# SAFETY DATA SHEET

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

### *1.1 Product identifier*

***Product name*** : FIRETEX FX2004 Solvent Based Intumescent

***Product code*** : FX2004

### *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*** : 112 - Information center (available 24 hours)

**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. 2, H225
Skin Irrit. 2, H315
Carc. 2, H351
Repr. 2, H361
STOT SE 3, H336
STOT RE 2, H373
Asp. Tox. 1, H304

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

## SECTION 2: Hazards identification

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*** : Highly flammable liquid and vapor.
May be fatal if swallowed and enters airways.
Causes skin irritation.
May cause drowsiness or dizziness.
Suspected of causing cancer.
Suspected of damaging fertility or the unborn child.
May cause 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*** : toluene
1,3,5-triazine-2,4,6-triamine

***Supplemental label elements*** : 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 |
|---|---|---|---|---|---|
| Toluene | REACH #: 01-2119471310-51<br>EC: 203-625-9<br>CAS: 108-88-3<br>Index: 601-021-00-3 | ≥10 - <25 | Flam. Liq. 2, H225<br>Skin Irrit. 2, H315<br>Repr. 2, H361d<br>STOT SE 3, H336<br>STOT RE 2, H373<br>Asp. Tox. 1, H304<br>Aquatic Chronic 3, H412 | - | [1] [2] |
| 1,3,5-Triazine-2,4,6-triamine | REACH #: 01-2119485947-16<br>EC: 203-615-4<br>CAS: 108-78-1<br>Index: 613-345-00-2 | <10 | Carc. 2, H351<br>Repr. 2, H361<br>STOT RE 2, H373 (urinary tract) | - | [1] [3] |
| Methyl Ethyl Ketone | REACH #: 01-2119457290-43<br>EC: 201-159-0<br>CAS: 78-93-3<br>Index: 606-002-00-3 | ≤3 | Flam. Liq. 2, H225<br>Eye Irrit. 2, H319<br>STOT SE 3, H336<br>EUH066 | - | [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 | ≤3 | 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 RE 2, H373<br>Asp. Tox. 1, H304<br>**See Section 16 for the full text of the H statements declared above.** | ATE [Dermal] = 1100 mg/kg<br>ATE [Inhalation (gases)] = 6700 ppm | [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
[3] Substance of equivalent concern

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.

## SECTION 4: First aid measures

***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.

### *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.
Ingestion may cause nausea, diarrhea and vomiting.
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.

### *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.

### *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). 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.
**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.

## SECTION 7: Handling and storage

***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 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.

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

***Recommendations*** : Not available.

***Industrial sector specific solutions*** : Not available.

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

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

## SECTION 8: Exposure controls/personal protection

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

***8.1 Control parameters***

**Occupational exposure limits**

| Product/ingredient name | Exposure limit values |
|---|---|
| Toluene | **Regulation on protection of workers from the risks related to exposure to chemical substances at work (Slovenia, 5/2021). Absorbed through skin.**<br>TWA: 192 mg/m³ 8 hours.<br>TWA: 50 ppm 8 hours.<br>KTV: 384 mg/m³, 4 times per shift, 15 minutes.<br>KTV: 100 ppm, 4 times per shift, 15 minutes. |
| Methyl Ethyl Ketone | **Regulation on protection of workers from the risks related to exposure to chemical substances at work (Slovenia, 5/2021). Absorbed through skin.**<br>TWA: 600 mg/m³ 8 hours.<br>TWA: 200 ppm 8 hours.<br>KTV: 900 mg/m³, 4 times per shift, 15 minutes.<br>KTV: 300 ppm, 4 times per shift, 15 minutes. |
| Xylene, mixed isomers | **Regulation on protection of workers from the risks related to exposure to chemical substances at work (Slovenia, 5/2021). [xylene (mixture of isomers)] Absorbed through skin.**<br>TWA: 221 mg/m³ 8 hours.<br>TWA: 50 ppm 8 hours.<br>KTV: 442 mg/m³, 4 times per shift, 15 minutes.<br>KTV: 100 ppm, 4 times per shift, 15 minutes. |

