

## GELCOAT ISO BRUSH BRIGHT BLUE

|                       |                                                                  |
|-----------------------|------------------------------------------------------------------|
| <b>Product Name:</b>  | <b>Gelcoat ISO Brush Bright Blue</b><br><b>1570453 Rev. 1</b>    |
| <b>Revision Date:</b> | 05-Sep-2023<br><b>According to Regulation (EC) No. 1907/2006</b> |

### 1. Identification of the substance/mixture and of the company/undertaking

#### 1.1. Product Identifier

|                                |                                   |
|--------------------------------|-----------------------------------|
| <b>Product Name:</b>           | Gelcoat ISO Brush Bright Blue     |
| <b>Chemical Name:</b>          | Gel Coat Polyester for Composites |
| <b>Pure Substance/Mixture:</b> | Mixture                           |

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

To form a protective and decorative layer for GRP composites. Contact us before using for food contact application.

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

##### Tricel Composites (GB) Limited

Unit A, Foxway,  
Off Atkinson Street,  
Leeds, West Yorkshire,  
LS10 1PS.  
Tel: +44 (0)113 270 3133

##### Tricel Composites (NI) Limited

Unit 4, Milltown Ind. Estate, Greenan  
Road. Warrenpoint, Newry  
Co. Down,  
BT34 3FN.  
Tel: +44 (0)284 175 3738

## 1.4. Emergency Telephone Number

| Leeds:                                           | Newry:                                           |
|--------------------------------------------------|--------------------------------------------------|
| Tel: +44 (0)113 270 3133<br>(office hours 9-5pm) | Tel: +44 (0)284 175 3738<br>(office hours 9-5pm) |

**UK:** National Poisons Emergency Number: 0344 892 0111 (for healthcare professionals use only). NHS public service number NHS 111.

**Ireland:** Emergency medical information: 8am-10pm (7 days) contact National Poisons Information Centre, Beaumont Hospital, Dublin 9 DOV2NO, Ireland. Telephone Healthcare Professionals: +353 (01) 809 2566. (24-hour service) & Telephone Members of Public: +353 (01) 809 2166. (8.00 a.m. to 10.00 p.m. 7 days a week)

## 2. Hazards Identification

### 2.1. Classification of the substance or mixture

**Classification of the substance or mixture - GHS/CLP (n° 1272/2008)**

|                                                    |                      |
|----------------------------------------------------|----------------------|
| Skin Corrosion/Irritation                          | Category 2 - (H315)  |
| Serious Eye Damage/Eye Irritation                  | Category 2 - (H319)  |
| Reproductive Toxicity                              | Category 2 - (H361d) |
| Specific Target Organ Toxicity (Single Exposure)   | Category 3 - (H335)  |
| Specific target organ toxicity - repeated exposure | Category 1 - (H372)  |
| Chronic Aquatic Toxicity                           | Category 3 - (H412)  |
| Flammable liquids                                  | Category 3 - (H226)  |

## 2.2. Label elements



**Signal Word:** Danger

**Contains:** Styrene

### 2.2.1. Hazard Statements

H315 – Causes skin irritation

H319 – Causes serious eye irritation

H335 – May cause respiratory irritation

H361d – Suspected of damaging the unborn child

H372 – Causes damage to organs through prolonged or repeated exposure if inhaled

H412 – Harmful to aquatic life with long lasting effects

Physical hazards

H226 – Flammable liquid and vapour

### EU H –Phrases

EUH208 – Contains phthalic anhydride, cobalt octoate. May produce an allergic reaction

### 2.2.2. Precautionary Statements

P210 – Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking

P243 – Take action to prevent static discharges

P260 – Do not breathe vapour

P273 – Avoid release to the environment

P280 – Wear protective gloves/protective clothing/eye protection/face protection

P302 + P352 – IF ON SKIN: Wash with plenty of soap and water

P304 + P340 – IF INHALED: Remove person to fresh air and keep comfortable for breathing

P305 + P351 + P338 – IF IN EYES: Rinse cautiously with water for several minutes.

Remove contact lenses, if present and easy to do. Continue rinsing

P403 + P233 – Store in a well-ventilated place. Keep container tightly closed

## 2.3. Other Hazards

PBT/vPvB see section 12.5.

## 3. Composition/Information on Ingredients

### 3.1. Mixtures

#### Hazardous Components

| Chemical Name                              | EC-No     | REACH<br>Registration<br>Number | CAS-No      | Weight<br>percent | GHS Classification                                                                                                                                                             | M-<br>Factor<br>(acute) | M-Factor<br>(chronic) | Concentr<br>ation<br>limit (%) |
|--------------------------------------------|-----------|---------------------------------|-------------|-------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|-----------------------|--------------------------------|
| Styrene                                    | 202-851-5 | 01-2119457861-32                | 100-42-5    | 30 - 35           | Flam. Liq. 3 (H226) Repr. 2 (H361d) Acute Tox. 4 (H332) Skin Irrit. 2 (H315) Eye Irrit. 2 (H319) Asp. Tox. 1 (H304) STOT SE 3 (H335) STOT RE 1 (H372) Aquatic Chronic 3 (H412) |                         |                       |                                |
| Talc                                       | 238-877-9 | 01-2120140278-58                | 14807-96-6  | 4 - 7             | -                                                                                                                                                                              |                         |                       |                                |
| Silica, amorphous, fumed, crystalline-free | 231-545-4 | 01-2119379499-16                | 112945-52-5 | 4 - 7             | -                                                                                                                                                                              |                         |                       |                                |
| Titanium dioxide                           | 236-675-5 | 01-2119489379-17                | 13463-67-7  | 3 - 6             | -                                                                                                                                                                              |                         |                       |                                |
| phthalic anhydride                         | 201-607-5 | 01-2119457017-41                | 85-44-9     | 0.1 - < 1         | Acute Tox. 4 (H302) Skin Irrit. 2 (H315) Skin Sens. 1 (H317) Eye Dam. 1 (H318) Resp. Sens. 1 (H334) STOT SE 3 (H335)                                                           |                         |                       |                                |
| (2-methoxymethylethoxy)propanol            | 252-104-2 | 01-2119450011-60                | 34590-94-8  | 0.1 - < 1         | -                                                                                                                                                                              |                         |                       |                                |
| Paraffin waxes and Hydrocarbon waxes       | 232-315-6 | 01-2119488076-30                | 8002-74-2   | 0.1 - < 1         | -                                                                                                                                                                              |                         |                       |                                |

|                                                                         |           |                  |           |              |                                                                                                            |  |  |  |
|-------------------------------------------------------------------------|-----------|------------------|-----------|--------------|------------------------------------------------------------------------------------------------------------|--|--|--|
| Hydrocarbons, C9-C12, n-alkanes, isoalkanes, cyclics, aromatics (2-25%) | 919-446-0 | 01-2119458049-33 | -         | 0.1 - < 0.25 | Flam. Liq. 3 (H226) Asp. Tox. 1 (H304) STOT SE 3 (H336) STOT RE 1 (H372) Aquatic Chronic 2 (H411) (EUH066) |  |  |  |
| Diiron trioxide                                                         | 215-168-2 | 01-2119457614-35 | 1309-37-1 | 0.1 - < 1    | -                                                                                                          |  |  |  |

**Additional information:** Acute Toxicity Estimate See Section 11 for more information

**For the full text of the H-Statements mentioned in this Section, see Section 16**

## 4. First Aid Measures

### 4.1. Description of First Aid Measures

**General advice** Show this safety data sheet to the doctor in attendance  
Do not breathe dust/fume/gas/mist/vapours/spray

**Eye Contact** Rinse thoroughly with plenty of water, also under the eyelids.  
Keep eye wide open while rinsing. If symptoms persist, call a physician

**Skin contact** Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes  
If skin irritation persists, call a physician

**Inhalation** Move to fresh air  
If not breathing, give artificial respiration  
Consult a physician

**Ingestion** Do NOT induce vomiting Rinse mouth.  
Consult a physician

**Protection of first-aiders** Use personal protective equipment  
See section 8 for more information

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

**Eye Contact** Irritating to eyes

**Skin contact** Irritating to skin  
May produce an allergic reaction.

**Inhalation** Harmful: danger of serious damage to health by prolonged exposure through inhalation Irritating to respiratory system  
May produce an allergic reaction.

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

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

**Notes to physician** No information available

## 5. Firefighting Measures

### 5.1. Extinguishing media

**Suitable Extinguishing Media:** Dry chemical, Foam, Carbon dioxide (CO<sub>2</sub>), (closed systems)

**Extinguishing Media Which Must not be Used for Safety Reasons:** Do not use a solid water stream as it may scatter and spread fire.

### 5.2. Special Hazards arising from substance or mixture

**Special exposure hazards arising from the substance or preparation itself, combustion products, resulting gases**

Vapours may form explosive mixtures with air. Most vapours are heavier than air. They will spread along ground and collect in low or confined areas (sewers, basements, tanks) Heating or fire can release toxic gas : Carbon monoxide

## 5.3. Advice for Firefighters

### Special protective equipment for fire-fighters

Wear self-contained breathing apparatus and protective suit.

### Other information

Cool containers / tanks with water spray.  
Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

## 6. Accidental Release Measures

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

#### For non-emergency personnel

##### Personal precautions

Remove all sources of ignition  
Heat, flames and sparks.  
Take precautionary measures against static charges.  
Ensure adequate ventilation  
Use personal protective equipment

#### For emergency responders

Avoid breathing vapours or mists In the event of fire and/or explosion do not breathe fumes. Use personal protective equipment

### 6.2. Environmental Precautions

#### Environmental precautions

The product should not be allowed to enter drains, water courses or the soil.

Do not flush into surface water or sanitary sewer system

## 6.3. Methods and Material for Containment and Cleaning Up

### Methods for cleaning up

Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13)

Use clean non-sparking tools to collect absorbed material

## 6.4. Reference to other sections

See section 8 for more information

See Section 12 for additional Ecological Information

# 7. Handling and Storage

## 7.1. Precautions for safe handling

### Precautions for safe handling

Avoid static electricity build up with connection to earth

Use only in area provided with appropriate exhaust ventilation

In case of insufficient ventilation, wear suitable respiratory equipment For personal protection see section 8

### Prevention of fire and explosion

Keep away from open flames, hot surfaces and sources of ignition Empty containers may contain flammable or explosive vapours

## Hygiene measures

When using, do not eat, drink or smoke Wash hands before breaks and at the end of workday. Provide regular cleaning of equipment, work area and clothing

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

### Technical measures

#### /Storage conditions

Keep in a dry, cool and well-ventilated place. Keep at temperature not exceeding 30°C Keep away from heat and sources of ignition.

