# SAFETY DATA SHEET
# 1 PACK POLYURETHANE (General colours)

This Safety Data Sheet is prepared in accordance with Annex II to Regulation (EC) No 1907/2006 as amended by Regulations (EU) No. 453/2010 and (EU) 2015/830

Part No: GB1PAL001958-A - Polyurethane Paint - Grey

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

### 1.1. Product identifier

**Product name** 1 PACK POLYURETHANE (General colours)

**Product number** 1P/GENERAL

**Product SUMI code** F

**Product SUMI version number** 1.00

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

**Identified uses** An air-drying, liquid, solvent-borne paint for industrial and professional use. For metal finishing, vehicle refinishing and the original coating of vehicles or trailers, the product is applied by manual spray, brush and roller.

### 1.3. Details of the supplier of the safety data sheet

**Supplier**

Manor Coating Systems Ltd
Otley Road
Shipley
West Yorkshire
BD17 7DP

Tel: 01274 587351
Fax: 01274531360
chiefchemist@manorcoatingsystems.co.uk

**Contact person** Chief Chemist

### 1.4. Emergency telephone number

**Emergency telephone** Manor Coating Systems Ltd. 01274 587351 may be contacted (Office hours only)

**National emergency telephone number** Members of the public should contact: 111 in UK, 01 809 2166 in Republic of Ireland

## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

**Classification (SI 2019 No. 720)**

**Physical hazards** Flam. Liq. 3 - H226

**Health hazards** STOT SE 3 - H336

**Environmental hazards** Not Classified

### 2.2. Label elements

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**Hazard pictograms**



| | |
|---|---|
| **Signal word** | Warning |
| **Hazard statements** | EUH208 Contains COBALT BIS(2-ETHYLHEXANOATE). May produce an allergic reaction.<br>H226 Flammable liquid and vapour.<br>H336 May cause drowsiness or dizziness. |
| **Precautionary statements** | P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.<br>P261 Avoid breathing vapour/ spray.<br>P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.<br>P284 [In case of inadequate ventilation] wear respiratory protection.<br>P312 Call a POISON CENTRE/doctor if you feel unwell.<br>P403+P233 Store in a well-ventilated place. Keep container tightly closed. |
| **Supplemental label information** | EUH066 Repeated exposure may cause skin dryness or cracking.<br>EUH210 Safety data sheet available on request. |
| **Contains** | HYDROCARBONS, C9 - C11. n-alkanes, isoalkanes,cyclics,<2% aromatics |
| **Supplementary precautionary statements** | P240 Ground and bond container and receiving equipment.<br>P241 Use explosion-proof electrical equipment.<br>P242 Use non-sparking tools.<br>P243 Take action to prevent static discharges.<br>P271 Use only outdoors or in a well-ventilated area.<br>P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.<br>P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.<br>P370+P378 In case of fire: Use foam, carbon dioxide, dry powder or water fog to extinguish.<br>P302/P352 IF ON SKIN: Wash with plenty of soap and water. Do not use solvent thinners or white spirit.<br>P501 Dispose of contents/ container in accordance with national regulations. |
| **Labelling notes** | For full text of Hazard- and EU Hazard-statements: see SECTION 16. |

## 2.3. Other hazards

This product does not contain any substances classified as PBT or vPvB.

## SECTION 3: Composition/information on ingredients

### 3.2. Mixtures

**HYDROCARBONS, C9 - C11. n-alkanes, isoalkanes,cyclics,<2% aromatics** **25-50%**

CAS number: 1174522-20-3 EC number: 919-857-5

**Classification**

Flam. Liq. 3 - H226
Acute Tox. 4 - H332
STOT SE 3 - H336
Asp. Tox. 1 - H304

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**XYLENE** **1-5%**

CAS number: 1330-20-7 EC number: 215-535-7

**Classification**
Flam. Liq. 3 - H226
Acute Tox. 4 - H312
Acute Tox. 4 - H332
Skin Irrit. 2 - H315
Eye Irrit. 2 - H319
STOT SE 3 - H335
STOT RE 2 - H373
Asp. Tox. 1 - H304
Aquatic Chronic 3 - H412

**HYDROCARBONS, C10 - C13, n-ALKANES, ISOALKANES, CYCLICS, <2% AROMATICS** **1-5%**

CAS number: 64742-48-9 EC number: 918-481-9

**Classification**
Asp. Tox. 1 - H304

**2-ETHYL-HEXANOIC ACID, ZIRCONIUM SALT** **0.1 - <1%**

CAS number: 22464-99-9 EC number: 245-018-1

**Classification**
Repr. 2 - H361

**COBALT BIS(2-ETHYLHEXANOATE)** **0.1 - <1%**

CAS number: 136-52-7 EC number: 205-250-6

M factor (Acute) = 1

**Classification**
Eye Irrit. 2 - H319
Skin Sens. 1 - H317
Repr. 1B - H360Fd
Aquatic Acute 1 - H400
Aquatic Chronic 3 - H412

The full text for all hazard statements is displayed in Section 16.

**Composition comments** The data shown are in accordance with the latest EC Directives.

**Ingredient notes** Substances presenting a health or environmental hazard within the meaning of Regulation (EC) No. 1272/2008, assigned a Community workplace exposure limit, classified as PBT/vPvB or included in the Candidate List.

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

**General information** 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.

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**Inhalation** Remove to fresh air, keep patient warm and at rest.
If breathing is irregular or stopped, administer artificial respiration.

**Ingestion** If accidentally swallowed rinse the mouth with plenty of water (only if the person is conscious) and obtain immediate medical attention.
Keep at rest. Do NOT induce vomiting.

**Skin contact** Remove contaminated clothing.
Wash skin thoroughly with soap and water or use recognised skin cleanser.
Do NOT use solvents or thinners.

**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.

### 4.2. Most important symptoms and effects, both acute and delayed

**Inhalation** In case of overexposure, organic solvents may depress the central nervous system causing dizziness and intoxication, and at very high concentrations unconsciousness and death.

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

**Skin contact** Prolonged or repeated contact with skin may cause soreness, irritation or dry skin due to a defatting action.

**Eye contact** The liquid splashed in the eyes may cause irritation and reversible damage.

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

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

**Suitable extinguishing media** recommended: alcohol resistant foam, CO2, powders, water spray/mist

**Unsuitable extinguishing media** Do not use water jet as an extinguisher, as this will spread the fire.

### 5.2. Special hazards arising from the substance or mixture

**Specific hazards** Fire will produce dense black smoke.
Exposure to decomposition products may cause a health hazard.
Appropriate breathing apparatus may be required.

**Hazardous combustion products** Protection against nuisance dust must be used when the airborne concentration exceeds 10 mg/m³. Oxides of carbon. Oxides of nitrogen.

### 5.3. Advice for firefighters

**Protective actions during firefighting** Cool closed containers exposed to fire with water.
Do not allow run-off from fire fighting to enter drains or water courses.

