - *Daphnia magna* - Neonate | 48 hours |
| | Acute LC50 4200 µg/l Fresh water | Fish - *Oncorhynchus mykiss* | 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 |
|---|---|---|---|
| Xylene, mixed isomers | - | - | Readily |
| Ethylbenzene | - | - | Readily |

### *12.3 Bioaccumulative potential*

| Product/ingredient name | $LogP_{ow}$ | BCF | Potential |
|---|---|---|---|
| Hydrocarbons, C9, aromatics | - | 10 to 2500 | High |
| Xylene, mixed isomers | - | 8.1 to 25.9 | Low |
| Hexamethylene Diisocyanate (max.) | - | 57.63 | Low |

### *12.4 Mobility in soil*

***Soil/water partition coefficient ($K_{OC}$)*** : Not available.

***Mobility*** : Not available.

## 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

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 isocyanates 08 05 01*

***Disposal considerations*** : Do not allow to enter drains or watercourses. Residues in empty containers should be neutralized with a decontaminant (see section 6).
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 RELATED MATERIAL | PAINT RELATED MATERIAL | PAINT RELATED MATERIAL |
| **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. |
| **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] |
|---|---|---|
| ACROLON C237 Acrylic Urethane Sheen Finish - Additive | ≥90 | 3 |
| hexamethylene-di-isocyanate | ≤0.41 | 74 |
| toluene | ≤0.1 | 48 |

**Labeling** : As from August 24 2023 adequate training is required before industrial or professional use.
Training advice www.safeusediisocyanates.eu.

**Other EU regulations**

***VOC content (2010/75/EU)*** : 34 **w/w**

## SECTION 15: Regulatory information

352 **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**

**Hazardous incident ordinance**

This product is controlled under the Germany Hazardous Incident Ordinance.

| *Product/ingredient name* | *List name* | *Name on list* | *Classification* | *Notes* |
|---|---|---|---|---|
| Ethylbenzene | DFG MAC-values list | Ethylbenzene | K4 | - |

***Water Hazard Class (WGK)*** : 2

***Technical instruction on air quality control*** : TA-Luft Number 5.2.5: 22.5%
TA-Luft Class I - Number 5.2.5: 11.8%

***AOX*** : The product does not contain organically bound halogens which could lead to an AOX value in waste water.

***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]**

## SECTION 16: Other information

| Classification | Justification |
|---|---|
| Flam. Liq. 3, H226 | On basis of test data |
| Acute Tox. 4, H332 | Calculation method |
| Eye Irrit. 2, H319 | Calculation method |
| Skin Sens. 1, H317 | Calculation method |
| STOT SE 3, H335 | Calculation method |
| STOT SE 3, H336 | Calculation method |
| Asp. Tox. 1, H304 | Calculation method |
| Aquatic Chronic 3, H412 | 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. |
| H312 | Harmful in contact with skin. |
| H315 | Causes skin irritation. |
| H317 | May cause an allergic skin reaction. |
| H319 | Causes serious eye irritation. |
| H330 | Fatal if inhaled. |
| H332 | Harmful if inhaled. |
| H334 | May cause allergy or asthma symptoms or breathing difficulties if inhaled. |
| H335 | May cause respiratory irritation. |
| H336 | May cause drowsiness or dizziness. |
| H373 | May cause damage to organs through prolonged or repeated exposure. |
| 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. 1 | ACUTE TOXICITY - Category 1 |
| Acute Tox. 4 | ACUTE TOXICITY - Category 4 |
| Aquatic Chronic 2 | AQUATIC HAZARD (LONG-TERM) - Category 2 |
| Aquatic Chronic 3 | AQUATIC HAZARD (LONG-TERM) - Category 3 |
| Asp. Tox. 1 | ASPIRATION HAZARD - 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 |
| Resp. Sens. 1 | RESPIRATORY SENSITIZATION - Category 1 |
| Skin Irrit. 2 | SKIN CORROSION/IRRITATION - Category 2 |
| Skin Sens. 1 | SKIN SENSITIZATION - Category 1 |
| STOT RE 2 | SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2 |
| STOT SE 3 | SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) - Category 3 |

***Date of printing*** : 19, Mar, 2024.

***Date of issue/ Date of revision*** : 19, Mar, 2024

***Date of previous issue*** : 21, Jan, 2024

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

***Version*** : 16

**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.***

## SECTION 16: Other information

***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.***

# SUMI
# Safe Use of Mixtures
# Information for end-users

**Title** : Professional application of coatings and inks by spraying-Outdoor

*This document is intended to communicate the conditions of safe use for the product and should always be read in combination with the product's Safety Data Sheet, Technical Data sheet and labels.*