### Materials to avoid

Strong oxidizing agents, Catalyst, Peroxides, Reducing agents

### Packaging material

metallic GRP Tanks (Reinforced Glass Polyester)

**Unsuitable materials for containers** copper, Copper alloys, Bronze, Zinc

## 7.3. Specific end use(s)

### Specific use(s)

No information available

## 8. Exposure Controls/Personal Protection

### 8.1. Control Parameters

#### 8.1.1. Occupational Control Limits

| Chemical Name | European Union | ACGIH OEL (Ceiling) | The United Kingdom | Ireland |
|---------------|----------------|---------------------|--------------------|---------|
|               |                |                     |                    |         |

# MATERIAL SAFETY DATA SHEET

|                                                      |                                            |                                                                                                                                                                                         |                                                                                                            |                                                                                     |
|------------------------------------------------------|--------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Styrene 100-42-5                                     | -                                          | ACGIH (2020):<br>TLV-TWA: 10 ppm<br>TLV-STEL/C: 20 ppm Notes:<br>OTO, A3, BEI<br>Critical effects: CNS and<br>hearing impairment, URT irr,<br>peripheral neuropathy<br>visual disorders | STEL 250 ppm STEL<br>1080 mg/m <sup>3</sup><br>TWA 100 ppm TWA 430<br>mg/m <sup>3</sup>                    | TWA 20 ppm TWA 85<br>mg/m <sup>3</sup><br>STEL 40 ppm STEL 170<br>mg/m <sup>3</sup> |
| Talc 14807-96-6                                      |                                            | TWA 2 mg/m <sup>3</sup>                                                                                                                                                                 | STEL 3 mg/m <sup>3</sup> TWA 1<br>mg/m <sup>3</sup>                                                        | TWA 10 mg/m <sup>3</sup> TWA 0.8<br>mg/m <sup>3</sup>                               |
| Titanium dioxide<br>13463-67-7                       |                                            | TWA 10 mg/m <sup>3</sup>                                                                                                                                                                | STEL 30 mg/m <sup>3</sup> STEL 12<br>mg/m <sup>3</sup> TWA 10 mg/m <sup>3</sup> TWA<br>4 mg/m <sup>3</sup> | TWA 10 mg/m <sup>3</sup> TWA 4<br>mg/m <sup>3</sup>                                 |
| phthalic anhydride<br>85-44-9                        |                                            | TWA 1 ppm                                                                                                                                                                               | STEL 12 mg/m <sup>3</sup> TWA 4<br>mg/m <sup>3</sup> Sen+                                                  | TWA 4 mg/m <sup>3</sup> STEL 12<br>mg/m <sup>3</sup> Sensitizer                     |
| (2-methoxymethylethoxy)propanol<br>34590-94-8        | TWA 50 ppm TWA 308<br>mg/m <sup>3</sup> S* | TWA 100 ppm                                                                                                                                                                             | STEL 150 ppm STEL 924<br>mg/m <sup>3</sup> TWA 50 ppm TWA<br>308 mg/m <sup>3</sup> Skin                    | TWA 50 ppm TWA 308<br>mg/m <sup>3</sup> Skin                                        |
| Paraffin waxes and<br>Hydrocarbon<br>waxes 8002-74-2 |                                            | TWA 2 mg/m <sup>3</sup>                                                                                                                                                                 | STEL 6 mg/m <sup>3</sup> TWA 2<br>mg/m <sup>3</sup>                                                        | TWA 2 mg/m <sup>3</sup> STEL 6<br>mg/m <sup>3</sup>                                 |
| Diliron trioxide<br>1309-37-1                        |                                            | TWA 5 mg/m <sup>3</sup>                                                                                                                                                                 | We are not aware of any<br>national exposure limit.                                                        | We are not aware of any<br>national exposure limit.                                 |
| cobalt octoate<br>136-52-7                           |                                            | 0.02 mg/m <sup>3</sup>                                                                                                                                                                  | STEL 0.3 mg/m <sup>3</sup> TWA 0.1<br>mg/m <sup>3</sup> Sen+                                               | TWA 0.1 mg/m <sup>3</sup> Sensitizer                                                |

Special hazards arising from the substance or mixture

## 8.1.2. Biological Standards

### Derived No Effect Level (DNEL)

| Derived No Effect Level (DNEL)                          |                  |                  |                         |        |
|---------------------------------------------------------|------------------|------------------|-------------------------|--------|
| Styrene (100-42-5)                                      |                  |                  |                         |        |
| Type                                                    | DNEL oral        | DNEL dermal      | DNEL inhalation         | Remark |
| Workers - Long Term - Systemic effect                   |                  | 406 mg/Kg bw/day | 85 mg/m <sup>3</sup>    |        |
| Workers - Acute Short Term - Local effect               |                  |                  | 306 mg/m <sup>3</sup>   |        |
| Workers - Acute Short term - Systemic effect            |                  |                  | 289 mg/m <sup>3</sup>   |        |
| General Population - Acute Short Term - Local effect    |                  |                  | 182.7 mg/m <sup>3</sup> |        |
| General Population - Acute Short Term - Systemic effect |                  |                  | 174.2 mg/m <sup>3</sup> |        |
| General Population - Long Term - Systemic effect        | 2.1 mg/Kg bw/day | 343 mg/Kg bw/day | 10.2 mg/m <sup>3</sup>  |        |

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| Talc (14807-96-6)                                       |                  |                         |                        |        |
|---------------------------------------------------------|------------------|-------------------------|------------------------|--------|
| Type                                                    | DNEL oral        | DNEL dermal             | DNEL inhalation        | Remark |
| Workers - Acute Short term - Systemic effect            |                  |                         | 2.16 mg/m <sup>3</sup> |        |
| Workers - Acute Short Term - Local effect               |                  |                         | 3.6 mg/m <sup>3</sup>  |        |
| Workers - Long Term - Systemic effect                   |                  | 43.2 mg/kg bw/day       | 2.16 mg/m <sup>3</sup> |        |
| Workers - Long Term - Local effect                      |                  | 4.54 mg/cm <sup>2</sup> | 3.6 mg/m <sup>3</sup>  |        |
| General Population - Acute Short Term - Systemic effect |                  |                         | 1.08 mg/m <sup>3</sup> |        |
| General Population - Acute Short Term - Local effect    |                  |                         | 1.8 mg/m <sup>3</sup>  |        |
| General Population - Long Term - Systemic effect        | 160 mg/kg bw/day | 21.6 mg/kg bw/day       | 1.08 mg/m <sup>3</sup> |        |
| General Population - Long Term - Local effect           |                  | 2.27 mg/cm <sup>2</sup> | 1.8 mg/m <sup>3</sup>  |        |

| Silica, amorphous, fumed, crystalline-free (112945-52-5) |           |             |                     |        |
|----------------------------------------------------------|-----------|-------------|---------------------|--------|
| Type                                                     | DNEL oral | DNEL dermal | DNEL inhalation     | Remark |
| Workers - Long Term - Systemic effect                    |           |             | 4 mg/m <sup>3</sup> |        |

| Titanium dioxide (13463-67-7)                    |                  |             |                      |        |
|--------------------------------------------------|------------------|-------------|----------------------|--------|
| Type                                             | DNEL oral        | DNEL dermal | DNEL inhalation      | Remark |
| Workers - Long Term - Local effect               |                  |             | 10 mg/m <sup>3</sup> |        |
| General Population - Long Term - Systemic effect | 700 mg/kg bw/day |             |                      |        |

| phthalic anhydride (85-44-9)                     |                |                 |                        |        |
|--------------------------------------------------|----------------|-----------------|------------------------|--------|
| Type                                             | DNEL oral      | DNEL dermal     | DNEL inhalation        | Remark |
| Workers - Long Term - Systemic effect            |                | 10 mg/kg bw/day | 32.2 mg/m <sup>3</sup> |        |
| General Population - Long Term - Systemic effect | 5 mg/kg bw/day | 5 mg/kg bw/day  | 8.6 mg/m <sup>3</sup>  |        |

| (2-methoxymethylethoxy)propanol (34590-94-8) |           |             |                 |        |
|----------------------------------------------|-----------|-------------|-----------------|--------|
| Type                                         | DNEL oral | DNEL dermal | DNEL inhalation | Remark |
|                                              |           |             |                 |        |

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|                                                  |                 |                  |            |  |
|--------------------------------------------------|-----------------|------------------|------------|--|
| Workers - Long Term - Systemic effect            |                 | 283 mg/kg bw/day | 308 mg/m³  |  |
| General Population - Long Term - Systemic effect | 36 mg/kg bw/day | 121 mg/kg bw/day | 37.2 mg/m³ |  |

| Hydrocarbons, C9-C12, n-alkanes, isoalkanes, cyclics, aromatics (2-25%) (-) |                 |                 |                 |        |
|-----------------------------------------------------------------------------|-----------------|-----------------|-----------------|--------|
| Type                                                                        | DNEL oral       | DNEL dermal     | DNEL inhalation | Remark |
| Workers - Long Term - Systemic effect                                       |                 | 21 mg/kg bw/day | 330 mg/m³       |        |
| General Population - Long Term - Systemic effect                            | 21 mg/kg bw/day | 12 mg/kg bw/day | 71 mg/m³        |        |

| Diiron trioxide (1309-37-1)           |           |             |                 |        |
|---------------------------------------|-----------|-------------|-----------------|--------|
| Type                                  | DNEL oral | DNEL dermal | DNEL inhalation | Remark |
| Workers - Long Term - Systemic effect |           |             | 10 mg/m³        |        |
| Workers - Long Term - Local effect    |           |             | 10 mg/m³        |        |

| cobalt octoate (136-52-7)                        |                  |             |                 |        |
|--------------------------------------------------|------------------|-------------|-----------------|--------|
| Type                                             | DNEL oral        | DNEL dermal | DNEL inhalation | Remark |
| Workers - Long Term - Local effect               |                  |             | 235.1 µg/m³     |        |
| General Population - Long Term - Systemic effect | 175 µg/kg bw/day |             |                 |        |
| General Population - Long Term - Local effect    |                  |             | 37 µg/m³        |        |

## Predicted No Effect Concentration (PNEC)

| PNEC Component           |               |                |
|--------------------------|---------------|----------------|
| Styrene (100-42-5)       |               |                |
| Exposure                 | Type          | PNEC           |
| Fresh water              | PNEC Aqua     | 0.028 mg/L     |
| Marine water             | PNEC Aqua     | 0.014 mg/L     |
| Intermittent use/release | PNEC Aqua     | 0.04 mg/L      |
| Fresh water              | PNEC Sediment | 0.614 mg/Kg.dw |
| Marine water             | PNEC Sediment | 0.307 mg/Kg.dw |
| Terrestrial Compartment  | PNEC Soil     | 0.2 mg/Kg.dw   |