**Special protective equipment for firefighters** Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing.

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

**Personal precautions** Exclude sources of ignition and ventilate the area.
Avoid breathing vapours.
Refer to protective measures listed in sections 7 and 8.

### 6.2. Environmental precautions

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

### 6.3. Methods and material for containment and cleaning up

**Methods for cleaning up** Contain and collect spillage with non-combustible absorbent materials, e.g. sand, earth, vermiculite, diatomaceous earth and place in container for disposal according to local regulations (see section 13).
Clean preferably with a detergent - avoid use of solvents.

### 6.4. Reference to other sections

**Reference to other sections** For personal protection, see Section 8. For waste disposal, see section 13.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

**Usage precautions** The Manual Handling Operations Regulations may apply to the handling of containers of this product. To assist employers, the following method of calculating the weight for any pack size is given. Take the pack size volume in litres and multiply this figure by the specific gravity value given in Section 9. This will give the net weight of the coating in kilograms. Allowance will then have to be made for the immediate packaging to give an approximate gross weight.
Prevent the creation of flammable or explosive concentrations of vapour in air and avoid vapour concentration 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 anti-static footwear clothing, floors should be of conducting type.
Isolate from sources of heat, sparks and open flame. Non-sparking tools should be used.
Avoid skin and eye contact. Avoid inhalation of dust from sanding.
Avoid the inhalation of dust, particulates and spray mist arising from the application.
Smoking, eating and drinking should be prohibited in application area.
For personal protection see Section 8.
Never use pressure to empty: container is not a pressure vessel.
Always keep in containers of same material as the original one.
Comply with the health and safety at work laws.
Do not allow to enter drains or water courses. Wash hands before eating and before leaving the site.
Remove contaminated clothing and protective equipment before entering eating areas.
Information on fire and explosion protection.
Vapours are heavier than air and may spread along floors.Vapours may form explosive mixtures with air. Materials such as cleaning rags, paper wipes and protective clothing, which are contaminated with the product may spontaneously self-ignite some hours later. To avoid the risks of fires, all contaminated materials, preferably soaked with water, should be stored in purpose-built containers or in metal containers with tight-fitting self-closing lids.
Contaminated materials should be removed from the workplace at the end of each working day and be stored outside.

### 7.2. Conditions for safe storage, including any incompatibilities

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**Storage precautions** Store in accordance with the Dangerous Substances and Explosive Atmospheres Regulations (DSEAR). Notes on joint storage.
Store away from oxidising agents, from strongly alkaline and strongly acid materials as well of amines, alcohols and water. Additional information on storage conditions
Observe label precautions.
Store between 5 and 25 °C in a dry, well ventilated place away from sources of heat and direct sunlight.
Keep container tightly closed.
Keep away from sources of ignition.
No smoking.
Prevent unauthorised access.
Containers which are opened must be carefully resealed and kept upright to prevent leakage.

### 7.3. Specific end use(s)

**Specific end use(s)** The identified uses for this product are detailed in Section 1.2.

## SECTION 8: Exposure controls/Personal protection

### 8.1. Control parameters

#### Occupational exposure limits

**HYDROCARBONS, C9 - C11. n-alkanes, isoalkanes,cyclics,<2% aromatics**

Long-term exposure limit (8-hour TWA): SUP 150 ppm 1000 mg/m³

**XYLENE**

Long-term exposure limit (8-hour TWA): WEL 50 ppm 220 mg/m³
Short-term exposure limit (15-minute): WEL 100 ppm 441 mg/m³
Sk

**2-ETHYL-HEXANOIC ACID, ZIRCONIUM SALT**

Long-term exposure limit (8-hour TWA): WEL 5 mg/m³ as Zr
Short-term exposure limit (15-minute): WEL 10 mg/m³ as Zr

**COBALT BIS(2-ETHYLHEXANOATE)**

Long-term exposure limit (8-hour TWA): WEL 0.1 mg/m3(Sen)
as Co

WEL = Workplace Exposure Limit.
Sk = Can be absorbed through the skin.

**Ingredient comments** According to EH40 - List of approved workplace exposure limits. For dust the 8 hour TWA's are:-
Respirable dust 4 mg/cu.m (WEL)
Total inhalable dust 10 mg/cu.m (WEL)

#### HYDROCARBONS, C9 - C11. n-alkanes, isoalkanes,cyclics,<2% aromatics (CAS: 1174522-20-3)

**DNEL** Professional - Inhalation; Long term : 871 (8 hr) mg/m³
Professional - Dermal; Long term : 77 mg/kg/day
Consumer - Inhalation; Long term : 185 mg/m³
Consumer - Dermal; Long term : 46 mg/kg/day
Consumer - Oral; Long term : 46 mg/kg/day

#### XYLENE (CAS: 1330-20-7)

**Biological limit values** 650 mmol methyl hippuric acid/mol creatinine in urine. Post shift sampling

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**DNEL**

Industry - Inhalation; Short term systemic effects: 289 mg/m³
Industry - Inhalation; Long term systemic effects: 77 mg/m³
Industry - Inhalation; Short term local effects: 289 mg/m³
Industry - Inhalation; Long term local effects: 77 mg/m³
Industry - Dermal; Short term systemic effects: 174 mg/m³
Consumer - Inhalation; Long term systemic effects: 14.8 mg/m³
Consumer - Inhalation; Short term local effects: 174 mg/m³
Consumer - Inhalation; Short term systemic effects: 174 mg/m³
Consumer - Dermal; Long term systemic effects: 108 mg/kg/day
Consumer - Oral; Long term systemic effects: 1.6 mg/kg/day

**PNEC**

- Fresh water; 0.327 mg/l
- marine water; 0.327 mg/l
- Intermittent release; 0.327 mg/l
- Sediment (Freshwater); 12.46 mg/kg
- Sediment (Marinewater); 12.46 mg/kg
- Soil; 2.31 mg/kg
- STP; 6.58 mg/l

### HYDROCARBONS, C10 - C13, n-ALKANES, ISOALKANES, CYCLICS, <2% AROMATICS (CAS: 64742-48-9)

**DNEL**

No data available.

**PNEC**

No data available.