## General description of the process covered

Outdoor spray painting by professionals for general applications (e.g. decorative)

## Operational conditions

**Place of use** : Outdoor use

## Risk management measures (RMM)

| Contributing activity | Process category (ies) | Maximum duration | Ventilation | |
|---|---|---|---|---|
| | | | Type | ach (air changes per hour) |
| Preparation of material for application | PROC05 | 1 to 4 hours | Outdoors | 3 - 5 |
| Loading of application equipment and handling of coated parts before curing | PROC08a | 1 to 4 hours | Outdoors | 3 - 5 |
| Professional application of coatings and inks by spraying | PROC11 | 1 to 4 hours | Outdoors | 3 - 5 |
| Film formation - force drying, stoving and other technologies | PROC04 | 1 to 4 hours | Outdoors | 3 - 5 |
| Cleaning | PROC05 | 1 to 4 hours | Outdoors | 3 - 5 |
| Waste management | PROC08a | 1 to 4 hours | Outdoors | 3 - 5 |

| Contributing activity | Process category (ies) | Respiratory | Eye | Hands |
|---|---|---|---|---|
| Preparation of material for application | PROC05 | None | Use eye protection according to EN 166. | Wear suitable gloves tested to EN374. |
| Loading of application equipment and handling of coated parts before curing | PROC08a | None | Use eye protection according to EN 166. | Wear suitable gloves tested to EN374. |
| Professional application of coatings and inks by spraying | PROC11 | None | Use eye protection according to EN 166. | Wear suitable gloves tested to EN374. |
| Film formation - force drying, stoving and other technologies | PROC04 | None | None | None |
| Cleaning | PROC05 | None | Use eye protection according to EN 166. | Wear suitable gloves tested to EN374. |
| Waste management | PROC08a | None | Use eye protection according to EN 166. | Wear suitable gloves tested to EN374. |

See chapter 8 of this Safety Data Sheet for specifications.





## Disclaimer

The information in this Safe Use of Mixture Information sheet is based on the data provided by the substance supplier for the substances in the product for which a chemical safety assessment has been carried out at the time of issue. It does not guarantee safe use of the product and does not replace any occupational risk assessment required by legislation. When developing workplace instructions for employees, SUMI sheets should always be considered in combination with the SDS and the label of the product.
No liability is accepted for any damage, no matter of what kind, which is direct or indirect consequence of acts and/or decisions (partly) based on the contents of this document.

# SUMI
# Safe Use of Mixtures
# Information for end-users

**Title** : Industrial spray painting, no booth

*This document is intended to communicate the conditions of safe use for the product and should always be read in combination with the product's Safety Data Sheet, Technical Data sheet and labels.*

## General description of the process covered

Paint application on industrial line with no enclosure (only local exhaust ventilation)

## Operational conditions

**Place of use** : Indoor use

## Risk management measures (RMM)

| Contributing activity | Process category (ies) | Maximum duration | Ventilation | |
|---|---|---|---|---|
| | | | Type | ach (air changes per hour) |
| Preparation of material for application | PROC05 | More than 4 hours | Enhanced (mechanical) room ventilation | 5 - 10 |
| Loading of application equipment and handling of coated parts before curing | PROC08b | More than 4 hours | Enhanced (mechanical) room ventilation | 5 - 10 |
| Industrial application of coatings and inks by spraying | PROC07 | More than 4 hours | Local exhaust ventilation | Refer to relevant technical standards |
| Film formation - force drying, stoving and other technologies | PROC04 | More than 4 hours | Enhanced (mechanical) room ventilation | 5 - 10 |
| Cleaning | PROC05 | More than 4 hours | Enhanced (mechanical) room ventilation | 5 - 10 |
| Waste management | PROC08b | More than 4 hours | Enhanced (mechanical) room ventilation | 5 - 10 |

| Contributing activity | Process category (ies) | Respiratory | Eye | Hands |
|---|---|---|---|---|
| Preparation of material for application | PROC05 | None | Use eye protection according to EN 166. | Wear suitable gloves tested to EN374. |
| Loading of application equipment and handling of coated parts before curing | PROC08b | None | Use eye protection according to EN 166. | Wear suitable gloves tested to EN374. |
| Industrial application of coatings and inks by spraying | PROC07 | Wear a respirator conforming to EN140 with an assigned protection factor of at least 10. | Use eye protection according to EN 166. | Wear suitable gloves tested to EN374. |
| Film formation - force drying, stoving and other technologies | PROC04 | None | None | None |
| Cleaning | PROC05 | None | Use eye protection according to EN 166. | Wear suitable gloves tested to EN374. |
| Waste management | PROC08b | None | Use eye protection according to EN 166. | Wear suitable gloves tested to EN374. |



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See chapter 8 of this Safety Data Sheet for specifications.