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|                    |          |        |
|--------------------|----------|--------|
| STP microorganisms | PNEC STP | 5 mg/L |
|--------------------|----------|--------|

|                   |               |                         |
|-------------------|---------------|-------------------------|
| Talc (14807-96-6) |               |                         |
| Exposure          | Type          | PNEC                    |
| Marine water      | PNEC Aqua     | 141.26 mg/L             |
| Fresh water       | PNEC Aqua     | 597.97 mg/L             |
| Marine water      | PNEC Sediment | 3.13 mg/kg sediment dw  |
| Fresh water       | PNEC Sediment | 31.33 mg/kg sediment dw |

|                                                          |           |             |
|----------------------------------------------------------|-----------|-------------|
| Silica, amorphous, fumed, crystalline-free (112945-52-5) |           |             |
| Exposure                                                 | Type      | PNEC        |
| Secondary Poisoning                                      | PNEC Oral | 60000 mg/kg |

|                               |               |                        |
|-------------------------------|---------------|------------------------|
| Titanium dioxide (13463-67-7) |               |                        |
| Exposure                      | Type          | PNEC                   |
| Fresh water                   | PNEC Aqua     | 0.184 mg/L             |
| Marine water                  | PNEC Aqua     | 0.0184 mg/L            |
| Intermittent use/release      | PNEC Aqua     | 0.193 mg/L             |
|                               | PNEC STP      | 100 mg/L               |
| Fresh water                   | PNEC Sediment | 1000 mg/kg sediment dw |
| Marine water                  | PNEC Sediment | 100 mg/kg sediment dw  |
|                               | PNEC Soil     | 100 mg/kg soil dw      |

|                              |           |          |
|------------------------------|-----------|----------|
| phthalic anhydride (85-44-9) |           |          |
| Exposure                     | Type      | PNEC     |
| Fresh water                  | PNEC Aqua | 1 mg/L   |
| Marine water                 | PNEC Aqua | 0.1 mg/L |
| Intermittent use/release     | PNEC Aqua | 5.6 mg/L |
|                              | PNEC STP  | 10 mg/L  |

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|                         |               |                        |
|-------------------------|---------------|------------------------|
| Fresh water             | PNEC Sediment | 3.8 mg/kg sediment dw  |
| Marine water            | PNEC Sediment | 0.38 mg/kg sediment dw |
| Terrestrial Compartment | PNEC Soil     | 0.173 mg/kg soil dw    |

| (2-methoxymethylethoxy)propanol (34590-94-8) |               |                        |
|----------------------------------------------|---------------|------------------------|
| Exposure                                     | Type          | PNEC                   |
| Marine water                                 | PNEC Aqua     | 1.9 mg/L               |
| Fresh water                                  | PNEC Aqua     | 19 mg/L                |
| Intermittent use/release                     | PNEC Aqua     | 190 mg/L               |
|                                              | PNEC STP      | 4168 mg/L              |
| Fresh water                                  | PNEC Sediment | 70.2 mg/kg sediment dw |
| Marine water                                 | PNEC Sediment | 7.02 mg/kg sediment dw |
|                                              | PNEC Soil     | 2.74 mg/kg soil dw     |

| cobalt octoate (136-52-7) |               |                        |
|---------------------------|---------------|------------------------|
| Exposure                  | Type          | PNEC                   |
| Fresh water               | PNEC Aqua     | 0.62 µg/L              |
| Marine water              | PNEC Aqua     | 2.36 µg/L              |
| STP microorganisms        | PNEC STP      | 0.37 mg/L              |
| Fresh water               | PNEC Sediment | 53.8 mg/kg sediment dw |
| Marine water              | PNEC Sediment | 69.8 mg/kg sediment dw |
| Terrestrial Compartment   | PNEC Soil     | 10.9 mg/kg soil dw     |

## 8.2. Exposure Controls

### 8.2.1. Occupational exposure

#### Engineering measures

Apply technical measures to comply with the occupational exposure limits.

When working in confined spaces (tanks, containers, etc.), ensure that there is a supply of air suitable for breathing and wear the recommended equipment

## Personal protective equipment

### General Information

Use personal protective equipment.

### Respiratory protection

Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour) If exposure limits are likely to be exceeded / In case of insufficient ventilation wear suitable respiratory equipment :  
Breathing apparatus with filter Type A ( Organic gases and vapours filter conforming to EN 14387 , APF 40 < 1 hour, APF 200 > 1 hour) / Type A(2)/P3 in combination with Particulates filter conforming to EN 143 , if exposed to dust

### Eye protection

Safety glasses with side-shields. Do not wear contact lenses.

### Skin and body protection

Antistatic boots. Protective shoes or boots. Wear fire/flame resistant/retardant clothing.

### Hand protection

Wear chemically resistant gloves (tested to EN 374) in combination with 'basic' employee training  
Glove material : Neoprene , Nitriles , Viton (R) or Polyvinyl alcohol  
Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough.

## 8.2.2. Environmental exposure controls

**Environmental exposure controls** Do not allow material to contaminate ground water system.

## 9. Physical and Chemical Properties

## 9.1. Information on basic physical and chemical properties

| Property                               | Values                                                 | Remark                    |
|----------------------------------------|--------------------------------------------------------|---------------------------|
| Physical state                         | Liquid                                                 |                           |
| Colour                                 | Variable<br>(This Data Sheet includes all the colours) |                           |
| Appearance                             |                                                        | No data available         |
| Particle size                          |                                                        | No data available         |
| Odour                                  | Styrene                                                |                           |
| Odour Threshold                        | 0.15 ppm                                               | Values related to styrene |
| pH                                     |                                                        | No data available         |
| pH (as aqueous solution)               |                                                        | No data available         |
| Melting point/range                    | - 30 °C                                                | Values related to styrene |
| Freezing Point                         |                                                        | No data available         |
| Softening point                        |                                                        | No data available         |
| Boiling point                          | 145 °C                                                 | Values related to styrene |
| Flash point                            | 31 °C                                                  | Values related to styrene |
| Flammability                           |                                                        | No data available         |
| Flammability Limit in Air              |                                                        |                           |
| Upper                                  | 6,1 - 6,8%                                             | Values related to styrene |
| Lower                                  | 0,9 -1,1%                                              | Values related to styrene |
| Vapour pressure                        | 6 hPa                                                  | 20°C                      |
| Vapour density                         | 3.6                                                    | Values related to styrene |
| Density                                | 1.1 - 1.4 g/cm <sup>3</sup>                            | 20°C                      |
| Specific Gravity                       |                                                        | No data available         |
| Bulk density                           |                                                        | No data available         |
| Water solubility                       | Insoluble in water                                     |                           |
| Solubility in other solvents           | Soluble in most organic solvents                       |                           |
| Partition coefficient: n-octanol/water | 3                                                      | Values related to styrene |
| Autoignition temperature               | 490 °C                                                 | Values related to styrene |
| Decomposition temperature              | No data available                                      |                           |
| Viscosity, kinematic                   | 9091 - 27273 mm <sup>2</sup> /s                        | 20°C                      |
| Viscosity, dynamic                     | 10000 - 30000 mPa.s                                    | 20°C                      |

## 9.2. Other Information

Information with regards to physical hazard classes

| Property        | Values | Remark            |
|-----------------|--------|-------------------|
| Explosives      |        | No data available |
| Flammable gases |        | No data available |

|                                                                            |                   |
|----------------------------------------------------------------------------|-------------------|
| Aerosols                                                                   | No data available |
| Oxidising gases                                                            | No data available |
| Gases under pressure                                                       | No data available |
| Flammable liquids                                                          | No data available |
| Flammable solids                                                           | No data available |
| Pyrophoric liquids                                                         | No data available |
| Pyrophoric solids                                                          | No data available |
| Self-heating substances and mixtures                                       | No data available |
| Substances and mixtures which, in contact with water, emit flammable gases | No data available |
| Oxidising liquids                                                          | No data available |
| Oxidising solids                                                           | No data available |
| Oxidising Properties                                                       | No data available |
| Organic peroxides                                                          | No data available |
| Corrosive to metals                                                        | No data available |
| Desensitised explosives                                                    | No data available |

## Other safety characteristics

|                                                     |                   |
|-----------------------------------------------------|-------------------|
| <b>Sensitivity to Mechanical Impact</b>             | No data available |
| SAPT (self-accelerating polymerisation temperature) | No data available |
| Formation of explosible dust/air mixtures           | No data available |
| Acid/alkaline reserve                               | No data available |
| Miscible                                            | No data available |
| Conductivity                                        | No data available |
| Corrosiveness                                       | No data available |
| Gas group                                           | No data available |
| Redox potential                                     | No data available |
| Photocatalytic properties                           | No data available |

## 10. Stability and Reactivity

### 10.1. Reactivity

|                   |                                                                       |
|-------------------|-----------------------------------------------------------------------|
| <b>Reactivity</b> | Product may ignite and burn at temperatures exceeding the flash point |
|-------------------|-----------------------------------------------------------------------|

### 10.2. Chemical stability

|                  |                                              |
|------------------|----------------------------------------------|
| <b>Stability</b> | Stable under recommended storage conditions. |
|------------------|----------------------------------------------|

## 10.3. Possibility of hazardous reactions

**Hazardous reactions** In use, may form flammable/explosive vapour-air mixture.

**Hazardous polymerisation** Polymerisation can occur.

## 10.4. Conditions to avoid

**Conditions to avoid** Heat, flames and sparks.  
Exposure to light.  
Take precautionary measures against static charges.

## 10.5. Incompatible materials

**Materials to avoid** Strong oxidizing agents, Catalyst, Peroxides, Reducing agents

## 10.6. Hazardous decomposition Products

**Hazardous decomposition Products** Incomplete combustion and thermolysis produces potentially toxic gases such as carbon monoxide and carbon dioxide

# 11. Toxicological Information

## 11.1. Information on Toxicological Effects

### 11.1.1. Acute toxicity

**Inhalation** Harmful: danger of serious damage to health by prolonged exposure through inhalation Irritating to respiratory system  
May produce an allergic reaction.