### 2-ETHYL-HEXANOIC ACID, ZIRCONIUM SALT (CAS: 22464-99-9)

**DNEL**

Industry - Inhalation; Long term systemic effects: 5 mg/m³
Industry - Dermal; Long term systemic effects: 15.75 mg/kg/day
Consumer - Inhalation; Long term systemic effects: 2.5 mg/m³
Consumer - Dermal; Long term systemic effects: 7.9 mg/kg/day
Consumer - Oral; Long term systemic effects: 7.9 mg/kg/day

**PNEC**

- Fresh water; 0.36 mg/l
- marine water; 0.036 mg/l
- Intermittent release; 0.493 mg/l
- STP; 71.7 mg/l
- Sediment (Freshwater); 6.37 mg/kg
- Sediment (Marinewater); 0.637 mg/kg
- Soil; 1.06 mg/kg

### COBALT BIS(2-ETHYLHEXANOATE) (CAS: 136-52-7)

**DNEL**

Workers - Inhalation; Long term local effects: 235.1 µg/m3
General population - Inhalation; Long term local effects: 37 µg/m3
General population - Oral; Long term systemic effects: 27.6 µg/kg bw/day

**PNEC**

Fresh water; 0.00149 mg/l
marine water; 0.0069 mg/l
STP; 1.08 mg/l
Sediment (Freshwater); 27.8 mg/kg, dry weight (dw)
Sediment (Marinewater); 17.8 mg/l, dry weight (dw)
Soil; 123.1 mg/kg, dry weight (dw)

## 8.2. Exposure controls

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**Protective equipment**



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| **Safe use of mixture** | This Safety Data Sheet should be read in conjunction with the Safe Use of Mixture (SUMI) report referred to in Section 1. The SUMI provides information collated from exposure scenarios of substances relevant to this product and is provided as part of our obligations under REACH Regulations. |
| **Two-pack product protection** | Not applicable |
| **Appropriate engineering controls** | Provide adequate ventilation. Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction.<br>If these are not sufficient to maintain concentrations of solvent vapour below the OEL, suitable respiratory protection must be worn. Dry sanding, flame cutting and/or welding of the dry paint film may give rise to dust and/or hazardous fumes. Wet sanding should be used wherever possible. If exposure cannot be avoided by the provision of local exhaust ventilation, suitable respiratory protective equipment should be used. See Respiratory Equipment below. |
| **Personal protection** | Requirements for personal protection can only be determined by performing a risk assessment on a case-by-case basis prior to use. This risk assessment should be reviewed regularly. |
| **Eye/face protection** | Use safety eyewear, manufactured/tested to EN 166, and designed to protect against splash of liquids. |
| **Hand protection** | Wear chemical resistant gloves classified under "Standard EN374: Protective gloves against chemicals and micro-organisms" made from PE, PVA or Viton gloves.<br>The instructions and information provided by the glove manufacturer on use, storage, maintenance and replacement must be followed.<br>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.<br>Barrier creams may help to protect the exposed areas of the skin, they should however not be applied once exposure has occurred. |
| **Other skin and body protection** | Wear appropriate clothing to prevent any possibility of skin contact. Personnel should wear anti-static clothing made of natural fibre or of high temperature resistant synthetic fibre. |
| **Hygiene measures** | Provide eyewash station. Do not smoke in work area. Wash at the end of each work shift and before eating, smoking and using the toilet. Promptly remove any clothing that becomes contaminated. Use appropriate skin cream to prevent drying of skin. Do not eat, drink or smoke when using this product. |

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| **Respiratory protection** | Selection of any respiratory protective equipment should ensure that it is adequate to reduce exposure to protect the worker's health and is suitable for the wearer, task and environment, including consideration of the facial features of the wearer.<br>* Spraying should be undertaken outdoor or in a vented booth. As a minimum, workers should wear a full face respirator to EN136, fitted with a filter suitable for both particulates and vapours, with an assigned protection factor 20 (e.g. A2/P3). A powered full face respirator with combined filter A2/P3 (APF 40) or compressed air breathing apparatus should be worn if used continuously more than 1 hour. Respirators must be worn by anyone in the booth or room during spraying, gun cleaning (spray-to-dry) and throughout the clearance time, until such time as the particulates and solvent vapour concentration have fallen below the appropriate occupational exposure limits.<br>* Brush or roller applications should be carried out outdoor or in good ventilation areas with 10 to 15 air changes per hour or more. As a minimum, a half face mask respirator with combined filter A2/P3 (APF 20) should be worn. A powered full face respirator with combined filter A2/P3 (APF 40) should be used, if used for more than 1 hour continuously as half face powered respirator are not recommended.<br>* For other operations: If workers could be exposed to concentration above the exposure limit or where ventilation is poor, they must use a respirator, fitted with a filter suitable for both particulates and vapours, with an assigned protection factor of at least 10 (e.g. A2/P3).<br>* Enclosed spaces with little or no ventilation: compressed air breathing apparatus should always be worn.<br>* Respiratory protection should not be removed until the particulate and solvent vapour concentrations have fallen below the occupational exposure limits or the operator has entered a clean air area.<br>* Fit testing and regular servicing is recommended for all respiratory protective equipment.<br>* The use of HSE website is strongly recommended in selecting the most appropriate RPE http://www.healthyworkinglives.com/rpe-selector |
| **Environmental exposure controls** | Do not allow to enter drains or water courses. |

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

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|---|---|
| **Appearance** | Viscous liquid. |
| **Colour** | Various |
| **Odour** | Naphthenic |
| **Odour threshold** | Not determined. |
| **pH** | Not determined. |
| **Melting point** | <-20°C |
| **Initial boiling point and range** | 145 - 200°C @ 760 mm Hg |
| **Flash point** | 38 - 40°C Setaflash closed cup. |
| **Evaporation rate** | 0.11 |
| **Flammability (solid, gas)** | Material is not a solid or gas |
| **Upper/lower flammability or explosive limits** | Lower flammable/explosive limit: 0.6 % Upper flammable/explosive limit: 8 % |
| **Vapour pressure** | 0.21 kPa @ °C |
| **Vapour density** | Heavier than air |

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| | |
|---|---|
| **Relative density** | 0.9 - 1.2 @ 20°C |
| **Solubility(ies)** | Immiscible with water. |
| **Partition coefficient** | Not determined. |
| **Auto-ignition temperature** | 230 - 270°C |
| **Decomposition Temperature** | Not determined. |
| **Viscosity** | 350 - 450 mPa•s, Rotothinner @ 20°C |
| **Explosive properties** | The product itself is not explosive, but the formation of an explosible mixture of vapour or dust with air is possible. |
| **Oxidising properties** | The product is not expected to be oxidising |

### 9.2. Other information

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|---|---|
| **Volatile organic compound** | This product contains a maximum VOC content of 420 g/litre. |

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

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|---|---|
| **Reactivity** | Stable under recommended storage and handling conditions (see section 7).<br>When exposed to high temperatures may produce hazardous decomposition products. |

### 10.2. Chemical stability

| | |
|---|---|
| **Stability** | Stable under recommended storage and handling conditions (see section 7). |

### 10.3. Possibility of hazardous reactions

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|---|---|
| **Possibility of hazardous reactions** | Keep away from oxidising agents, strongly alkaline and strongly acid materials |

### 10.4. Conditions to avoid

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|---|---|
| **Conditions to avoid** | Avoid heat, flames and other sources of ignition. When exposed to high temperatures may produce hazardous decomposition products. |