**Biological exposure indices**

## SECTION 8: Exposure controls/personal protection

| Product/ingredient name | Exposure indices |
|---|---|
| toluene | **Regulation on protection of workers from the risks related to exposure to chemical substances at work (Slovenia, 5/2021)** BAT: 1.5 mg/l, o-cresol (after hydrolysis) [in urine]. Sampling time: at the end of the work shift, at long-term exposure: at the end of the work shift after several consecutive workdays. BAT: 600 µg/l, toluene [in blood]. Sampling time: immediately after exposure. BAT: 75 µg/l, toluene [in urine]. Sampling time: at the end of the work shift. |
| butanone | **Regulation on protection of workers from the risks related to exposure to chemical substances at work (Slovenia, 5/2021)** BAT: 2 mg/l, 2-butanone [in urine]. Sampling time: at the end of the work shift. |
| xylene | **Regulation on protection of workers from the risks related to exposure to chemical substances at work (Slovenia, 5/2021) [xylene (all isomers)]** BAT: 2 g/l, methylhippuric acid (all isomers) [in urine]. Sampling time: at the end of the work 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 |
|---|---|---|---|---|---|
| Toluene | DNEL | Short term Inhalation | 226 mg/m³ | General population [Human via the environment] | Systemic |
| | DNEL | Short term Inhalation | 226 mg/m³ | General population [Human via the environment] | Local |
| | DNEL | Long term Dermal | 226 mg/m³ | General population [Human via the environment] | Systemic |
| | DNEL | Long term Inhalation | 226 mg/kg bw/day | General population [Human via the environment] | Systemic |
| | DNEL | Long term Inhalation | 56.5 mg/m³ | General population [Human via the environment] | Systemic |
| | DNEL | Long term Oral | 8.13 mg/kg bw/day | General population [Human via the | Systemic |

## SECTION 8: Exposure controls/personal protection

| | | | | | |
|---|---|---|---|---|---|
| | | | | environment] | |
| | DNEL | Long term Inhalation | 192 mg/m³ | Workers | Systemic |
| | DNEL | Long term Inhalation | 192 mg/m³ | Workers | Local |
| | DNEL | Short term Inhalation | 384 mg/m³ | Workers | Systemic |
| | DNEL | Short term Inhalation | 384 mg/m³ | Workers | Local |
| | DNEL | Long term Dermal | 384 mg/kg bw/day | Workers | Systemic |
| | DNEL | Long term Inhalation | 56.5 mg/m³ | General population [Consumers] | Local |
| 1,3,5-Triazine-2,4,6-triamine | DNEL | Short term Dermal | 117 mg/kg | Workers | Systemic |
| | DNEL | Short term Inhalation | 82.3 mg/m³ | Workers | Systemic |
| | DNEL | Long term Dermal | 11.8 mg/kg | Workers | Systemic |
| | DNEL | Long term Inhalation | 8.3 mg/m³ | Workers | Systemic |
| | DNEL | Long term Dermal | 4.2 mg/kg | General population | Systemic |
| | DNEL | Long term Inhalation | 1.5 mg/m³ | General population | Systemic |
| | DNEL | Long term Oral | 0.42 mg/kg | General population | Systemic |
| Methyl Ethyl Ketone | DNEL | Long term Dermal | 1161 mg/ kg bw/day | Workers | Systemic |
| | DNEL | Long term Inhalation | 600 mg/m³ | Workers | Systemic |
| | DNEL | Long term Dermal | 412 mg/kg bw/day | General population [Consumers] | Systemic |
| | DNEL | Long term Inhalation | 106 mg/m³ | General population [Consumers] | Systemic |
| | DNEL | Long term Oral | 31 mg/kg bw/day | General population [Consumers] | 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**