## Disclaimer

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# SUMI
# Safe Use of Mixtures
# Information for end-users

**Title** : Industrial spray painting, walk-in booth

*This document is intended to communicate the conditions of safe use for the product and should always be read in combination with the product's Safety Data Sheet, Technical Data sheet and labels.*

## General description of the process covered

Paint application on industrial line with walk-in spray booth

## Operational conditions

**Place of use** : Indoor use

## Risk management measures (RMM)

| Contributing activity | Process category (ies) | Maximum duration | Ventilation | |
|---|---|---|---|---|
| | | | Type | ach (air changes per hour) |
| Preparation of material for application | PROC05 | More than 4 hours | Enhanced (mechanical) room ventilation | 5 - 10 |
| Loading of application equipment and handling of coated parts before curing | PROC08b | More than 4 hours | Enhanced (mechanical) room ventilation | 5 - 10 |
| Industrial application of coatings and inks by spraying | PROC07 | More than 4 hours | Local exhaust ventilation | Refer to relevant technical standards |
| Film formation - force drying, stoving and other technologies | PROC04 | More than 4 hours | Enhanced (mechanical) room ventilation | 5 - 10 |
| Cleaning | PROC05 | More than 4 hours | Local exhaust ventilation | Refer to relevant technical standards |
| Application equipment cleaning outside booth | PROC05 | More than 4 hours | Enhanced (mechanical) room ventilation | 5 - 10 |
| Waste management | PROC08b | More than 4 hours | Enhanced (mechanical) room ventilation | 5 - 10 |

| Contributing activity | Process category (ies) | Respiratory | Eye | Hands |
|---|---|---|---|---|
| Preparation of material for application | PROC05 | None | Use eye protection according to EN 166. | Wear suitable gloves tested to EN374. |
| Loading of application equipment and handling of coated parts before curing | PROC08b | None | Use eye protection according to EN 166. | Wear suitable gloves tested to EN374. |
| Industrial application of coatings and inks by spraying | PROC07 | Compressed-air breathing apparatus to EN 14594 with an assigned protection factor of at least 20. | Use eye protection according to EN 166. | Wear suitable gloves tested to EN374. |
| Film formation - force drying, stoving and other technologies | PROC04 | None | None | None |
| Cleaning | PROC05 | None | Use eye protection according to EN 166. | Wear suitable gloves tested to EN374. |



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| | | | | |
|---|---|---|---|---|
| Application equipment cleaning outside booth | PROC05 | None | Use eye protection according to EN 166. | Wear suitable gloves tested to EN374. |
| Waste management | PROC08b | None | Use eye protection according to EN 166. | Wear suitable gloves tested to EN374. |

See chapter 8 of this Safety Data Sheet for specifications.



## Disclaimer

The information in this Safe Use of Mixture Information sheet is based on the data provided by the substance supplier for the substances in the product for which a chemical safety assessment has been carried out at the time of issue. It does not guarantee safe use of the product and does not replace any occupational risk assessment required by legislation. When developing workplace instructions for employees, SUMI sheets should always be considered in combination with the SDS and the label of the product.
No liability is accepted for any damage, no matter of what kind, which is direct or indirect consequence of acts and/or decisions (partly) based on the contents of this document.

# SUMI
# Safe Use of Mixtures
# Information for end-users

**Title** : Industrial application of coatings and inks by other than spraying-Enclosed

*This document is intended to communicate the conditions of safe use for the product and should always be read in combination with the product's Safety Data Sheet, Technical Data sheet and labels.*

## General description of the process covered

Paint application on industrial line by brush, roller, dipping, spreading, coil, fluidized bed or curtain coating (enclosed application)