### 10.5. Incompatible materials

| | |
|---|---|
| **Materials to avoid** | Keep away from oxidising agents, strongly alkaline and strongly acid materials |

### 10.6. Hazardous decomposition products

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|---|---|
| **Hazardous decomposition products** | such as carbon monoxide and dioxide, smoke, oxides of nitrogen etc. |

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

#### Acute toxicity - dermal

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|---|---|
| **ATE dermal (mg/kg)** | 65,232.85 |

#### Acute toxicity - inhalation

| | |
|---|---|
| **ATE inhalation (gases ppm)** | 397,327.35 |
| **ATE inhalation (vapours mg/l)** | 66.9 |
| **ATE inhalation (dusts/mists mg/l)** | 593.03 |

#### Skin corrosion/irritation

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|---|---|
| **Skin corrosion/irritation** | Repeated exposure may cause skin dryness or cracking. |

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**Serious eye damage/irritation**

**Serious eye damage/irritation** Based on available data the classification criteria are not met.

**Respiratory sensitisation**

**Respiratory sensitisation** Based on available data the classification criteria are not met.

**Skin sensitisation**

**Skin sensitisation** Contains COBALT BIS(2-ETHYLHEXANOATE). May produce an allergic reaction.

**Germ cell mutagenicity**

**Genotoxicity - in vitro** Based on available data the classification criteria are not met.

**Genotoxicity - in vivo** Based on available data the classification criteria are not met.

**Carcinogenicity**

**Carcinogenicity** Based on available data the classification criteria are not met.

**Reproductive toxicity**

**Reproductive toxicity - fertility** Based on available data the classification criteria are not met.

**Reproductive toxicity - development** Based on available data the classification criteria are not met.

**Specific target organ toxicity - single exposure**

**STOT - single exposure** Vapours may cause drowsiness and dizziness.

**Target organs** Central nervous system

**Specific target organ toxicity - repeated exposure**

**STOT - repeated exposure** Based on available data the classification criteria are not met.

**Aspiration hazard**

**Aspiration hazard** Based on available data the classification criteria are not met.

**General information** There are no data available on the mixture itself. The mixture has been assessed following the method according to the "Classification, labelling and packaging of substances and mixtures" EC 1272/2008 and ensuing amendments and classified for toxicological hazards accordingly. See sections 2 and 3 for details.

**Inhalation** Exposure to component solvent vapours concentration 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 kidney, liver and central nervous system.

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

**Skin contact** Acts as a defatting agent on skin. May cause cracking of skin, and eczema. The product contains a small amount of sensitising substance which may provoke an allergic reaction among sensitive individuals after repeated contact.

**Eye contact** Irritating to eyes. Symptoms following overexposure may include the following: Redness. Pain. The liquid splashed in the eyes may cause irritation and reversible damage.

**Route of exposure** 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.

**Medical symptoms** 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.

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**Medical considerations** 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.

**Toxicological information on ingredients.**

**HYDROCARBONS, C9 - C11. n-alkanes, isoalkanes,cyclics,<2% aromatics**

**Acute toxicity - oral**

| | |
|---|---|
| **Acute toxicity oral ($LD_{50}$ mg/kg)** | 5,000.0 |
| **Species** | Rat |
| **ATE oral (mg/kg)** | 5,000.0 |

**Acute toxicity - dermal**

| | |
|---|---|
| **Acute toxicity dermal ($LD_{50}$ mg/kg)** | 5,000.0 |
| **Species** | Rabbit |
| **ATE dermal (mg/kg)** | 5,000.0 |

**Acute toxicity - inhalation**

| | |
|---|---|
| **Acute toxicity inhalation ($LC_{50}$ vapours mg/l)** | 13.1 |
| **Species** | Rat |
| **ATE inhalation (vapours mg/l)** | 13.1 |

**Skin corrosion/irritation**

| | |
|---|---|
| **Animal data** | Prolonged skin contact may defat the skin and produce dermatitis. |

**Serious eye damage/irritation**

| | |
|---|---|
| **Serious eye damage/irritation** | Slightly irritating. |

**Respiratory sensitisation**

| | |
|---|---|
| **Respiratory sensitisation** | No information available. |

**Skin sensitisation**

| | |
|---|---|
| **Skin sensitisation** | Not sensitising. |

**Germ cell mutagenicity**

| | |
|---|---|
| **Genotoxicity - in vitro** | Ames test: Negative. Chromosome aberration: Negative. Gene mutation: Negative. |
| **Genotoxicity - in vivo** | Micronucleus test: Negative. |

**Carcinogenicity**

| | |
|---|---|
| **Carcinogenicity** | Not expected to be carcinogenic. |

**Reproductive toxicity**

| | |
|---|---|
| **Reproductive toxicity - fertility** | By analogy with comparable product: Animal testing did not show any effects on fertility Parental Toxicity - LOAEL 1500 mg/kg/day, , Fertility - NOAEL 1500 mg/kg/day, Oral, Rat |

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|---|---|
| **Reproductive toxicity - development** | Developmental toxicity: - NOAEL: 5.22 mg/l, , Maternal toxicity: - NOAEL: >=5.22 mg/l, Inhalation, Rat |

**Specific target organ toxicity - single exposure**

| | |
|---|---|
| **STOT - single exposure** | Central nervous system depression including narcotic effects such as drowsiness, narcosis, reduced alertness, loss of reflexes, lack of coordination and vertigo. |
| **Target organs** | Central nervous system Kidneys |

**Specific target organ toxicity - repeated exposure**

| | |
|---|---|
| **STOT - repeated exposure** | By analogy with comparable product: Based on available data , the classification criteria are not met. NOAEL >=11.6 mg/l, Inhalation, Rat |

**Aspiration hazard**

| | |
|---|---|
| **Aspiration hazard** | If swallowed accidentally, the product may enter the lungs due to its low viscosity and lead to the rapid development of very serious inhalation pulmonary lesions (medical survey during 48 hours) |

| | |
|---|---|
| **Inhalation** | Vapours have a narcotic effect. Symptoms following overexposure may include the following: Headache. Fatigue. Dizziness. Nausea, vomiting. |
| **Ingestion** | If swallowed accidentally, the product may enter the lungs due to its low viscosity and lead to the rapid development of very serious inhalation pulmonary lesions (medical survey during 48 hours) |
| **Skin contact** | Prolonged contact may cause dryness of the skin. |
| **Eye contact** | May cause temporary eye irritation. |

**XYLENE**

**Acute toxicity - oral**

| | |
|---|---|
| **Acute toxicity oral ($LD_{50}$ mg/kg)** | 3,523.0 |
| **Species** | Rat |
| **ATE oral (mg/kg)** | 3,523.0 |

**Acute toxicity - dermal**

| | |
|---|---|
| **Acute toxicity dermal ($LD_{50}$ mg/kg)** | 4,200.0 |
| **Species** | Rabbit |
| **ATE dermal (mg/kg)** | 1,100.0 |