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## Ingestion

Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhoea.

| Chemical Name                                                           | LD50 Oral                                             | LD50 Dermal                                       | LC50 Inhalation                                           | Read-across (Analogy) |
|-------------------------------------------------------------------------|-------------------------------------------------------|---------------------------------------------------|-----------------------------------------------------------|-----------------------|
| Styrene 100-42-5                                                        | 5000 mg/kg (Rat)                                      | > 2000 mg/kg bw (Rat) 24h<br>OECD 402             | 11.8 mg/L (Rat) 4h CSR                                    |                       |
| Talc 14807-96-6                                                         | > 5000 mg/kg bw (Rat)<br>OECD 423                     | > 2000 mg/kg bw (Rat)<br>OECD 402                 |                                                           |                       |
| Silica, amorphous, fumed, crystalline-free 112945-52-5                  | > 5000 mg/kg bw (Rat)<br>OECD 401                     | > 5000 mg/kg (Rabbit)                             | > 0.14 mg/L air (Rat) 4h (analytical) OECD 403            |                       |
| Titanium dioxide 13463-67-7                                             | > 5000 mg/kg bw (Rat)<br>OECD 425, EPA OPPTS 870.1100 |                                                   | > 6,82 mg/L air (Rat) 4h No guideline followed            |                       |
| phthalic anhydride 85-44-9                                              | 1530 mg/kg bw (Rat)                                   | > 3160 mg/kg bw (Rabbit)                          | > 2.14 mg/L (Rat) 4h OECD 403                             |                       |
| (2-methoxymethylethoxy)propanol 34590-94-8                              | > 5000 mg/kg bw (Rat)<br>Similar to OECD 401          | 9510 mg/kg bw (Rabbit) 24h<br>Similar to OECD 402 | LC0 (7h) > 275 ppm (1667 mg/m³) (Rat) Similar to OECD 403 |                       |
| Paraffin waxes and Hydrocarbon waxes 8002-74-2                          | > 5000 mg/kg bw (Rat)<br>OECD 420                     | > 2000 mg/kg bw (Rat)<br>OECD 402                 |                                                           |                       |
| Hydrocarbons, C9-C12, n-alkanes, isoalkanes, cyclics, aromatics (2-25%) | > 15000 mg/kg bw (Rat)<br>Similar to OECD 401         |                                                   | > 13.1 mg/L air (Rat) 4h Similar to OECD 403              |                       |
| Diiron trioxide 1309-37-1                                               | > 5000 mg/kg bw (Rat) EU Method B.1                   |                                                   | 5.05 mg/L air (Rat) 4h OECD 403                           |                       |
| cobalt octoate 136-52-7                                                 | 3129 mg/kg/bw (Rat)<br>OECD 425                       | > 2000 mg/kg bw (Rat)<br>OECD 402                 |                                                           |                       |

## 11.1.2. Skin corrosion/irritation

| Chemical Name                                          | Skin corrosion/irritation                                                            | Read-across (Analogy) |
|--------------------------------------------------------|--------------------------------------------------------------------------------------|-----------------------|
| Styrene 100-42-5                                       | Irritating to skin in vivo assay rabbit                                              |                       |
| Talc 14807-96-6                                        | No skin irritation in vivo assay in vitro study<br>rabbit OECD 404<br>EU Method B.46 |                       |
| Silica, amorphous, fumed, crystalline-free 112945-52-5 | No skin irritation rabbit<br>OECD 404                                                |                       |

# MATERIAL SAFETY DATA SHEET

|                                                                              |                                                                           |  |
|------------------------------------------------------------------------------|---------------------------------------------------------------------------|--|
| Titanium dioxide 13463-67-7                                                  | No skin irritation in vivo assay rabbit<br>OECD 404<br>EPA OPPTS 870.2500 |  |
| phthalic anhydride 85-44-9                                                   | Irritating to skin in vivo assay rabbit<br>OECD 404                       |  |
| (2-methoxymethylethoxy)propanol 34590-94-8                                   | No skin irritation in vivo assay rabbit<br>similar to OECD 404            |  |
| Paraffin waxes and Hydrocarbon waxes 8002-74-2                               | No skin irritation in vivo assay rabbit<br>OECD 404                       |  |
| Hydrocarbons, C9-C12, n-alkanes, isoalkanes, cyclics, aromatics (2-25%)<br>- | No skin irritation in vivo assay rabbit<br>OECD 404                       |  |
| Diiron trioxide 1309-37-1                                                    | No skin irritation in vivo assay rabbit<br>OECD 404                       |  |
| cobalt octoate 136-52-7                                                      | No skin corrosion in vitro study OECD 431<br>EU Method B. 40              |  |

## 11.1.3. Serious Eye Damage/Eye Irritation

| Chemical Name                                                                | Serious Eye Damage/Eye Irritation                                                      | Read-across (Analogy) |
|------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|-----------------------|
| Styrene 100-42-5                                                             | Irritating to eyes in vivo assay rabbit                                                |                       |
| Talc 14807-96-6                                                              | No eye irritation in vivo assay (rabbit)<br>OECD 405                                   |                       |
| Silica, amorphous, fumed, crystalline-free 112945-52-5                       | No eye irritation rabbit<br>OECD 405                                                   |                       |
| Titanium dioxide 13463-67-7                                                  | No eye irritation in vivo assay rabbit<br>OECD 405<br>EU Method B.5 EPA OPPTS 870.2400 |                       |
| phthalic anhydride 85-44-9                                                   | Irritating to eyes in vivo assay rabbit<br>Draize Test                                 |                       |
| (2-methoxymethylethoxy)propanol 34590-94-8                                   | No eye irritation in vivo assay                                                        |                       |
| Paraffin waxes and Hydrocarbon waxes 8002-74-2                               | No eye irritation in vivo assay rabbit<br>OECD 405                                     |                       |
| Hydrocarbons, C9-C12, n-alkanes, isoalkanes, cyclics, aromatics (2-25%)<br>- | No eye irritation in vivo assay (rabbit)<br>OECD 405                                   |                       |

# MATERIAL SAFETY DATA SHEET

|                           |                                                                                          |  |
|---------------------------|------------------------------------------------------------------------------------------|--|
| Diiron trioxide 1309-37-1 | No eye irritation in vivo assay rabbit<br>OECD 405                                       |  |
| cobalt octoate 136-52-7   | Moderate eye irritation OECD 437<br>EU Method B.47 Irritating to eyes rabbit<br>OECD 405 |  |

## 11.1.4. Respiratory or skin sensitisation

May produce an allergic reaction.

| Chemical Name                                                                       | Respiratory or skin sensitisation                                                                                                    | Read-across (Analogy) |
|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|-----------------------|
| Styrene 100-42-5                                                                    | Does not cause skin sensitization Does not cause<br>respiratory sensitization<br>CSR                                                 |                       |
| Talc 14807-96-6                                                                     | Does not cause skin sensitization in vivo assay<br>guinea pig<br>OECD 406                                                            |                       |
| Silica, amorphous, fumed,<br>crystalline-free 112945-52-5                           | Does not cause skin sensitization Does not cause<br>respiratory sensitization                                                        |                       |
| Titanium dioxide 13463-67-7                                                         | Does not cause skin sensitization in vivo assay<br>guinea pig OECD 406<br>EU Method B.6 EPA OPP 81-6<br>mouse similar to<br>OECD 429 |                       |
| phthalic anhydride 85-44-9                                                          | May cause sensitisation by inhalation and skin contact in<br>vivo assay<br>guinea pig<br>OECD 406                                    |                       |
| (2-methoxymethylethoxy)propanol<br>34590-94-8                                       | Does not cause skin sensitization in vivo assay                                                                                      |                       |
| Paraffin waxes and Hydrocarbon<br>waxes<br>8002-74-2                                | Does not cause skin sensitization<br>in vivo assay<br>guinea pig<br>OECD 406<br>EU Method B.6                                        |                       |
| Hydrocarbons, C9-C12, n-alkanes,<br>isoalkanes, cyclics, aromatics (2-<br>25%)<br>- | Does not cause skin sensitization<br>in vivo assay<br>guinea pig<br>OECD 406                                                         |                       |

# MATERIAL SAFETY DATA SHEET

|                            |                                                                               |  |
|----------------------------|-------------------------------------------------------------------------------|--|
| cobalt octoate<br>136-52-7 | May cause sensitisation by skin contact<br>in vivo assay<br>mouse<br>OECD 429 |  |
|----------------------------|-------------------------------------------------------------------------------|--|

## 11.1.5. Mutagenic Effects

### in vitro study

| Chemical Name                                                                       | Ames test                                                                                                                                                  | Read-across (Analogy) |
|-------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|
| Styrene 100-42-5                                                                    | Ambiguous<br>In vitro gene mutation study in bacteria<br>(S. typhimurium G46, TA1530, TA 1535, TA100, TA98, TA1538, TA 1537)<br>OECD 471                   |                       |
| Talc 14807-96-6                                                                     | negative<br>In vitro gene mutation study in bacteria Salmonella sp.<br>similar to OECD 471<br>EU Method B.13/14                                            |                       |
| Silica, amorphous, fumed,<br>crystalline-free 112945-52-5                           | negative<br>In vitro gene mutation study in bacteria OECD 471                                                                                              |                       |
| Titanium dioxide 13463-67-7                                                         | negative<br>In vitro gene mutation study in bacteria<br>(S. typhimurium TA 1535, TA 1537, TA 98, TA100 and TA 102)<br>OECD 471                             |                       |
| phthalic anhydride 85-44-9                                                          | negative<br>In vitro gene mutation study in bacteria<br>(S. typhimurium TA 1535, TA 1537, TA 98, TA100 and TA 102)<br>(Escherichia coli WP2 uvrA) OECD 471 |                       |
| (2-methoxymethylethoxy)propanol<br>34590-94-8                                       | negative<br>In vitro gene mutation study in bacteria (Escherichia coli<br>WP2 uvrA)<br>similar to OECD 471                                                 |                       |
| Paraffin waxes and Hydrocarbon<br>waxes 8002-74-2                                   | negative<br>In vitro gene mutation study in bacteria<br>(S. typhimurium TA 1535, TA 1537, TA 98 and TA 100)<br>(Escherichia coli WP2 uvrA)<br>OECD 471     |                       |
| Hydrocarbons, C9-C12, n-alkanes,<br>isoalkanes, cyclics, aromatics (2-<br>25%)<br>- | negative<br>In vitro gene mutation study in bacteria<br>(S. typhimurium TA 1535, TA 1537, TA 98, TA 100, TA<br>1538)<br>similar to OECD 471                |                       |
| Diiron trioxide 1309-37-1                                                           | negative<br>In vitro gene mutation study in bacteria<br>(S. typhimurium TA 1535, TA 1537, TA 98 and TA 100)<br>(Escherichia coli WP2 uvrA)                 | Cas N° : 51274-00-1   |