## Operational conditions

**Place of use** : Indoor use

## Risk management measures (RMM)

| Contributing activity | Process category (ies) | Maximum duration | Ventilation | |
|---|---|---|---|---|
| | | | Type | ach (air changes per hour) |
| Preparation of material for application | PROC05 | More than 4 hours | Enhanced (mechanical) room ventilation | 5 - 10 |
| Loading of application equipment and handling of coated parts before curing | PROC08b | More than 4 hours | Enhanced (mechanical) room ventilation | 5 - 10 |
| Industrial application of coatings and inks by other than spraying | PROC10, PROC13 | More than 4 hours | Local exhaust ventilation | Refer to relevant technical standards |
| Film formation - force drying, stoving and other technologies | PROC02 | More than 4 hours | Enhanced (mechanical) room ventilation | 5 - 10 |
| Cleaning | PROC05 | More than 4 hours | Local exhaust ventilation | Refer to relevant technical standards |
| Application equipment cleaning outside booth | PROC05 | More than 4 hours | Enhanced (mechanical) room ventilation | 5 - 10 |
| Waste management | PROC08b | More than 4 hours | Enhanced (mechanical) room ventilation | 5 - 10 |

| Contributing activity | Process category (ies) | Respiratory | Eye | Hands |
|---|---|---|---|---|
| Preparation of material for application | PROC05 | None | Use eye protection according to EN 166. | Wear suitable gloves tested to EN374. |
| Loading of application equipment and handling of coated parts before curing | PROC08b | None | Use eye protection according to EN 166. | Wear suitable gloves tested to EN374. |
| Industrial application of coatings and inks by other than spraying | PROC10, PROC13 | None | None | None |
| Film formation - force drying, stoving and other technologies | PROC02 | None | None | None |
| Cleaning | PROC05 | None | Use eye protection according to EN 166. | Wear suitable gloves tested to EN374. |



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| | | | | |
|---|---|---|---|---|
| Application equipment cleaning outside booth | PROC05 | None | Use eye protection according to EN 166. | Wear suitable gloves tested to EN374. |
| Waste management | PROC08b | None | Use eye protection according to EN 166. | Wear suitable gloves tested to EN374. |

See chapter 8 of this Safety Data Sheet for specifications.





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# SUMI
# Safe Use of Mixtures
# Information for end-users

**Title** : Professional painting, outdoor brush/roller

*This document is intended to communicate the conditions of safe use for the product and should always be read in combination with the product's Safety Data Sheet, Technical Data sheet and labels.*

## General description of the process covered

Outdoor painting by professionals with brush or roller

## Operational conditions

**Place of use** : Outdoor use

## Risk management measures (RMM)

| Contributing activity | Process category (ies) | Maximum duration | Ventilation | |
|---|---|---|---|---|
| | | | Type | ach (air changes per hour) |
| Preparation of material for application | PROC05 | More than 4 hours | Outdoors | 3 - 5 |
| Loading of application equipment and handling of coated parts before curing | PROC08a | More than 4 hours | Outdoors | 3 - 5 |
| Professional application of coatings and inks by brush or roller | PROC10 | More than 4 hours | Outdoors | 3 - 5 |
| Film formation - force drying, stoving and other technologies | PROC04 | More than 4 hours | Outdoors | 3 - 5 |
| Cleaning | PROC05 | More than 4 hours | Outdoors | 3 - 5 |
| Waste management | PROC08a | More than 4 hours | Outdoors | 3 - 5 |

| Contributing activity | Process category (ies) | Respiratory | Eye | Hands |
|---|---|---|---|---|
| Preparation of material for application | PROC05 | None | Use eye protection according to EN 166. | Wear suitable gloves tested to EN374. |
| Loading of application equipment and handling of coated parts before curing | PROC08a | None | Use eye protection according to EN 166. | Wear suitable gloves tested to EN374. |
| Professional application of coatings and inks by brush or roller | PROC10 | None | Use eye protection according to EN 166. | Wear suitable gloves tested to EN374. |
| Film formation - force drying, stoving and other technologies | PROC04 | None | None | None |
| Cleaning | PROC05 | None | Use eye protection according to EN 166. | Wear suitable gloves tested to EN374. |
| Waste management | PROC08a | None | Use eye protection according to EN 166. | Wear suitable gloves tested to EN374. |

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# SUMI
# Safe Use of Mixtures
# Information for end-users

**Title** : Industrial application of coatings and inks by other than spraying-Local exhaust ventilation

*This document is intended to communicate the conditions of safe use for the product and should always be read in combination with the product's Safety Data Sheet, Technical Data sheet and labels.*

## General description of the process covered

Paint application on industrial line by brush, roller, dipping, spreading, coil, fluidized bed or curtain coating (local exhaust ventilation only)