**Acute toxicity - inhalation**

| | |
|---|---|
| **Acute toxicity inhalation ($LC_{50}$ gases ppmV)** | 6,700.0 |
| **Species** | Rat |
| **Acute toxicity inhalation ($LC_{50}$ vapours mg/l)** | 27.6 |
| **Species** | Rat |

# 1 PACK POLYURETHANE (General colours)

| | |
|---|---|
| **Acute toxicity inhalation ($LC_{50}$ dust/mist mg/l)** | 10.0 |
| **Species** | Rat |
| **ATE inhalation (gases ppm)** | 6,700.0 |
| **ATE inhalation (vapours mg/l)** | 27.6 |
| **ATE inhalation (dusts/mists mg/l)** | 10.0 |

**Skin corrosion/irritation**

| | |
|---|---|
| **Animal data** | Dose: 24 and, 72 hours, Rabbit Irritating to skin. |

**Serious eye damage/irritation**

| | |
|---|---|
| **Serious eye damage/irritation** | Causes serious eye irritation. |

**Respiratory sensitisation**

| | |
|---|---|
| **Respiratory sensitisation** | Not sensitising |

**Skin sensitisation**

| | |
|---|---|
| **Skin sensitisation** | - Mouse: Not sensitising. |

**Germ cell mutagenicity**

| | |
|---|---|
| **Genotoxicity - in vitro** | Chromosome aberration: Negative. Ames test: Negative. Gene mutation: Negative. |
| **Genotoxicity - in vivo** | Dominant lethal assay, intraperitoneal: Negative. |

**Carcinogenicity**

| | |
|---|---|
| **Carcinogenicity** | NOAEL 500 mg/kg, Oral, Rat, male/female Did not show carcinogenic effects in animal experiments. |
| **IARC carcinogenicity** | IARC Group 3 Not classifiable as to its carcinogenicity to humans. |

**Reproductive toxicity**

| | |
|---|---|
| **Reproductive toxicity - fertility** | One-generation study - NOAEL >=500 ppm, Inhalation, Rat, male/female P Two-generation study - NOAEL 500 ppm, Inhalation, Rat, male/female P Two-generation study - NOAEL >500 ppm, Inhalation, male/female F1 Two-generation study - NOAEL >500 ppm, Inhalation, Rat, male/female F2 This substance has no evidence of toxicity to reproduction. |
| **Reproductive toxicity - development** | Maternal toxicity: - NOAEL: 500 ppm, Inhalation, Rat, female |

**Specific target organ toxicity - single exposure**

| | |
|---|---|
| **STOT - single exposure** | May cause respiratory irritation. |
| **Target organs** | Central nervous system Liver Kidneys |

**Specific target organ toxicity - repeated exposure**

| | |
|---|---|
| **STOT - repeated exposure** | NOAEL 150 mg/kg, (3 months), Oral, Rat NOAEL >3.5 mg/l, (3 months), Inhalation, Rat, Dog |
| **Target organs** | Kidneys Liver |

# 1 PACK POLYURETHANE (General colours)

**Aspiration hazard**

| | |
|---|---|
| **Aspiration hazard** | Aspiration hazard - Category 1 If swallowed accidentally, the product may enter the lungs due to its low viscosity and lead to the rapid development of very serious inhalation pulmonary lesions (medical survey during 48 hours) |

**HYDROCARBONS, C10 - C13, n-ALKANES, ISOALKANES, CYCLICS, <2% AROMATICS**

**Acute toxicity - oral**

| | |
|---|---|
| **Acute toxicity oral ($LD_{50}$ mg/kg)** | 15,001.0 |
| **Species** | Rat |
| **ATE oral (mg/kg)** | 15,001.0 |

**Aspiration hazard**

| | |
|---|---|
| **Aspiration hazard** | Aspiration hazard - Category 1 May be fatal if swallowed and enters airways. |

| | |
|---|---|
| **Ingestion** | Harmful if swallowed. Irritating to mouth, throat and stomach. |
| **Skin contact** | The product is irritating to eyes and skin. May cause an allergic skin reaction. |
| **Eye contact** | Causes serious eye irritation. |

**2-ETHYL-HEXANOIC ACID, ZIRCONIUM SALT**

**Skin corrosion/irritation**

| | |
|---|---|
| **Animal data** | Erythema/eschar score: No erythema (0). (rabbit) Oedema score: No oedema (0). (rabbit) Not irritating. |

**Serious eye damage/irritation**

| | |
|---|---|
| **Serious eye damage/irritation** | Not irritating. (rabbit) |

**Respiratory sensitisation**

| | |
|---|---|
| **Respiratory sensitisation** | No specific test data are available. |

**Skin sensitisation**

| | |
|---|---|
| **Skin sensitisation** | Not sensitising. Guinea pig maximisation test Read-across data. |

**Germ cell mutagenicity**

| | |
|---|---|
| **Genotoxicity - in vitro** | Chromosome aberration: Negative. Read-across data. |
| **Genotoxicity - in vivo** | Micronucleus test: Negative. Read-across data. |

**Reproductive toxicity**

| | |
|---|---|
| **Reproductive toxicity - fertility** | One-generation study - NOAEL 300 mg/kg/day, Oral, Rat P Read across data |
| **Reproductive toxicity - development** | Developmental toxicity: - NOAEL: 100 mg/kg/day, Oral, Rat Read-across data. Maternal toxicity: - NOAEL: 250 mg/kg/day, Oral, Rat Read-across data. |

**Specific target organ toxicity - repeated exposure**

| | |
|---|---|
| **STOT - repeated exposure** | NOAEL 3150 - 7080 mg/kg/day, Oral, Rat Read-across data. |

**COBALT BIS(2-ETHYLHEXANOATE)**

# 1 PACK POLYURETHANE (General colours)

**Acute toxicity - oral**

| | |
|---|---|
| **Acute toxicity oral ($LD_{50}$ mg/kg)** | 3,129.0 |
| **Species** | Rat |

**Acute toxicity - dermal**

| | |
|---|---|
| **Acute toxicity dermal ($LD_{50}$ mg/kg)** | 2,001.0 |
| **Species** | Rat |

## SECTION 12: Ecological information

**Ecotoxicity** There are no data available on the mixture itself. The mixture has been assessed following the method according to the "Classification, labelling and packaging of substances and mixtures" EC1272/2008 and ensuing amendments and is not classified as dangerous for the environment, but contains substance(s) dangerous for the environment. See section 3 for details. Do not allow to enter drains or water courses.