# MATERIAL SAFETY DATA SHEET

|                            |                                                                                                                     |                                |
|----------------------------|---------------------------------------------------------------------------------------------------------------------|--------------------------------|
|                            | OECD 471                                                                                                            |                                |
| cobalt octoate<br>136-52-7 | Negative<br>In vitro gene mutation study in bacteria (S. typhimurium<br>TA 1535, TA 1537, TA 98, TA100 and OECD 471 | Cas N°: 68956-82-1, 14024-48-7 |

| Chemical Name                                             | In vitro Mammalian Cell Gene Mutation Test                                                | Read-across (Analogy)                                   |
|-----------------------------------------------------------|-------------------------------------------------------------------------------------------|---------------------------------------------------------|
| Styrene 100-42-5                                          | Ambiguous<br>In vitro gene mutation study in mammalian cells hamster<br>OECD 476          |                                                         |
| Silica, amorphous, fumed,<br>crystalline-free 112945-52-5 | negative<br>In vitro gene mutation study in mammalian cells OECD<br>476                   |                                                         |
| Titanium dioxide 13463-67-7                               | negative<br>In vitro gene mutation study in mammalian cells mouse<br>OECD 476             |                                                         |
| phthalic anhydride 85-44-9                                | negative<br>In vitro gene mutation study in mammalian cells hamster<br>OECD 476           |                                                         |
| (2-methoxymethylethoxy)propanol<br>34590-94-8             | negative<br>In vitro gene mutation study in mammalian cells rat<br>similar to<br>OECD 482 |                                                         |
| Paraffin waxes and Hydrocarbon<br>waxes 8002-74-2         | negative<br>In vitro gene mutation study in mammalian cells mouse<br>OECD 476             |                                                         |
| Diiron trioxide 1309-37-1                                 | negative<br>In vitro gene mutation study in mammalian cells hamster<br>OECD 476           | Cas N° : 1317-61-9                                      |
| cobalt octoate 136-52-7                                   | negative<br>In vitro gene mutation study in mammalian cells mouse<br>OECD 476             | Cas N°: 7440-48-4, 1308-06-1,<br>10124-43-3, 12016-80-7 |
| Chemical Name                                             | In vitro Mammalian Chromosome Aberration Test                                             | Read-across (Analogy)                                   |
| Styrene 100-42-5                                          | positive Chromosome aberration test in vitro<br>OECD 473<br>OECD 479                      |                                                         |
| Talc 14807-96-6                                           | negative Chromosome aberration test in vitro<br>rat similar to OECD 473<br>EU Method B.10 |                                                         |
| Silica, amorphous, fumed,<br>crystalline-free 112945-52-5 | negative Chromosome aberration test in vitro<br>OECD 473                                  |                                                         |
| Titanium dioxide 13463-67-7                               | negative Chromosome aberration test in vitro<br>hamster<br>OECD 473                       |                                                         |

# MATERIAL SAFETY DATA SHEET

|                                                                              |                                                                                          |                    |
|------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|--------------------|
| phthalic anhydride 85-44-9                                                   | Ambiguous Chromosome aberration test in vitro<br>hamster<br>OECD 473                     |                    |
| (2-methoxymethylethoxy)propanol 34590-94-8                                   | negative Chromosome aberration test in vitro<br>hamster<br>similar to OECD 473           |                    |
| Paraffin waxes and Hydrocarbon waxes 8002-74-2                               | negative<br><br>Chromosome aberration test in vitro<br>hamster<br>similar to<br>OECD 473 |                    |
| Hydrocarbons, C9-C12, n-alkanes, isoalkanes, cyclics, aromatics (2-25%)<br>- | negative<br>Chromosome aberration test in vitro<br><br>similar to<br>OECD 473            |                    |
| Diiron trioxide 1309-37-1                                                    | negative<br><br>Chromosome aberration test in vitro<br><br>hamster<br><br>OECD 473       | Cas N° : 1317-61-9 |

## in vivo assay

| Chemical Name                                                                | Unscheduled DNA Synthesis (UDS)                | Read-across (Analogy)                      |
|------------------------------------------------------------------------------|------------------------------------------------|--------------------------------------------|
| Styrene 100-42-5                                                             | negative mouse OECD 486<br>OECD 474            |                                            |
| Silica, amorphous, fumed, crystalline-free 112945-52-5                       | negative rat                                   |                                            |
| Titanium dioxide 13463-67-7                                                  | negative rat<br>OECD 474                       |                                            |
| Paraffin waxes and Hydrocarbon waxes 8002-74-2                               | negative mouse similar to OECD 474             |                                            |
| Hydrocarbons, C9-C12, n-alkanes, isoalkanes, cyclics, aromatics (2-25%)<br>- | negative mouse similar to OECD 474<br>OECD 475 |                                            |
| Diiron trioxide 1309-37-1                                                    | negative rat<br>OECD 489                       |                                            |
| cobalt octoate 136-52-7                                                      | negative rat<br>OECD 474<br>OECD 475           | Cas N°: 68956-82-1, 14024-48-7, 10026-24-1 |

## 11.1.6. Carcinogenicity

| Carcinogenicity    |                          |         |                                                                                                                |            |
|--------------------|--------------------------|---------|----------------------------------------------------------------------------------------------------------------|------------|
| Styrene (100-42-5) |                          |         |                                                                                                                |            |
| Routes of Exposure | Method                   | Species | Dose                                                                                                           | Evaluation |
| Inhalation         | OECD 453                 | rat     | NOAEC systemic (carcinogenicity) $\geq 4.34$ mg/L air (nominal)                                                | negative   |
| Inhalation         | OECD 453                 | mouse   | LOAEC (carcinogenicity) female/male = 0.09 - 0.18 mg/L air resp., NOAEC (carcinogenicity) male = 0.09 mg/L air | positive   |
| Oral               | No information available | rat     | NOAEL (carcinogenicity) $\geq 2000$ mg/kg bw /day                                                              | positive   |
| Oral               | No information available | mouse   | LOAEL (carcinogenicity) = 150 mg/kg bw /day                                                                    | positive   |

| Talc (14807-96-6)  |          |         |                                                |            |
|--------------------|----------|---------|------------------------------------------------|------------|
| Routes of Exposure | Method   | Species | Dose                                           | Evaluation |
| Oral               | OECD 453 | rat     | NOAEL (101d) = 100 mg/kg bw/day                | negative   |
| Inhalation         | OECD 453 | mouse   | NOAEC (104 weeks) = 6-18 mg/m <sup>3</sup> air | negative   |
| Inhalation         | OECD 453 | rat     | NOAEC = 6-18 mg/m <sup>3</sup> air             | negative   |

| Silica, amorphous, fumed, crystalline-free (112945-52-5) |          |         |                                  |            |
|----------------------------------------------------------|----------|---------|----------------------------------|------------|
| Routes of Exposure                                       | Method   | Species | Dose                             | Evaluation |
| Oral                                                     | OECD 453 | rat     | NOAEL = 1800 - 3200 mg/kg bw/day | negative   |

| phthalic anhydride (85-44-9) |                          |         |                                                                                                                      |            |
|------------------------------|--------------------------|---------|----------------------------------------------------------------------------------------------------------------------|------------|
| Routes of Exposure           | Method                   | Species | Dose                                                                                                                 | Evaluation |
| Oral                         | No information available | mouse   | NOAEL (carcinogenicity, male) = 3570 mg/kg bw/day (72w)<br>NOAEL (carcinogenicity, female) = 1785 mg/kg bw/day (72w) | negative   |

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|      |                          |     |                                                    |          |
|------|--------------------------|-----|----------------------------------------------------|----------|
| Oral | No information available | rat | NOAEL (carcinogenicity) = 1000 mg/kg bw/day (105w) | negative |
|------|--------------------------|-----|----------------------------------------------------|----------|

| Paraffin waxes and Hydrocarbon waxes (8002-74-2) |        |         |                                           |            |
|--------------------------------------------------|--------|---------|-------------------------------------------|------------|
| Routes of Exposure                               | Method | Species | Dose                                      | Evaluation |
| Dermal                                           |        | mouse   | NOEL (carcinogenicity) = 128 mg/kg bw/day | negative   |

| Hydrocarbons, C9-C12, n-alkanes, isoalkanes, cyclics, aromatics (2-25%) (-) |                     |         |                                                                                           |            |
|-----------------------------------------------------------------------------|---------------------|---------|-------------------------------------------------------------------------------------------|------------|
| Routes of Exposure                                                          | Method              | Species | Dose                                                                                      | Evaluation |
| Inhalation                                                                  | similar to OECD 453 | rat     | NOAEC (female) >= 2 200 mg/m <sup>3</sup> air<br>NOAEC (male) = 138 mg/m <sup>3</sup> air | negative   |

## 11.1.7. Reproductive toxicity

| Reproductive toxicity |                          |         |                                                                                                                                  |            |
|-----------------------|--------------------------|---------|----------------------------------------------------------------------------------------------------------------------------------|------------|
| Styrene (100-42-5)    |                          |         |                                                                                                                                  |            |
| Routes of Exposure    | Method                   | Species | Dose                                                                                                                             | Evaluation |
| Inhalation            | No information available | rat     | NOAEL/LOAEL (fertility) 60d = 100 - 200 mg/kg bw/day                                                                             | positive   |
| Oral                  | OECD 422                 | rat     | NOAEL/LOAEL (fertility) 60d = 200 - 400 mg/kg bw/day                                                                             | positive   |
| Inhalation            | OECD 416                 | rat     | NOAEC (P, F1) = 0.64 mg/L air<br>LOAEC (P, F1) = 2.13 mg/L air<br>NOAEC (F2) = 0.21 mg/L air<br>LOAEC (F2) = 0.64 mg/L air (70d) | negative   |

| Talc (14807-96-6)  |                     |         |                                              |            |
|--------------------|---------------------|---------|----------------------------------------------|------------|
| Routes of Exposure | Method              | Species | Dose                                         | Evaluation |
| Oral               | similar to OECD 416 | rabbit  | NOAEL (reproduction & F1) > 900 mg/kg bw/day | negative   |

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| Silica, amorphous, fumed, crystalline-free (112945-52-5) |          |         |                          |            |
|----------------------------------------------------------|----------|---------|--------------------------|------------|
| Routes of Exposure                                       | Method   | Species | Dose                     | Evaluation |
| Oral                                                     | OECD 415 | rat     | NOAEL = 497 mg/kg bw/day | negative   |

| phthalic anhydride (85-44-9) |                          |         |                                                                                                                |            |
|------------------------------|--------------------------|---------|----------------------------------------------------------------------------------------------------------------|------------|
| Routes of Exposure           | Method                   | Species | Dose                                                                                                           | Evaluation |
| Oral                         | No information available | mouse   | NOAEL (reproductive, male) = 3570 mg/kg bw/day (72w)<br>NOAEL (reproductive, female) = 1785 mg/kg bw/day (72w) | negative   |
| Oral                         | No information available | rat     | NOAEL (reproductive, female) = 1000 mg/kg bw/day (105w)                                                        | negative   |

| Paraffin waxes and Hydrocarbon waxes (8002-74-2) |          |         |                                                                                                                                             |            |
|--------------------------------------------------|----------|---------|---------------------------------------------------------------------------------------------------------------------------------------------|------------|
| Routes of Exposure                               | Method   | Species | Dose                                                                                                                                        | Evaluation |
| Oral                                             | OECD 421 | rat     | NOAEL (p/ reproductive performance) >= 1000 mg/kg bw/day<br>NOAEL Neonatal (F1) >= 1000 mg/kg bw/day Read across with : Chevron 100 Neutral | negative   |

| Hydrocarbons, C9-C12, n-alkanes, isoalkanes, cyclics, aromatics (2-25%) (-) |                     |         |                         |            |
|-----------------------------------------------------------------------------|---------------------|---------|-------------------------|------------|
| Routes of Exposure                                                          | Method              | Species | Dose                    | Evaluation |
| Inhalation                                                                  | similar to OECD 421 | rat     | NOAEC (F1) = 1720 mg/m³ | negative   |

| cobalt octoate (136-52-7) |                                                     |         |                                      |            |
|---------------------------|-----------------------------------------------------|---------|--------------------------------------|------------|
| Routes of Exposure        | Method                                              | Species | Dose                                 | Evaluation |
| Oral                      | Read-across (Analogy)<br>Cas N°: 7440-48-4 OECD 422 | rat     | NO(A)EL (P&F1) 28d = 30 mg/kg bw/day | positive   |