## SECTION 8: Exposure controls/personal protection

| Product/ingredient name | Compartment Detail | Value | Method Detail |
|---|---|---|---|
| Toluene | Fresh water sediment | 0.68 mg/l | Assessment Factors |
| | Marine water sediment | 0.68 mg/l | Assessment Factors |
| | Sewage Treatment Plant | 13.61 mg/l | Assessment Factors |
| | Soil | 2.89 mg/kg | Assessment Factors |
| | Fresh water sediment | 16.39 mg/kg dwt | - |
| | Marine water sediment | 16.39 mg/kg dwt | - |
| 1,3,5-Triazine-2,4,6-triamine | Fresh water | 0.5 mg/l | - |
| | Marine water | 0.05 mg/l | - |
| | Sewage Treatment Plant | 200 mg/l | - |
| | Fresh water sediment | 2.524 mg/kg | - |
| Methyl Ethyl Ketone | Fresh water | 55.8 mg/l | - |
| | Marine water | 55.8 mg/l | - |
| | Sewage Treatment Plant | 709 mg/l | - |
| | Sediment | 284.7 mg/kg dwt | - |
| | Soil | 22.5 mg/kg | - |
| | Secondary Poisoning | 1000 mg/kg | - |

### *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.

: 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. 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.
Gloves for repeated or prolonged exposure (breakthrough time > 240 min.)
When the hazardous ingredients in Section 3 contain any of the following: Aromatic solvents (Xylene, Toluene) or Aliphatic solvents or Mineral Oil use: Polyvinyl alcohol (PVA) gloves 0.2-0.3 mm
Otherwise use: Butyl gloves >0.3 mm
For long term exposure or spills (breakthrough time >480 min.): Use PE laminated 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.
The recommendation for the type or types of glove to use when handling this product is based on information from the following source: Solvent resin manufacturers and European Solvents Industry Group (ESIG)

## SECTION 8: Exposure controls/personal protection

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*** : 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*** : White.

***Odor*** : Solvent.

***Odor threshold*** : Not Available (Not Tested).

***pH*** : Not relevant/applicable due to nature of the product.
insoluble in water.

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

***Initial boiling point and boiling range*** : 78°C

***Flash point*** : Closed cup: 5°C [Pensky-Martens Closed Cup]

## SECTION 9: Physical and chemical properties

***Evaporation rate*** : 5.6 (butyl acetate = 1)

***Flammability*** : Flammable liquid.

***Lower and upper explosion limit*** : LEL: 1% (Toluene)
UEL: 10% (Methyl Ethyl Ketone)

***Vapor pressure*** : 12.1 kPa (90.6 mm Hg)

***Relative vapor density*** : 2.48 [Air = 1]

***Relative density*** : 1.31

***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 |
|---|---|---|---|
| Methyl Ethyl Ketone | 475 | 887 | |
| Toluene | 480 | 896 | |

***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*** : 7.892 kJ/g

## SECTION 10: Stability and reactivity

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

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

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

***10.4 Conditions to avoid*** : When exposed to high temperatures may produce hazardous decomposition products.

***10.5 Incompatible materials*** : Keep away from the following materials to prevent strong exothermic reactions: oxidizing agents, strong alkalis, strong acids.

***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.
Ingestion may cause nausea, diarrhea and vomiting.
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.

**Acute toxicity**

| Product/ingredient name | Result | Species | Dose | Exposure |
|---|---|---|---|---|
| Toluene | LC50 Inhalation Vapor | Rat | 49 g/m³ | 4 hours |
| | LD50 Oral | Rat | 636 mg/kg | - |
| 1,3,5-Triazine-2,4,6-triamine | LD50 Oral | Rat | 3161 mg/kg | - |
| Methyl Ethyl Ketone | LD50 Dermal | Rabbit | 6480 mg/kg | - |
| | LD50 Oral | Rat | 2737 mg/kg | - |
| Xylene, mixed isomers | LC50 Inhalation Gas. | Rat | 6700 ppm | 4 hours |
| | LD50 Oral | Rat | 4300 mg/kg | - |

**Acute toxicity estimates**

| Route | ATE value |
|---|---|
| Dermal | 49306.25 mg/kg |
| Inhalation (gases) | 300319.9 ppm |