### 12.1. Toxicity

**Toxicity** There is no toxicity data for the mixture itself.

**Ecological information on ingredients.**

**HYDROCARBONS, C9 - C11. n-alkanes, isoalkanes,cyclics,<2% aromatics**

**Acute aquatic toxicity**

| | |
|---|---|
| **Acute toxicity - fish** | $LC_{50}$, 96 hours: > 1000 mg/l, Oncorhynchus mykiss (Rainbow trout)<br>OECD |
| **Acute toxicity - aquatic invertebrates** | $EC_{50}$, 48 hours: > 1000 mg/l, Daphnia magna<br>OECD |
| **Acute toxicity - aquatic plants** | $IC_{50}$, 72 hours: >1000 mg/l, Pseudokirchneriella subcapitata |
| **Acute toxicity - microorganisms** | $EC_{50}$, 48 hours: 43.98 mg/l, |

**Chronic aquatic toxicity**

| | |
|---|---|
| **Chronic toxicity - aquatic invertebrates** | NOEC, 21 days: 0.23 mg/l, Daphnia magna |

**XYLENE**

**Acute aquatic toxicity**

| | |
|---|---|
| **Acute toxicity - fish** | $LC_{50}$, 96 hours: 2.6 mg/l, Oncorhynchus mykiss (Rainbow trout) |
| **Acute toxicity - aquatic invertebrates** | $EC_{50}$, 24 hours: 1 mg/l, Daphnia magna |
| **Acute toxicity - aquatic plants** | $IC_{50}$, 72 hours: 2.2 mg/l, Freshwater algae, Pseudokirchneriella subcapitata<br>NOEC, 72 hours: 0.44 mg/l, Pseudokirchneriella subcapitata |
| **Acute toxicity - microorganisms** | $EC_{50}$, 24 hours: 96 mg/l, Bacteria |

**Chronic aquatic toxicity**

# 1 PACK POLYURETHANE (General colours)

| | |
|---|---|
| **Chronic toxicity - fish early life stage** | NOEC, 56 days: > 1.3 mg/l, Oncorhynchus mykiss (Rainbow trout) |
| **Chronic toxicity - aquatic invertebrates** | NOEC, 21 days: 1.57 mg/l, Daphnia magna |

**HYDROCARBONS, C10 - C13, n-ALKANES, ISOALKANES, CYCLICS, <2% AROMATICS**

**Acute aquatic toxicity**

| | |
|---|---|
| **Acute toxicity - fish** | LL0, 96 hours: 1000 mg/l, Oncorhynchus mykiss (Rainbow trout) |
| **Acute toxicity - aquatic invertebrates** | LL0, 48 hours: 1000 mg/l, Daphnia magna |
| **Acute toxicity - aquatic plants** | NOELR, 72 hours: 1000 mg/l, Pseudokirchneriella subcapitata<br>QSAR prediction |
| **Acute toxicity - microorganisms** | EL50, 48 hours: >1000 mg/l, Tetrahymena pyriformis |

**Chronic aquatic toxicity**

| | |
|---|---|
| **Chronic toxicity - fish early life stage** | NOELR, 28 days: 0.1 mg/l, Onchorhynchus mykiss (Rainbow trout) |
| **Chronic toxicity - aquatic invertebrates** | NOELR, 21 days: 0.18 mg/l, Daphnia magna |

**2-ETHYL-HEXANOIC ACID, ZIRCONIUM SALT**

**Acute aquatic toxicity**

| | |
|---|---|
| **Acute toxicity - fish** | NOELR, 96 hours: >=100 mg/l, Brachydanio rerio (Zebra Fish) |
| **Acute toxicity - aquatic invertebrates** | NOEC, 48 hours: 0.17 mg/l, Daphnia magna |
| **Acute toxicity - aquatic plants** | $EC_{50}$, 72 hours: 49.3 mg/l, Desmodesmus subspicatus |
| **Acute toxicity - microorganisms** | $EC_{50}$, 17 hours: 112.1 mg/l, Pseudomonas putida |

**COBALT BIS(2-ETHYLHEXANOATE)**

**Acute aquatic toxicity**

| | |
|---|---|
| **$LE(C)_{50}$** | 0.1 < L(E)C50 ≤ 1 |
| **M factor (Acute)** | 1 |
| **Acute toxicity - fish** | , : 1.5 mg/l, |

## 12.2. Persistence and degradability

**Persistence and degradability** There is no data for the mixture itself.

**Ecological information on ingredients.**

**HYDROCARBONS, C9 - C11. n-alkanes, isoalkanes,cyclics,<2% aromatics**

| | |
|---|---|
| **Persistence and degradability** | 28 days - 80% readily biodegradable - OECD 301F |

# 1 PACK POLYURETHANE (General colours)

### XYLENE

**Persistence and degradability** Readily biodegradable

**Biodegradation** - Degradation % >60: 28 days
Readily biodegradable

### HYDROCARBONS, C10 - C13, n-ALKANES, ISOALKANES, CYCLICS, <2% AROMATICS

**Phototransformation** Not expected to be significant

**Biodegradation** Water - Degradation 80%: 28 days
Readily biodegradable

### 2-ETHYL-HEXANOIC ACID, ZIRCONIUM SALT

**Phototransformation** Water - $DT_{50}$ : 47.1 hours
Read-across data.

**Stability (hydrolysis)** Not hydrolysable
Read-across data.

**Biodegradation** Water - Degradation % 46.54: 10 days
Water - Degradation % 73.82: 28 days

## 12.3. Bioaccumulative potential

**Bioaccumulative potential** There is no data for the mixture itself.

**Partition coefficient** Not determined.

## Ecological information on ingredients.

### HYDROCARBONS, C9 - C11. n-alkanes, isoalkanes,cyclics,<2% aromatics

**Bioaccumulative potential** May accumulate in soil and water systems.

**Partition coefficient** log Pow: 5 - 6.7

### XYLENE

**Bioaccumulative potential** Not expected to bioaccumulate. BCF: 25.9,

**Partition coefficient** log Pow: 3.15

### HYDROCARBONS, C10 - C13, n-ALKANES, ISOALKANES, CYCLICS, <2% AROMATICS

**Bioaccumulative potential** No information available.

**Partition coefficient** No information available.

### 2-ETHYL-HEXANOIC ACID, ZIRCONIUM SALT

**Bioaccumulative potential** log Pow: 2.96, Read-across data.

## 12.4. Mobility in soil

**Mobility** The product is immiscible with water and will spread on the water surface. The product contains organic solvents which will evaporate easily from all surfaces.

## Ecological information on ingredients.

# 1 PACK POLYURETHANE (General colours)

**HYDROCARBONS, C9 - C11. n-alkanes, isoalkanes,cyclics,<2% aromatics**

**Mobility** The product contains organic solvents which will evaporate easily from all surfaces. In soil the product has only slight mobility and will partially evaporate The product has poor water-solubility.