## 11.1.8. Developmental Toxicity

Suspected of damaging the unborn child.

| Developmental Toxicity |                          |         |                                                                                      |            |
|------------------------|--------------------------|---------|--------------------------------------------------------------------------------------|------------|
| Styrene (100-42-5)     |                          |         |                                                                                      |            |
| Routes of Exposure     | Method                   | Species | Dose                                                                                 | Evaluation |
| Inhalation             | No information available | rat     | NOAEC/LOAEC (maternal toxicity + developmental toxicity) >50d = 1.08 - 2.15 mg/L air | positive   |
| Inhalation             | OECD 414                 | rat     | LOAEC (maternal toxicity) 6-15d = 1.28 mg/L air                                      | positive   |
| Inhalation             | OECD 414                 | rat     | NOAEC (developmental toxicity) 6-15d >= 2.56 mg/L air                                | negative   |
| Inhalation             | OECD 414                 | rabbit  | NOAEC (maternal toxicity + developmental toxicity) 6-18d = 2.56 mg/L air             | negative   |

| Silica, amorphous, fumed, crystalline-free (112945-52-5) |          |         |                                                                                             |            |
|----------------------------------------------------------|----------|---------|---------------------------------------------------------------------------------------------|------------|
| Routes of Exposure                                       | Method   | Species | Dose                                                                                        | Evaluation |
| Oral                                                     | OECD 414 | rat     | NOAEL (maternal toxicity) = 1350 mg/kg bw/day<br>NOAEL (teratogenicity) = 1350 mg/kg bw/day | negative   |

| Titanium dioxide (13463-67-7) |          |         |                                                                   |            |
|-------------------------------|----------|---------|-------------------------------------------------------------------|------------|
| Routes of Exposure            | Method   | Species | Dose                                                              | Evaluation |
| Oral                          | OECD 414 | rat     | NOAEL (maternal & developmental toxicity) 20d = 1000 mg/kg bw/day | negative   |

| (2-methoxymethylethoxy)propanol (34590-94-8) |                  |         |                                                     |            |
|----------------------------------------------|------------------|---------|-----------------------------------------------------|------------|
| Routes of Exposure                           | Method           | Species | Dose                                                | Evaluation |
| Inhalation                                   | EPA OTS 798.4350 | rat     | NOAEL (maternal tox/teratogenicity) 6-15d = 300 ppm | negative   |

| Paraffin waxes and Hydrocarbon waxes (8002-74-2) |  |  |  |  |
|--------------------------------------------------|--|--|--|--|
|--------------------------------------------------|--|--|--|--|

# MATERIAL SAFETY DATA SHEET

| Routes of Exposure | Method   | Species | Dose                                                                                                                                               | Evaluation |
|--------------------|----------|---------|----------------------------------------------------------------------------------------------------------------------------------------------------|------------|
| Dermal             | OECD 414 | rat     | LOAEL (maternal toxicity) = 125 mg/kg bw/day<br>NOAEL (teratogenicity) >= 2000 mg/kg bw/day<br>Read across with : 100 SUS solvent refined base oil | negative   |

| Hydrocarbons, C9-C12, n-alkanes, isoalkanes, cyclics, aromatics (2-25%) (-) |                     |         |                                                                                                                         |            |
|-----------------------------------------------------------------------------|---------------------|---------|-------------------------------------------------------------------------------------------------------------------------|------------|
| Routes of Exposure                                                          | Method              | Species | Dose                                                                                                                    | Evaluation |
| Inhalation                                                                  | similar to OECD 414 | rat     | NOAEL (maternal toxicity) >= 5220 mg/m <sup>3</sup> air<br>NOAEC (developmental Toxicity) >= 5220 mg/m <sup>3</sup> air | negative   |

**Specific target organ toxicity –  
single exposure**

May cause irritation of respiratory tract

**Specific target organ toxicity –  
repeated exposure**

Causes damage to organs through prolonged or repeated exposure , target organ(s) :  
Central nervous system , Ears

| STOT - repeated exposure |                          |           |                                                                                                                                             |         |
|--------------------------|--------------------------|-----------|---------------------------------------------------------------------------------------------------------------------------------------------|---------|
| Styrene (100-42-5)       |                          |           |                                                                                                                                             |         |
| Routes of Exposure       | Method                   | Species   | Dose                                                                                                                                        | Remarks |
| Inhalation               | OECD 412                 | rat mouse | NOAEC male (28d) = 3.47 mg/L air<br>NOAEC (ototoxicity) 28d = 2.13 mg/L air<br>NOAEC (28d) = 0.181 mg/L air<br>NOAEC (28d) = 0.688 mg/L air |         |
| Inhalation               | No information available | rat       | NOAEC (nasal tract) = 0.85 mg/L air<br>NOAEC (overall) = 2.13 mg/L air<br>NOAEC (ototoxicity) = 0.85 mg/L air<br>LOAEC (ototoxicity) =      |         |

# MATERIAL SAFETY DATA SHEET

|            |                          |       |                                                                              |  |
|------------|--------------------------|-------|------------------------------------------------------------------------------|--|
|            |                          |       | 3.41 mg/L air<br>NOAEC (overall) = 2.13 mg/L air                             |  |
| Oral       | No information available | rat   | NOAEL (toxicity) = 1000 mg/kg bw/day<br>LOAEL (toxicity) = 2000 mg/kg bw/day |  |
| Oral       | No information available | mouse | NOAEL (toxicity) = 150 mg/kg bw /day<br>LOAEL (toxicity) = 300 mg/kg bw /day |  |
| Inhalation | OECD 453                 | rat   | LOAEC local (toxicity) = 0.21 mg/L air                                       |  |

| Silica, amorphous, fumed, crystalline-free (112945-52-5) |                          |         |                                                                       |         |
|----------------------------------------------------------|--------------------------|---------|-----------------------------------------------------------------------|---------|
| Routes of Exposure                                       | Method                   | Species | Dose                                                                  | Remarks |
| Oral                                                     | OECD 408                 | rat     | NOEL (highest dose) 4000 <= 4500 mg/kg bw/day 90d                     |         |
| Inhalation                                               | OECD 413                 | rat     | NOEC = 1.3 mg/m <sup>3</sup> air NOEC < 1.3 mg/m <sup>3</sup> air 90d |         |
| Dermal                                                   | No information available | rabbit  | NOAEL >= 10000 mg/kg bw/day                                           |         |

| Titanium dioxide (13463-67-7) |          |         |                                 |         |
|-------------------------------|----------|---------|---------------------------------|---------|
| Routes of Exposure            | Method   | Species | Dose                            | Remarks |
| Oral                          | OECD 407 | rat     | NOEL (29d) = 24000 mg/kg bw/day |         |
| Oral                          | OECD 408 | rat     | NOAEL (92-93d) > 1000 mg/kg/day |         |

| phthalic anhydride (85-44-9) |                          |         |                                                                   |         |
|------------------------------|--------------------------|---------|-------------------------------------------------------------------|---------|
| Routes of Exposure           | Method                   | Species | Dose                                                              | Remarks |
| Oral                         | No information available | rat     | NOAEL = 1250 mg/kg bw/day<br>LOAEL = 2500 mg/kg bw/day<br>7 weeks |         |
| Oral                         | No information available | rat     | NOAEL (105 weeks) = 500 mg/kg bw/day                              |         |

# MATERIAL SAFETY DATA SHEET

|      |                          |       |                                                                                          |  |
|------|--------------------------|-------|------------------------------------------------------------------------------------------|--|
| Oral | No information available | mouse | LOAEL (male) = 2340<br>mg/kg bw/day<br>LOAEL (female) = 1717<br>mg/kg bw/day<br>72 weeks |  |
|------|--------------------------|-------|------------------------------------------------------------------------------------------|--|

| (2-methoxymethylethoxy)propanol (34590-94-8) |                                                                     |         |                                          |         |
|----------------------------------------------|---------------------------------------------------------------------|---------|------------------------------------------|---------|
| Routes of Exposure                           | Method                                                              | Species | Dose                                     | Remarks |
| Oral                                         | KANPOGYO No.700,<br>YAKUHATSU No.<br>1039.61 and KIKYKU No.<br>1014 | rat     | NOEL/NOAEL (4 weeks)<br>= 200/1000 mg/kg |         |
| Inhalation                                   | similar to OECD 413                                                 | rat     | NOAEL (13 weeks) = 200<br>ppm            |         |
| Dermal                                       | similar to OECD 411                                                 | rabbit  | NOAEL (90d) = 2850<br>mg/kg bw/day       |         |

| Paraffin waxes and Hydrocarbon waxes (8002-74-2) |                                                              |         |                                                                                                                                         |         |
|--------------------------------------------------|--------------------------------------------------------------|---------|-----------------------------------------------------------------------------------------------------------------------------------------|---------|
| Routes of Exposure                               | Method                                                       | Species | Dose                                                                                                                                    | Remarks |
| Dermal                                           | Read-across (Analogy)<br>Cas N°: 64742-52-5<br>OECD 410      | rabbit  | NOAEL (28d) = 1000<br>mg/kg bw/day                                                                                                      |         |
| Oral                                             | OECD 408                                                     | rat     | NOAEL (Low melting point<br>wax) = 1.5 mg/kg bw/day<br>NOAEL (High melting point<br>and high sulphur wax) =<br>1500 mg/kg bw/day<br>90d |         |
| Dermal                                           | Read-across (Analogy) :<br>Lubricant Base Oils OECD<br>411   | rat     | NOAEL (13 weeks) > 2000<br>mg/kg bw/day                                                                                                 |         |
| Dermal                                           | Read-across (Analogy) :<br>MRD-87-016 similar to<br>OECD 453 | mouse   | NOAEL (male) 24 months<br>>= 150 mg/kg bw/day                                                                                           |         |

| Hydrocarbons, C9-C12, n-alkanes, isoalkanes, cyclics, aromatics (2-25%) (-) |                     |         |                                                                             |         |
|-----------------------------------------------------------------------------|---------------------|---------|-----------------------------------------------------------------------------|---------|
| Routes of Exposure                                                          | Method              | Species | Dose                                                                        | Remarks |
| Oral                                                                        | similar to OECD 408 | rat     | NOAEL (female) 30d = 1056<br>mg/kg bw<br>LOAEL (male) 30d = 116<br>mg/kg bw |         |