**Irritation/Corrosion**

| Product/ingredient name | Result | Species | Score | Exposure | Observation |
|---|---|---|---|---|---|
| Toluene | Eyes - Mild irritant | Rabbit | - | 0.5 minutes 100 mg | - |
| | Eyes - Mild irritant | Rabbit | - | 870 ug | - |
| | Eyes - Severe irritant | Rabbit | - | 24 hours 2 mg | - |
| | Skin - Mild irritant | Pig | - | 24 hours 250 uL | - |
| | Skin - Mild irritant | Rabbit | - | 435 mg | - |
| | Skin - Moderate irritant | Rabbit | - | 24 hours 20 mg | - |
| | Skin - Moderate irritant | Rabbit | - | 500 mg | - |
| 1,3,5-Triazine-2,4,6-triamine | Eyes - Mild irritant | Rabbit | - | 24 hours 500 mg | - |
| Methyl Ethyl Ketone | Skin - Mild irritant | Rabbit | - | 24 hours 14 mg | - |
| | Skin - Moderate irritant | Rabbit | - | 24 hours 500 mg | - |
| 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 | - |

## SECTION 11: Toxicological information

| | | | | | |
|---|---|---|---|---|---|
| | Skin - Moderate irritant<br>Skin - Moderate irritant | Rabbit<br>Rabbit | -<br>- | 100 %<br>24 hours 500 mg | -<br>- |

***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 |
|---|---|---|---|
| Toluene<br>Methyl Ethyl Ketone<br>Xylene, mixed isomers | Category 3<br>Category 3<br>Category 3 | -<br>-<br>- | Narcotic effects<br>Narcotic effects<br>Respiratory tract irritation |

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

| Product/ingredient name | Category | Route of exposure | Target organs |
|---|---|---|---|
| Toluene<br>1,3,5-Triazine-2,4,6-triamine<br>Xylene, mixed isomers | Category 2<br>Category 2<br>Category 2 | -<br>-<br>- | -<br>urinary tract<br>- |

**Aspiration hazard**

| Product/ingredient name | Result |
|---|---|
| Toluene<br>Xylene, mixed isomers | ASPIRATION HAZARD - Category 1<br>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.

## SECTION 12: Ecological information

| Product/ingredient name | Result | Species | Exposure |
|---|---|---|---|
| Toluene | Acute EC50 >433 ppm Marine water | Algae - *Skeletonema costatum* | 96 hours |
| | Acute EC50 11600 µg/l Fresh water | Crustaceans - *Gammarus pseudolimnaeus* - Adult | 48 hours |
| | Acute EC50 6000 µg/l Fresh water | Daphnia - *Daphnia magna* - Juvenile (Fledgling, Hatchling, Weanling) | 48 hours |
| | Acute LC50 5500 µg/l Fresh water | Fish - *Oncorhynchus kisutch* - Fry | 96 hours |
| | Chronic NOEC 1 mg/l Fresh water | Daphnia - *Daphnia magna* | 21 days |
| Methyl Ethyl Ketone | Acute EC50 >500000 µg/l Marine water | Algae - *Skeletonema costatum* | 96 hours |
| | Acute EC50 5091000 µg/l Fresh water | Daphnia - *Daphnia magna* - Larvae | 48 hours |
| | Acute LC50 3220000 µg/l Fresh water | Fish - *Pimephales promelas* | 96 hours |
| 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 |

### *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 |
|---|---|---|---|
| Toluene | - | - | Readily |
| Methyl Ethyl Ketone | - | - | Readily |
| Xylene, mixed isomers | - | - | Readily |

### *12.3 Bioaccumulative potential*

| Product/ingredient name | $LogP_{ow}$ | BCF | Potential |
|---|---|---|---|
| Toluene | - | 90 | Low |
| 1,3,5-Triazine-2,4,6-triamine | - | <3.8 | Low |
| Xylene, mixed isomers | - | 8.1 to 25.9 | 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** | II | II | II |
| **14.5 Environmental hazards** | No. | No. | No. |
| | | | |

## SECTION 14: Transport information

| | | | |
|---|---|---|---|
| **Additional information** | **Special provisions** 640 (C)<br>**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.