**Surface tension** 0.0237 mN/m @ 25°C

**XYLENE**

**Mobility** The product contains volatile solvents which are immiscible with water and will evaporate into the atmosphere. In soil the product has only slight mobility and will partially evaporate

**HYDROCARBONS, C10 - C13, n-ALKANES, ISOALKANES, CYCLICS, <2% AROMATICS**

**Mobility** The product contains volatile solvents which are immiscible with water and will evaporate into the atmosphere. Not expected to partition to sediment and wastewater solids.

**2-ETHYL-HEXANOIC ACID, ZIRCONIUM SALT**

**Henry's law constant** 0.294 Pa m³/mol @ 25°C Read-across data.

### 12.5. Results of PBT and vPvB assessment

**Results of PBT and vPvB assessment** This product does not contain any substances classified as PBT or vPvB.

### 12.6. Other adverse effects

**Other adverse effects** Not determined.

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

**General information** Do not allow to enter drains or water courses or dispose of where ground or surface waters may be affected. Waste and emptied containers should be classified in accordance with The Environment Protection (Duty of Care) Regulations" (in England, Scotland, Wales or The Controlled Waste (Duty of Care) Regulations in Northern Ireland).

**Waste class** The European List of Wastes classification of this product, when disposed of as waste is:
Waste Code: Name of Waste (according to Decision 2000/532/EC):
08 01 11 Waste paint and varnish containing organic solvents or other dangerous substances
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. Using the information provided in this safety data sheet, advice should be obtained from the relevant environment agency whether the Hazardous Waste Regulations apply. Empty containers must be scrapped or reconditioned. Dispose of empty containers contaminated by the product in accordance with local or national legal provisions.

**Additional information**

## SECTION 14: Transport information

**General** This section contains basic classification information; specific information is not provided for all transport modes if not relevant for the product as supplied. Relevant modal regulations should be consulted if the product is transported onwards.

# 1 PACK POLYURETHANE (General colours)

**Road transport notes** VISCOUS FLAMMABLE LIQUID DEROGATION
In pack sizes less than 450 litres, under the terms of 2.2.3.1.5, this product is not subject to the provisions of ADR.

**Sea transport notes** VISCOUS FLAMMABLE LIQUID DEROGATION:
In pack sizes up to and including 30 litres, under the terms of 2.3.2.5, this product is not subject to the packaging, labelling and marking requirements of the IMDG Code, but both full documentation and placarding of cargo transport units is still required.

**Air transport notes** VISCOUS FLAMMABLE LIQUID DEROGATION:
The "viscosity exemption" provision does not apply to air transport.

## 14.1. UN number

UN 1263

## 14.2. UN proper shipping name

PAINT

## 14.3. Transport hazard class(es)

3

**ADR/RID label** 3

**Transport labels**




## 14.4. Packing group

PG III

## 14.5. Environmental hazards

**Environmentally hazardous substance/marine pollutant**
No.

## 14.6. Special precautions for user

Transport within the 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 accident or spillage.

**EmS** F-E, S-E

**Tunnel restriction code** (D/E)

## 14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code** Not relevant.

## SECTION 15: Regulatory information

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

# 1 PACK POLYURETHANE (General colours)

**EU legislation**

Waste Framework Directive (Directive 2008/98/EC on waste) and amendments

Directive 2004/42/EC on Volatile Organic Compounds (VOC)
ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road.

**Paints Directive 2004/42/EC** 2004/42/IIB(d)(420)420

### 15.2. Chemical safety assessment

No Chemical Safety Assessment has been carried out for this mixture by the supplier.

## SECTION 16: Other information

| | |
|---|---|
| **General information** | The product should not be used for purposes other than those shown in Section 1. |
| **Key literature references and sources for data** | Raw material supplier's Safety Data Sheets. Reference to ECHA Registered Substance dossiers. |
| **Classification procedures according to SI 2019 No. 720** | Unless indicated elsewhere in this safety data sheet, the classification of this mixture has been determined using a combination of test data, bridging principles and calculation. |
| **Legal obligations** | |
| **Revision comments** | Formulation adjusted to meet the requirement of the 15th ATP |
| **Issued by** | Chief Chemist |
| **Revision date** | 11/01/2022 |
| **Revision** | CLP 1.04 |
| **Supersedes date** | 18/11/2020 |
| **SDS number** | 10517 |
| **Hazard statements in full** | H226 Flammable liquid and vapour.<br>H304 May be fatal if swallowed and enters airways.<br>H312 Harmful in contact with skin.<br>H315 Causes skin irritation.<br>H317 May cause an allergic skin reaction.<br>H319 Causes serious eye irritation.<br>H332 Harmful if inhaled.<br>H335 May cause respiratory irritation.<br>H336 May cause drowsiness or dizziness.<br>H360Fd May damage fertility. Suspected of damaging the unborn child.<br>H361 Suspected of damaging fertility or the unborn child.<br>H373 May cause damage to organs through prolonged or repeated exposure.<br>H400 Very toxic to aquatic life.<br>H412 Harmful to aquatic life with long lasting effects.<br>EUH208 Contains COBALT BIS(2-ETHYLHEXANOATE). May produce an allergic reaction. |

The information of this SDS is based on the present state of our knowledge and on current legislation.
It provides guidance on health, safety and environmental aspects of the product and should not be construed as any guarantee of technical performance or suitability for particular applications.
The product should not to be used for purposes other than those shown in section 1 without first referring to the supplier and obtaining written handling instructions.
As the specific conditions of use of the product are outside the supplier's control, the user is responsible for ensuring that the requirements of relevant legislation are complied with.
The information in this safety data sheet does not constitute the user's own assessment of workplace risks as required by other health and safety legislation.

# Manor Coating Systems Limited
# Safe Use of Mixtures Report

**Our SUMI Code: F**
**Version Number: 1.00**
**Issue Date: 13/09/2017**

**Purpose**
This Safe Use of Mixtures Report has been compiled from information (including exposure scenarios) that we have received from our suppliers. We are obligated to pass information that is relevant to the safe use of our products (when they are used for their intended purpose and in line with our recommendations shown on our Product Data Sheet) down the supply chain. In general we manufacture mixtures and do not supply substances so we have reviewed the information provided to us and produced this Safe Use of Mixtures Report which should be read in conjunction with the relevant material safety Data Sheet and Product Data Sheet, best practice, process knowledge and guidance notes from the HSE and others when preparing risk assessments and designing safe systems of work. This information is passed down the chain as part of our obligations under REACH.