## Operational conditions

**Place of use** : Indoor use

## Risk management measures (RMM)

| Contributing activity | Process category (ies) | Maximum duration | Ventilation | |
|---|---|---|---|---|
| | | | Type | ach (air changes per hour) |
| Preparation of material for application | PROC05 | More than 4 hours | Enhanced (mechanical) room ventilation | 5 - 10 |
| Loading of application equipment and handling of coated parts before curing | PROC08b | More than 4 hours | Enhanced (mechanical) room ventilation | 5 - 10 |
| Industrial application of coatings and inks by other than spraying | PROC10, PROC13 | More than 4 hours | Local exhaust ventilation | Refer to relevant technical standards |
| Film formation - force drying, stoving and other technologies | PROC04 | More than 4 hours | Enhanced (mechanical) room ventilation | 5 - 10 |
| Cleaning | PROC05 | More than 4 hours | Enhanced (mechanical) room ventilation | 5 - 10 |
| Waste management | PROC08b | More than 4 hours | Enhanced (mechanical) room ventilation | 5 - 10 |

| Contributing activity | Process category (ies) | Respiratory | Eye | Hands |
|---|---|---|---|---|
| Preparation of material for application | PROC05 | None | Use eye protection according to EN 166. | Wear suitable gloves tested to EN374. |
| Loading of application equipment and handling of coated parts before curing | PROC08b | None | Use eye protection according to EN 166. | Wear suitable gloves tested to EN374. |
| Industrial application of coatings and inks by other than spraying | PROC10, PROC13 | None | Use eye protection according to EN 166. | Wear suitable gloves tested to EN374. |
| Film formation - force drying, stoving and other technologies | PROC04 | None | None | None |
| Cleaning | PROC05 | None | Use eye protection according to EN 166. | Wear suitable gloves tested to EN374. |
| Waste management | PROC08b | None | Use eye protection according to EN 166. | Wear suitable gloves tested to EN374. |



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# SUMI
# Safe Use of Mixtures
# Information for end-users

**Title** : Industrial spray painting, enclosed

*This document is intended to communicate the conditions of safe use for the product and should always be read in combination with the product's Safety Data Sheet, Technical Data sheet and labels.*

## General description of the process covered

Paint application on industrial line with fully-enclosed spraying

## Operational conditions

**Place of use** : Indoor use

## Risk management measures (RMM)

| Contributing activity | Process category (ies) | Maximum duration | Ventilation | |
|---|---|---|---|---|
| | | | Type | ach (air changes per hour) |
| Preparation of material for application | PROC05 | More than 4 hours | Enhanced (mechanical) room ventilation | 5 - 10 |
| Loading of application equipment and handling of coated parts before curing | PROC08b | More than 4 hours | Enhanced (mechanical) room ventilation | 5 - 10 |
| Industrial application of coatings and inks by spraying | PROC07 | More than 4 hours | Full containment/extraction | 100 or equivalent |
| Film formation - force drying, stoving and other technologies | PROC02 | More than 4 hours | Enhanced (mechanical) room ventilation | 5 - 10 |
| Cleaning | PROC05 | More than 4 hours | Local exhaust ventilation | Refer to relevant technical standards |
| Application equipment cleaning outside booth | PROC05 | More than 4 hours | Enhanced (mechanical) room ventilation | 5 - 10 |
| Waste management | PROC08b | More than 4 hours | Enhanced (mechanical) room ventilation | 5 - 10 |

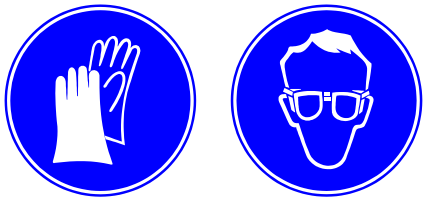
| Contributing activity | Process category (ies) | Respiratory | Eye | Hands |
|---|---|---|---|---|
| Preparation of material for application | PROC05 | None | Use eye protection according to EN 166. | Wear suitable gloves tested to EN374. |
| Loading of application equipment and handling of coated parts before curing | PROC08b | None | Use eye protection according to EN 166. | Wear suitable gloves tested to EN374. |
| Industrial application of coatings and inks by spraying | PROC07 | None | None | None |
| Film formation - force drying, stoving and other technologies | PROC02 | None | None | None |
| Cleaning | PROC05 | None | Use eye protection according to EN 166. | Wear suitable gloves tested to EN374. |
| Application equipment cleaning outside booth | PROC05 | None | Use eye protection according to EN 166. | Wear suitable gloves tested to EN374. |



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|---|---|---|---|---|
| Waste management | PROC08b | None | Use eye protection according to EN 166. | Wear suitable gloves tested to EN374. |

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