**Substances of very high concern**

| Ingredient name | Intrinsic property | Status | Reference number | Date of revision |
|---|---|---|---|---|
| 1,3,5-Triazine-2,4,6-triamine | Substance of equivalent concern for human health | Candidate | D(2022) 9120-DC | 1/17/2023 |
| 1,3,5-Triazine-2,4,6-triamine | Substance of equivalent concern for environment | Candidate | D(2022) 9120-DC | 1/17/2023 |

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

| Product/ingredient name | % | Designation [Usage] |
|---|---|---|
| FIRETEX FX2004 Solvent Based Intumescent | ≥90 | 3 |
| toluene | ≥10 - <25 | 48 |

**Labeling** : Not applicable.

**Other EU regulations**

***VOC content*** ***(2010/75/EU)*** : 26.9 **w/w**
354 **g/l**

**Explosive precursors** : Not applicable.

***Seveso Directive***

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

**National regulations**

| *Product/ingredient name* | *List name* | *Name on list* | *Classification* | *Notes* |
|---|---|---|---|---|
| Toluene | Slovenia Carcinogen, Mutagen, Reprotoxic chemicals | toluen | Dev. 2 | - |

## 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. 2, H225 | On basis of test data |
| Skin Irrit. 2, H315 | Calculation method |
| Carc. 2, H351 | Calculation method |
| Repr. 2, H361 | Calculation method |
| STOT SE 3, H336 | Calculation method |
| STOT RE 2, H373 | 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. |
| H304 | May be fatal if swallowed and enters airways. |
| H312 | Harmful in contact with skin. |
| H315 | Causes skin irritation. |
| H319 | Causes serious eye irritation. |
| H332 | Harmful if inhaled. |
| H335 | May cause respiratory irritation. |
| H336 | May cause drowsiness or dizziness. |
| H351 | Suspected of causing cancer. |
| H361 | Suspected of damaging fertility or the unborn child. |
| H361d | Suspected of damaging the unborn child. |
| H373 | May cause damage to organs through prolonged or repeated exposure. |
| H412 | Harmful to aquatic life with long lasting effects. |
| EUH066 | Repeated exposure may cause skin dryness or cracking. |

## SECTION 16: Other information

| | | | |
|---|---|---|---|
| ***Full text of classifications [CLP/GHS]*** | : | Acute Tox. 4 | ACUTE TOXICITY - Category 4 |
| | | Aquatic Chronic 3 | AQUATIC HAZARD (LONG-TERM) - Category 3 |
| | | Asp. Tox. 1 | ASPIRATION HAZARD - Category 1 |
| | | Carc. 2 | CARCINOGENICITY - Category 2 |
| | | 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 Irrit. 2 | SKIN CORROSION/IRRITATION - Category 2 |
| | | 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*** | : | 09, Jan, 2024. | |
| ***Date of issue/ Date of revision*** | : | 09, Jan, 2024 | |
| ***Date of previous issue*** | : | 03, Jan, 2024 | |
| | : | If there is no previous validation date please contact your supplier for more information. | |
| ***Version*** | : | 5.03 | |

**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.***

# 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. |

See chapter 8 of this Safety Data Sheet for specifications.



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## Disclaimer

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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. |

See chapter 8 of this Safety Data Sheet for specifications.



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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. |

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 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.





## Disclaimer

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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, 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. |
| Application equipment | PROC05 | None | Use eye protection | Wear suitable gloves |



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| cleaning outside booth | | | according to EN 166. | 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, indoor 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

Indoor painting by professionals with brush or roller, with good general room ventilation (open doors/windows)

## Operational conditions

**Place of use** : Indoor use

## Risk management measures (RMM)

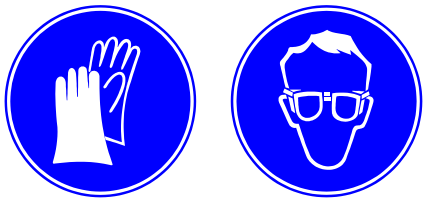
| Contributing activity | Process category (ies) | Maximum duration | Ventilation | |
|---|---|---|---|---|
| | | | Type | ach (air changes per hour) |
| Preparation of material for application | PROC05 | More than 4 hours | Good general room ventilation | 3 - 5 |
| Loading of application equipment and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

*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

Indoor spray painting by professionals for general applications (e.g. decorative), with general room ventilation only (open doors/windows)