This report is prepared with our best reasonable endeavour using the information and knowledge in our possession at the date of publication.

| | |
|---|---|
| **SU3 Title** | Uses in coatings - Industrial |
| **SU3 Process Category** | PROC1, PROC2, PROC3, PROC4, PROC5, PROC7, PROC8a, PROC8b, PROC10, PROC13, PROC15 |
| **SU3 Frequency and duration of use** | Covers daily exposures up to 8 hours (unless stated) |
| **SU3 Processes, tasks, activities covered** | Covers the use in coatings (paints, inks, adhesives, etc) including exposures during use (including materials receipt, storage, preparation and transfer from bulk and semi-bulk, application by spray, roller, spreader, dip, flow, fluidised bed on production lines and film formation) and equipment cleaning, maintenance and associated laboratory activities. |
| **SU3 Other Operational Conditions affecting worker exposure** | Assumes use at not > 20°C above ambient. Assumes a good basic standard of occupational hygiene is implemented. |
| **SU3 General exposures (closed systems)** | Handle substance within a closed system. |
| **SU3 Mixing operations (closed systems) General exposures (closed systems)** | Handle substance within a closed system. Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour). |
| **SU3 Film formation - air drying** | Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour). |
| **SU3 Preparation of material for application. Mixing operations (open systems)** | Provide a good standard of controlled ventilation (10 to 15 air changes per hour) |
| **SU3 Spraying** | Automatic/robotic: Carry out in a vented booth or extracted enclosure.<br>Manual Provide a good standard of controlled ventilation (10 to 15 air changes per hour). Wear a respirator conforming to EN140 with Type A/P2 filter or better. |
| **SU3 Material transfers. Non-dedicated facility** | Ensure material transfers are under containment or extract ventilation. |
| **SU3 Material transfers. Dedicated facility** | Ensure material transfers are under containment or extract ventilation. |

| | |
|---|---|
| **SU3 Roller, spreader, flow application** | Provide extract ventilation to points where emissions occur. |
| **SU3 Dipping, immersion and pouring** | Provide a good standard of controlled ventilation (10 to 15 air changes per hour). |
| **SU3 Laboratory activities** | No other specific measures identified. |
| **SU3 Material transfers. Drum/batch transfers. Transfer from/pouring from containers** | Provide a good standard of controlled ventilation (10 to 15 air changes per hour). Wear suitable gloves tested to EN374. Avoid splashing. Clear lines prior to decoupling. |
| **SU3 Production of preparation or articles by tabletting, compression, extrusion or pelletisation** | Provide a good standard of controlled ventilation (10 to 15 air changes per hour). Wear suitable coveralls to prevent exposure to the skin. |
| **SU3 Equipment cleaning and maintenance** | Drain or remove substance from equipment prior to break-in or maintenance. |
| **SU22 Title** | Uses in coatings - Professional |
| **SU22 Process Category** | PROC1, PROC2, PROC3, PROC4, PROC5, PROC8a, PROC8b, PROC10, PROC11, PROC13, PROC15, PROC19 |
| **SU22 Processes, tasks, activities covered** | Covers the use in coatings (paints, inks, adhesives, etc) including exposures during use (including materials receipt, storage, preparation and transfer from bulk and semi-bulk, application by spray, roller, spreader, dip, flow, fluidised bed on production lines and film formation) and equipment cleaning, maintenance and associated laboratory activities. |
| **SU22 Frequency and duration of use** | Covers daily exposures up to 8 hours (unless stated) |
| **SU22 Other Operational Conditions affecting worker exposure** | Assumes use at not > 20oC above ambient. Assumes a good basic standard of occupational hygiene is implemented. |
| **SU22 General exposures (closed systems)** | Handle substance within a closed system. Ensure material transfers are under containment or extract ventilation. |
| **SU22 Filling/preparation of equipment from drums or containers. Handle substance within a closed sys** | Ensure material transfers are under containment or extract ventilation. |
| **SU22 Preparation of material for application** | Handle substance within a closed system. Provide a good standard of controlled ventilation (10 to 15 air changes per hour). |
| **SU22 Film formation - air drying** | Outdoor.Ensure operation is undertaken outdoors. Avoid carrying out activities involving exposure for more than 1 hour. Wear suitable gloves tested to EN374. Indoor. Provide extract ventilation to points where emissions occur. Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour). |
| **SU22 Preparation of material for application.** | Indoor. Provide a good standard of controlled ventilation (10 to 15 air changes per hour). Avoid carrying out activities involving exposure for more than 1 hour. Outdoor. Ensure operation is undertaken outdoors. Avoid carrying out activities involving exposure for more than 1 hour. |
| **SU22 Material transfers. Drum/batch transfers** | Transfer via enclosed lines. Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour). Wear suitable gloves tested to EN374. Avoid splashing. Clear lines prior to decoupling. |

| | |
|---|---|
| **SU22 Brush, Roller, spreader, flow application** | Indoor. Provide a good standard of controlled ventilation (10 to 15 air changes per hour). Wear a respirator conforming to EN140 with Type A/P2 filter or better. Outdoor. Ensure operation is undertaken outdoors. Wear a respirator conforming to EN140 with Type A/P2 filter or better. |
| **SU22 Spraying. Manual** | Indoor. Carry out in a vented booth or extracted enclosure. Outdoor. Ensure operation is undertaken outdoors. Avoid carrying out activities involving exposure for more than 4 hours. Wear suitable gloves tested to EN374.Wear a respirator conforming to EN140 with Type A/P2 filter or better. |
| **SU22 Dipping, immersion and pouring.** | Indoor. Provide extract ventilation to points where emissions occur. Avoid carrying out activities involving exposure for more than 4 hours Outdoor. Ensure operation is undertaken outdoors. Wear a respirator conforming to EN140 with Type A/P2 filter or better. |
| **SU22 Laboratory activitie** | Handle in a fume cupboard or under extract ventilation. |
| **SU22 Equipment cleaning and maintenance** | Drain down system prior to equipment break-in or maintenance. Avoid carrying out activities involving exposure for more than 4 hours. |
| **SU22 Equipment cleaning and maintenance** | Drain down system prior to equipment break-in or maintenance. Avoid carrying out activities involving exposure for more than 4 hours. |

**Sectors of Use (SU) and Process Codes (PROC)**
Sectors of Use (SU) and Process Codes (PROC) are defined in various regulations.

For the paint industry
SU 3 - Industrial Use of Coatings (eg within a factory on a production line)
SU22 - Use of Coatings by Professional Users (eg a painter and decorator)
Are the most relevant

**Method of Preparation**
In preparing this Safe Use of Mixtures Report we have relied heavily on the LCID. Specifically contained in Safe Use Information for Mixtures under REACH and the Lead Component (LCID) Methodology - A Brief Description (March 2016) published by CEFIC and their supporting spreadsheets published in 2017.

This approach has been endoursed by the European paint association (CEPE) and the British Coatings Federation (BCF).

The CEFIC approach uses information published by suppliers and in generally available sources including DNELs and PNECs and ECETOC-TRA data.

**Further advice, support or assistance**
If you require further advice, information, support or assistance please contact us.

**Lead Component Identifcation (LCID) information**

| | |
|---|---|
| LC INHALATION | XYLENE |
| LC DERMAL | HYDROCARBONS, C9 - C11, n-alkanes, isoalkanes, cyclics, <2% aromatics |
| EYE HAZ 1 | XYLENE |