# MATERIAL SAFETY DATA SHEET

|            |                     |     |                                                                                                                                      |  |
|------------|---------------------|-----|--------------------------------------------------------------------------------------------------------------------------------------|--|
| Inhalation | similar to OECD 413 | rat | NOAEC (female) = 3950<br>mg/m <sup>3</sup><br>LOAEC (male) = 1975<br>mg/m <sup>3</sup><br>LOAEC (female) = 7400<br>mg/m <sup>3</sup> |  |
| Dermal     | similar to OECD 411 | rat | NOAEL (systemic) >= 495<br>mg/kg bw/day                                                                                              |  |

| Diiron trioxide (1309-37-1) |                                                     |         |                                                      |         |
|-----------------------------|-----------------------------------------------------|---------|------------------------------------------------------|---------|
| Routes of Exposure          | Method                                              | Species | Dose                                                 | Remarks |
| Inhalation                  | Read-across (Analogy)<br>Cas N°: 1317-61-9 OECD 412 | rat     | NOAEL (male) 4 weeks =<br>10.1 mg/m <sup>3</sup> air |         |
| Inhalation                  | Read-across (Analogy)<br>Cas N°: 1317-61-9 OECD 413 | rat     | NOAEL (13 weeks) = 4.7<br>mg/m <sup>3</sup> air      |         |
| Oral                        | OECD 408                                            | rat     | NOAEL (13 weeks) > 1000<br>mg/kg bw/day              |         |

| cobalt octoate (136-52-7) |                                                                    |         |                                 |         |
|---------------------------|--------------------------------------------------------------------|---------|---------------------------------|---------|
| Routes of Exposure        | Method                                                             | Species | Dose                            | Remarks |
| Oral                      | Read-across (Analogy)<br>cobalt dichloride<br>hexahydrate OECD 408 | rat     | NOAEL (90d) = 3 mg/kg<br>bw/day |         |

## 11.2. Information on Other Hazards

Endocrine disrupting properties No information available

Other information None

## 12. Ecological Information

### 12.1. Toxicity

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment. Do not flush into surface water or sanitary sewer system

#### 12.1.1. Acute aquatic toxicity - Component Information

# MATERIAL SAFETY DATA SHEET

| Chemical Name                                                           | Toxicity to algae                                                                                                             | Toxicity to daphnia and other aquatic invertebrates.                                 | Toxicity to fish                                                                              | Toxicity to microorganisms                                                                                      |
|-------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|
| Styrene 100-42-5                                                        | EC50 (72h) = 4.9 mg/L (Pseudokirchnerella subcapitata)<br>EPA OTS 797.1050                                                    | EC50 (48h) = 4.7 mg/L (Daphnia magna)<br>NOEC = 1.9 mg/L (Daphnia magna)<br>OECD 202 | LC50 (96h) = 4.02 - 10 mg/L (Pimephales promelas) OECD 203                                    | EC (30min) = 500 mg/L (Activated sludge of a predominantly domestic sewage)<br>OECD 209                         |
| Talc 14807-96-6                                                         | EC50 (96h) = 7202.700 mg/L (Green Algae) NOEC (30d) = 918.089 mg/L (Green Algae) QSAR                                         | LC50 (48h) = 36812.359 mg/L (Daphnid species) QSAR                                   | LC50 (96h) = 89581.016 mg/L (Fishes species) QSAR                                             |                                                                                                                 |
| Silica, amorphous, fumed, crystalline-free<br>112945-52-5               |                                                                                                                               | EL50 (24h) >= 1000 mg/L (Daphnia magna) OECD 202                                     | LC50 (96h) > 10000 mg/L (Brachydanio rerio) OECD 203                                          |                                                                                                                 |
| Titanium dioxide 13463-67-7                                             | EC50 (72h) > 100 mg/L (Pseudokirchneriella subcapitata)<br>NOEC (72h) >= 100 mg/L (Pseudokirchneriella subcapitata) OECD 201  | EC50 (48h) > 100 mg/L (Daphnia magna) OECD 202                                       | LC50 (96h) > 100 mg/L (Carassius auratus) NOEC (96h) >= 100 mg/L (Carassius auratus) OECD 203 | EC50 (3h) > 1000 mg/L, NOEC (3h) >= 1000 mg/L (Activated sludge of a predominantly domestic sewage)<br>OECD 209 |
| phthalic anhydride 85-44-9                                              | EC50 (72h) = 68 mg/L, NOEC (72h) = 32 mg/L (Pseudokirchnerella subcapitata) OECD 201                                          | EC50 (48h) = 71 mg/L (Daphnia magna) OECD 202                                        | LC50 (96h) > 99 mg/L (Oryzias latipes) OECD 203                                               | EC50 (3h) > 1000 mg/L (Activated sludge), ISO 8192<br>EC50 (16h) = 13 mg/L (Pseudomonas putida), ISO 10712      |
| (2-methoxymethylethoxy)propanol 34590-94-8                              | EC50 (72h) > 969 mg/L (Pseudokirchnerella subcapitata) OECD 201                                                               | LC50 (48h) = 1919 mg/L (Daphnia magna) Similar to OECD 202                           | LC50 (96h) > 1000 mg/L (Poecilia reticulata) OECD 203                                         | EC10 (18h) = 4168 mg/L (Pseudomonas putida) No guideline followed                                               |
| Paraffin waxes and Hydrocarbon waxes 8002-74-2                          | NOEL (72h) >= 100 mg/L (Pseudokirchnerella subcapitata), Read across with : N100DW<br>OECD 201                                | LL50 (48h) > 1000 mg/L (Daphnia magna) QSAR                                          | LL50 (96h) > 1000 mg/L (Oncorhynchus mykiss) QSAR                                             | LL50 (40h) > 1000 mg/L (Tetrahymena pyriformis)<br>NOEL (40h) >= 1000 mg/L (Tetrahymena pyriformis) QSAR        |
| Hydrocarbons, C9-C12, n-alkanes, isoalkanes, cyclics, aromatics (2-25%) | EL50 (72h) = 4.1 mg/L (Pseudokirchneriella subcapitata)<br>NOELR (72h) = 0.76 mg/L (Pseudokirchneriella subcapitata) OECD 201 | EL50 (48h) = 10 - 22 mg/L (Daphnia magna) OECD 202                                   | LL50 (96h) = 10 - 30 mg/L (Oncorhynchus mykiss) OECD 203                                      |                                                                                                                 |
| Diiron trioxide 1309-37-1                                               |                                                                                                                               | EC50 (48h) > 100 mg/L (Daphnia magna) OECD 202                                       |                                                                                               | EC50 (3h) > 10000 mg/L (Activated sludge of a predominantly domestic sewage)<br>ISO 8192                        |

# MATERIAL SAFETY DATA SHEET

|                         |                                                                                                                                                                                                              |  |                                                                                                                                                                          |                                                                                                                                               |
|-------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| cobalt octoate 136-52-7 | EC50 (72h) = 144 µg Codiss./L (Pseudokirchneriella subcapitata)<br>NOEC (72h) = 32.2 µg./L (Pseudokirchneriella subcapitata)<br>LOEC (72h) = 52.7 µg Codiss./L (Pseudokirchneriella subcapitata)<br>OECD 201 |  | LC50 (96h) = 1.512 mg/L (Oncorhynchus mykiss)<br>NOEC (96h) = 0.939 mg/L (Oncorhynchus mykiss)<br>LOEC (96h) = 1.577 mg/L (Oncorhynchus mykiss)<br>ASTM guideline (1996) | EC10 (30 min) = 3.73 mg/L (Activated sludge)<br>EC50 (30 min) = 120 mg/L (Activated sludge)<br>Read across with Cas N°: 7646-79-9<br>OECD 209 |
|-------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|

## 12.1.2. Chronic aquatic toxicity – Component Information

| Chemical Name                                                           | Toxicity to algae                                                                                                         | Toxicity to daphnia and other aquatic invertebrates.                                                                                         | Toxicity to fish                                                                                                                                                 | Toxicity to microorganisms |
|-------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|
| Styrene 100-42-5                                                        |                                                                                                                           | NOEC (21d) = 1.01 mg/L (Daphnia magna)<br>LOEC (21d) = 2.06 mg/L (Daphnia magna)<br>EC50 (21d) = 1.88 mg/L (Daphnia magna) OECD 203          |                                                                                                                                                                  |                            |
| phthalic anhydride 85-44-9                                              |                                                                                                                           | NOEC (reproduction) 21d = 16 mg/L, EC50 (reproduction) 21d = 42 mg/L (Daphnia magna) OECD 211                                                | LC50 (7d) = 560 mg/L (Danio rerio), OECD 210 LOEC (total embryotoxicity) 60d = 32 mg/L, NOEC (mortality, length, weight, embryotoxicity) 60d = 10 mg/L, OECD 210 |                            |
| (2-methoxymethylethoxy)propanol 34590-94-8                              |                                                                                                                           | NOEC (22d) >= 0.5 mg/L (Daphnia magna) Similar to OECD 211                                                                                   |                                                                                                                                                                  |                            |
| Paraffin waxes and Hydrocarbon waxes 8002-74-2                          |                                                                                                                           | NOEL (21d) >= 1000 mg/L (Daphnia magna) QSAR                                                                                                 | NOEL (28d) >= 1000 mg/L (Oncorhynchus mykiss) QSAR                                                                                                               |                            |
| Hydrocarbons, C9-C12, n-alkanes, isoalkanes, cyclics, aromatics (2-25%) |                                                                                                                           | EC50 (21d) = 0.328 mg/L (Daphnia magna) OECD 211                                                                                             |                                                                                                                                                                  |                            |
| cobalt octoate 136-52-7                                                 | EC50 (7d) = 90.1 µg./L (Lemna minor)<br>NOEC (7d) = 3.0 µg/L (Lemna minor)<br>LOEC (7d) = 8.8 µg/L (Lemna minor) OECD 221 | NOECR (21d) = 60.8 µg./L (Daphnia magna)<br>LC50 (21d) = 121.3 mg/L (Daphnia magna) LOECR (21d) = 93.3 µg Codiss./L (Daphnia magna) OECD 211 |                                                                                                                                                                  |                            |