## 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 | 15 minutes to 1 hour | Good general room ventilation | 3 - 5 |
| Loading of application equipment and handling of coated parts before curing | PROC08a | 15 minutes to 1 hour | Good general room ventilation | 3 - 5 |
| Professional application of coatings and inks by spraying | PROC11 | 15 minutes to 1 hour | Good general room ventilation | 3 - 5 |
| Film formation - force drying, stoving and other technologies | PROC04 | 15 minutes to 1 hour | Good general room ventilation | 3 - 5 |
| Cleaning | PROC05 | 15 minutes to 1 hour | Good general room ventilation | 3 - 5 |
| Waste management | PROC08a | 15 minutes to 1 hour | Good general room ventilation | 3 - 5 |

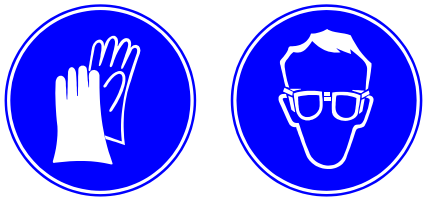
| Contributing activity | Process category (ies) | Respiratory | Eye | Hands |
|---|---|---|---|---|
| Preparation of material for application | PROC05 | None | Use eye protection according to EN 166. | Wear chemical-resistant gloves (tested to EN374) in combination with 'basic' employee training. |
| Loading of application equipment and handling of coated parts before curing | PROC08a | None | Use eye protection according to EN 166. | Wear chemical-resistant gloves (tested to EN374) in combination with 'basic' employee training. |
| Professional application of coatings and inks by spraying | PROC11 | Wear a respirator conforming to EN140 with an assigned protection factor of at least 10. | Use eye protection according to EN 166. | Wear chemical-resistant gloves (tested to EN374) in combination with 'basic' employee training. |
| Film formation - force drying, stoving and other technologies | PROC04 | None | None | None |
| Cleaning | PROC05 | None | Use eye protection according to EN 166. | Wear chemical-resistant gloves (tested to EN374) in combination with 'basic' |



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| | | | | employee training. |
| Waste management | PROC08a | None | Use eye protection according to EN 166. | Wear chemical-resistant gloves (tested to EN374) in combination with 'basic' employee training. |

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# 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 | 15 minutes to 1 hour | Outdoors | 3 - 5 |
| Loading of application equipment and handling of coated parts before curing | PROC08a | 15 minutes to 1 hour | Outdoors | 3 - 5 |
| Professional application of coatings and inks by spraying | PROC11 | 15 minutes to 1 hour | Outdoors | 3 - 5 |
| Film formation - force drying, stoving and other technologies | PROC04 | 15 minutes to 1 hour | Outdoors | 3 - 5 |
| Cleaning | PROC05 | 15 minutes to 1 hour | Outdoors | 3 - 5 |
| Waste management | PROC08a | 15 minutes to 1 hour | 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 chemical-resistant gloves (tested to EN374) in combination with 'basic' employee training. |
| Loading of application equipment and handling of coated parts before curing | PROC08a | None | Use eye protection according to EN 166. | Wear chemical-resistant gloves (tested to EN374) in combination with 'basic' employee training. |
| Professional application of coatings and inks by spraying | PROC11 | Wear a respirator conforming to EN140 with an assigned protection factor of at least 10. | Use eye protection according to EN 166. | Wear chemical-resistant gloves (tested to EN374) in combination with 'basic' employee training. |
| Film formation - force drying, stoving and other technologies | PROC04 | None | None | None |
| Cleaning | PROC05 | None | Use eye protection according to EN 166. | Wear chemical-resistant gloves (tested to EN374) in combination with 'basic' employee training. |



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|---|---|---|---|---|
| Waste management | PROC08a | None | Use eye protection according to EN 166. | Wear chemical-resistant gloves (tested to EN374) in combination with 'basic' employee training. |

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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)

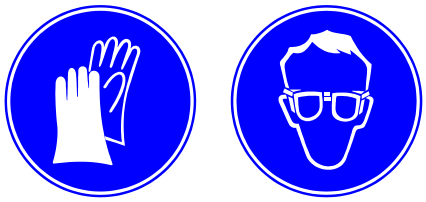
| Contributing activity | Process category (ies) | Maximum duration | Ventilation | |
|---|---|---|---|---|
| | | | Type | ach (air changes per hour) |
| Preparation of material for application | PROC05 | More than 4 hours | Enhanced (mechanical) room ventilation | 5 - 10 |
| Loading of application equipment 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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