## 12.1.3. Effects on terrestrial organisms - Component Information

|                              |             |                |                               |         |
|------------------------------|-------------|----------------|-------------------------------|---------|
| Acute toxicity               |             |                |                               |         |
| phthalic anhydride (85-44-9) |             |                |                               |         |
| Acute toxicity               | Test Method | Species        | Values                        | Remarks |
| plants                       |             | Lactuca sativa | EC50 (germination) = 731 mg/L |         |

|                           |          |                 |                                                                                                                                                                                                          |         |
|---------------------------|----------|-----------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|
| Chronic toxicity          |          |                 |                                                                                                                                                                                                          |         |
| Styrene (100-42-5)        |          |                 |                                                                                                                                                                                                          |         |
| Chronic toxicity          | Method   | Species         | Values                                                                                                                                                                                                   | Remarks |
| Toxicity to invertebrates | OECD 207 | Eisenia foetida | LC50 (14d) = 120 mg/kg soil dw<br>LOEC (burrowing time and mean percent weight change) = 65 mg/kg soil dw<br>LOEC (survival) = 180 mg/kg soil dw<br>NOEC (mean percent weight change) = 34 mg/kg soil dw |         |

|                                              |          |                     |                      |         |
|----------------------------------------------|----------|---------------------|----------------------|---------|
| (2-methoxymethylethoxy)propanol (34590-94-8) |          |                     |                      |         |
| Chronic toxicity                             | Method   | Species             | Values               | Remarks |
| plants                                       | OECD 227 | Grossypium hirsutum | NOEC (21d) = 250 g/L |         |

## 12.2. Persistence and degradability

|                                                |                                                       |                           |
|------------------------------------------------|-------------------------------------------------------|---------------------------|
| Chemical Name                                  | Biodegradation                                        | Evaluation                |
| Styrene 100-42-5                               | 87% (20d) similar to OECD 301D                        | Readily biodegradable     |
| phthalic anhydride 85-44-9                     | 68 % (10d), 74 % (30d)<br>OECD 301 D                  | Readily biodegradable     |
| (2-methoxymethylethoxy)propanol 34590-94-8     | 96 % (28d) DOC removal, 75 % (10d) OECD 301F          | Readily biodegradable     |
| Paraffin waxes and Hydrocarbon waxes 8002-74-2 | 31 % (28d) OECD 301F<br>Read across with : MRD-94-981 | Inherently biodegradable. |

|                                                                         |                                                                     |                       |
|-------------------------------------------------------------------------|---------------------------------------------------------------------|-----------------------|
| Hydrocarbons, C9-C12, n-alkanes, isoalkanes, cyclics, aromatics (2-25%) | 74.7% (28d) (Activated sludge, domestic, non-adapted)<br>OECD 301 F | Readily biodegradable |
| cobalt octoate 136-52-7                                                 | 60% (> 10d), OECD 301 B                                             | Readily biodegradable |

## 12.3. Bioaccumulative potential

|                               |         |                               |
|-------------------------------|---------|-------------------------------|
| Bioconcentration factor (BCF) |         |                               |
| Styrene (100-42-5)            |         |                               |
| Method                        | Species | Bioconcentration factor (BCF) |
| Calculation method            |         | 74                            |

|                              |         |                               |
|------------------------------|---------|-------------------------------|
| phthalic anhydride (85-44-9) |         |                               |
| Method                       | Species | Bioconcentration factor (BCF) |
| Calculation method           |         | 3.16 - 3.4                    |

|                                            |         |
|--------------------------------------------|---------|
| Chemical Name                              | log Pow |
| Styrene 100-42-5                           | 3       |
| Talc 14807-96-6                            | -9.4    |
| phthalic anhydride 85-44-9                 | 1.6     |
| (2-methoxymethylethoxy)propanol 34590-94-8 | 0.0043  |

## 12.4. Mobility in soil

|                            |        |       |
|----------------------------|--------|-------|
| Chemical Name              | LogKoc | Koc   |
| Styrene 100-42-5           | 2.55   | 352   |
| Talc 14807-96-6            | 1.5027 | 31.82 |
| phthalic anhydride 85-44-9 | -      | 31    |

## 12.5. Results of PBT and vPvB

|               |     |      |
|---------------|-----|------|
| Chemical Name | PBT | vPvB |
|---------------|-----|------|

|                                                                         |                                                                                     |                                                                                         |
|-------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| Styrene 100-42-5                                                        | This substance is not considered to be persistent, bioaccumulating nor toxic (PBT). | This substance is not considered to be very persistent nor very bioaccumulating (vPvB). |
| Talc 14807-96-6                                                         | This substance is not considered to be persistent, bioaccumulating nor toxic (PBT). | This substance is not considered to be very persistent nor very bioaccumulating (vPvB). |
| Silica, amorphous, fumed, crystalline-free 112945-52-5                  | This substance is not considered to be persistent, bioaccumulating nor toxic (PBT). | This substance is not considered to be very persistent nor very bioaccumulating (vPvB). |
| Titanium dioxide 13463-67-7                                             | This substance is not considered to be persistent, bioaccumulating nor toxic (PBT). | This substance is not considered to be very persistent nor very bioaccumulating (vPvB). |
| phthalic anhydride 85-44-9                                              | This substance is not considered to be persistent, bioaccumulating nor toxic (PBT). | This substance is not considered to be very persistent nor very bioaccumulating (vPvB). |
| (2-methoxymethylethoxy)propanol 34590-94-8                              | This substance is not considered to be persistent, bioaccumulating nor toxic (PBT). | This substance is not considered to be very persistent nor very bioaccumulating (vPvB). |
| Paraffin waxes and Hydrocarbon waxes 8002-74-2                          | This substance is not considered to be persistent, bioaccumulating nor toxic (PBT). | This substance is not considered to be very persistent nor very bioaccumulating (vPvB). |
| Hydrocarbons, C9-C12, n-alkanes, isoalkanes, cyclics, aromatics (2-25%) | This substance is not considered to be persistent, bioaccumulating nor toxic (PBT). | This substance is not considered to be very persistent nor very bioaccumulating (vPvB). |
| -                                                                       |                                                                                     |                                                                                         |
| Diiron trioxide 1309-37-1                                               | This substance is not considered to be persistent, bioaccumulating nor toxic (PBT). |                                                                                         |

## 12.6. Endocrine disrupting properties

Endocrine disrupting properties No information available

## 12.7. Other Adverse Effects

None known.

## 13. Disposal Considerations

### 13.1. Waste Treatment Methods

#### Waste from Residues/Unused Products

- Dispose of in accordance with the European Directives on waste and hazardous waste.
- Do not flush into surface water or sanitary sewer system

## Contaminated packaging

- Empty containers should be taken to an approved waste handling site for recycling or disposal.

## Other information

- According to the European Waste Catalogue, Waste Codes are not product specific, but application specific.
- Waste codes should be assigned by the user based on the application for which the product was used.

## 14. Transport Information

### 14.1. UN number or ID number

|           |        |
|-----------|--------|
| ADR/RID   | UN1866 |
| IMDG/IMO  | UN1866 |
| ICAO/IATA | UN1866 |
| ADN       | UN1866 |

### 14.2. UN proper shipping name

|           |                                                                  |
|-----------|------------------------------------------------------------------|
| ADR/RID   | Resin solution<br>UN1866, RESIN SOLUTION, 3, PG III, (D/E)       |
| IMDG/IMO  | Resin solution<br>UN1866, RESIN SOLUTION, 3, PG III, (31°C c.c.) |
| ICAO/IATA | UN1866, RESIN SOLUTION, 3, PG III                                |
| ADN       | Resin solution<br>UN1866, RESIN SOLUTION, 3, PG III              |

## 14.3. Transport hazard class(es)

ADR/RID

Hazard class 3

IMDG/IMO

Hazard class 3

ICAO/IATA

Hazard class 3

ADN

Hazard class 3

## 14.4. Packing group

ADR/RID III

IMDG/IMO III

ICAO/IATA III

ADN III

## 14.5. Environmental hazards

ADR/RID No

IMDG/IMO No

Marine pollutant No

ICAO/IATA No

ADN No

## 14.6. Special precautions for user

ADR/RID

Classification Code F1

Tunnel restriction code (D/E)

Limited quantity 5 L

IMDG/IMO

EmS F-E, S-E

|                     |      |
|---------------------|------|
| Limited quantity    | 5 L  |
| ICAO/IATA           |      |
| ERG Code            | 3L   |
| Limited quantity    | 10 L |
| ADN                 |      |
| Classification Code | F1   |
| Limited quantity    | 5 L  |
| ventilation         | VE01 |

### Special precautions for users

Special precautions      No information available

## 14.7. Maritime transport in bulk according to IMO instruments

Transport in bulk according to Annex II of MARPOL and the IBC Code not applicable

## 15. Regulatory Information

### 15.1. Safety, Health And Environmental Regulations / Legislation Specific For The Substance Or Mixture

Regulation (EC) No. 1907/2006 (REACH)

Regulation (EC) No. 1272/2008 (CLP)

Regulation (EU) No. 2020/878

Directive 88/642/EEC

Directive 98/24/EC

Directive 1999/92/EC

Directive 2012/18/EU

The mixture is subject to restrictions on use, see Annex XVII of the Regulation 1907/2006/EC (REACH): Column 1, n° 3; Column 1, n° 40.

### European Union

## Named dangerous substances per Seveso Directive (2012/18/EU)

### National regulatory information

#### The United Kingdom

Avoid exceeding of the given occupational exposure limits (see section 8).

#### Ireland

Avoid exceeding of the given occupational exposure limits (see section 8).

## 15.2. Chemical Safety Assessment

Chemical Safety Assessment

Yes

Exposure scenario

Relevant information for risk control are communicated in the form of exposure scenario attached to the safety data sheet.

## 16. Other Information

### Full text of H-Statements referred to under sections 2 and 3

H226 - Flammable liquid and vapour

H302 - Harmful if swallowed

H304 - May be fatal if swallowed and enters airways

H315 - Causes skin irritation

H317 - May cause an allergic skin reaction

H318 - Causes serious eye damage

H319 - Causes serious eye irritation

H332 - Harmful if inhaled

H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled

H335 - May cause respiratory irritation

H336 - May cause drowsiness or dizziness

H360Fd - May damage fertility. Suspected of damaging the unborn child

H361d - Suspected of damaging the unborn child

H372 - Causes damage to organs through prolonged or repeated exposure if inhaled

H400 - Very toxic to aquatic life

H411 - Toxic to aquatic life with long lasting effects

H412 – Harmful to aquatic life with long lasting effects

EUH066 – Repeated exposure may cause skin dryness or cracking

EUH208 – May produce an allergic reaction

Training Advice      Handle in accordance with good industrial hygiene and safety practice. To avoid risks to man and the environment, comply with the instructions for use.

Sources of key data  
used to compile the datasheet      ECHA

This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006

## Disclaimer

*The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.*

**End of Safety Data Sheet**