## * * *Section 1 - IDENTIFICATION OF THE SUBSTANCE / MIXTURE AND OF THE COMPANY / UNDERTAKING* * *

**1.1 Product Identifier:**

**Material Name:** OBJET VERODENT MED670

**Chemical Family**

acrylic compounds

**Substance Registration Number(s)**

The components are either registered, pre-registered or not subject to REACH.

Substance Registration Number(s) : 01-0000016491-73-XXXX (CAS#, 5117-12-4)

**1.2 Relevant Identified Uses of the Substance or Mixture and Uses Advised Against**

**Identified Uses**

This product is a cartridge containing ink. Under normal conditions of use, the substance is released from a cartridge only inside an appropriate printing system, and therefore, exposure is limited.

**Uses Advised Against**

None known.

**1.3 Details of the supplier of the safety data sheet**

Stratasys GmbH
Airport Boulevard B 210
D-77836 Rheinmünster, Germany

Phone: +49 722 97 77 20

Emergency # +49 722 97772280

**Email Address**

objet-info@stratasys.com; www.stratasys.com

**1.4 Emergency Telephone Number**

+49 722 97772280 : Europe (Multi-lingual Response)
+49 722 97772281 : Global (English language response)
+1 978 495 5580 : USA (Multi-lingual Response)
+85 2 975 70887 : Asia Pacific (Multi-lingual Response)
+61 2 8011 4763 : Australia (Multi-lingual Response)
+86 15626070595 : China (Chinese language response)

## * * *Section 2 - HAZARDS IDENTIFICATION* * *

### 2.1 Classification of the Substance or Mixture

**Classification according to Regulation (EC) No 1272/2008**

Acute Toxicity (Oral), Category 4
Eye Damage / Irritation, Category 1
Skin Corrosion / Irritation, Category 2
Skin sensitizer, Category 1
Toxic to Reproduction, Category 2
Specific Target Organ Toxicity - Single Exposure, Category 3 (respiratory system)
Specific Target Organ Toxicity - Repeated Exposure, Category 2
Hazardous to the Aquatic Environment - Chronic Hazard, Category 3

**Classification according to Directives 67/548/EEC and/or 1999/45/EC**

**R22** Harmful if swallowed.
**R36/37/38** Irritating to eyes, respiratory system and skin.
**R41** Risk of serious damage to eyes.
**R43** May cause sensitization by skin contact.
**R48/22** Harmful: danger of serious damage to health by prolonged exposure if swallowed.
**R52/53** Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
**R62** Possible risk of impaired fertility.

**2.2 Label Elements**

**Labeling according to Regulation (EC) 1272/2008/EC:**

**Symbol(s)**

**Signal Word**

DANGER

**Hazard Statement(s)**

**H302** Harmful if swallowed.
**H318** Causes serious eye damage
**H315** Causes skin irritation
**H317** May cause an allergic skin reaction
**H335** May cause respiratory irritation
**H361** Suspected of damaging fertility or the unborn child.
**H373** May cause damage to organs through prolonged or repeated exposure
**H412** Harmful to aquatic life with long lasting effects

**Precautionary Statement(s)**

**Prevention**

**P271** Use only outdoors or in a well-ventilated area. **P280** Wear protective gloves/protective clothing/eye protection/face protection.

**Response**

**P305+P351+P338** IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. **P310** Immediately call a POISON CENTER or doctor/physician.

**Storage**

**P405** Store locked up.

**Disposal**

**P501** Dispose of contents/container in accordance with local/regional/national/international regulations.

**Labeling according to Directive 67/548/EEC and/or 1999/45/EC**

**Symbols**

**Xn**

**R22** Harmful if swallowed.
**R36/37/38** Irritating to eyes, respiratory system and skin.
**R41** Risk of serious damage to eyes.
**R43** May cause sensitization by skin contact.
**R48/22** Harmful: danger of serious damage to health by prolonged exposure if swallowed.
**R52/53** Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
**R62** Possible risk of impaired fertility.

**S2** Keep out of the reach of children.
**S24** Avoid contact with skin.
**S26** In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
**S36/37/39** Wear suitable protective clothing, gloves and eye/face protection.
**S46** If swallowed, seek medical advice immediately and show this container or label.
**S60** This material and its container must be disposed of as hazardous waste.
**S61** Avoid release to the environment. Refer to special instructions/Safety data sheets.

**2.3 Other Hazards**

None known.

## * * *Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS* * *

| CAS<br>EC No<br>Registration No | Component<br>Synonyms | 67/548 EEC<br>(DSD) | 1272/2008<br>(CLP) | Percent |
|---|---|---|---|---|
| --<br>-- | Acrylic monomer | Xn; R:22-41-43-48/22 | Acute Tox. 4 (Oral)<br>Eye Dam. 1<br>Skin Sens. 1<br>STOT RE 2 | <30 |
| 5888-33-5<br>227-561-6<br>-- | 2-Propenoic acid, 1,7,7-trimethylbicyclo[2.2.1]hept-2-yl ester, exo- | Xi N; R:36/37/38-51/53 | Skin Irrit. 2<br>Eye Irrit. 2<br>STOT SE 3<br>Aquatic Chronic 2 | <25 |
| --<br>-- | Acrylic Oligomer | Xi; R:43 | Skin Sens. 1 | <15 |

| | | | | |
|---|---|---|---|---|
| --<br>-- | Photo initiator | Xn; R:62 | Repr. 2 | <3 |
| 13463-67-7<br>236-675-5<br>-- | Titanium dioxide | | | <0.5 |
| 52408-84-1<br>500-114-5<br>-- | Acrylic acid ester | Xi; R:36-43 | Eye Irrit. 2<br>Skin Sens.1 | <0.3 |
| 1330-20-7<br>215-535-7<br>-- | Xylenes (o-, m-, p- isomers) | Xn; R:10-20/21-38 | Flam. Liq. 3<br>Acute Tox. 4 (Dermal)<br>Acute Inh. Tox. 4<br>Skin Irrit. 2<br>Note(s): C | 0.01-0.1 |
| 123-86-4<br>204-658-1<br>-- | n-Butyl acetate | R:10-66-67 | Flam. Liq. 3<br>STOT SE 3<br>EU Repeat Skin EU | 0.01-0.1 |
| 100-41-4<br>202-849-4<br>-- | Ethylbenzene | F Xn; R:11-20 | Flam. Liq. 2<br>Acute Inh. Tox. 4 | 0.01-0.1 |
| 108-65-6<br>203-603-9<br>-- | Propylene glycol monomethyl ether acetate | R:10 | Flam. Liq. 3 | <0.025 |
| 1333-86-4<br>215-609-9<br>-- | Carbon black | | | <0.01 |
| 7664-38-2<br>231-633-2<br>-- | Phosphoric acid | C; R:34 | Skin Corr. 1B<br>Note(s): B | <0.003 |

**Notes:**

**B** Some substances (acids, bases, etc.) are placed on the market in aqueous solutions at various concentrations and, therefore, these solutions require different classification and labelling since the hazards vary at different concentrations. In Part 3 of Annex VI entries with Note B have a general designation of the following type: "nitric acid ...%". In this case the supplier must state the percentage concentration of the solution on the label. Unless otherwise stated, it is assumed that the percentage concentration is calculated on a weight/weight basis.

**C** Some organic substances may be marketed either in a specific isomeric form or as a mixture of several isomers. In this case the supplier must state on the label whether the substance is a specific isomer or a mixture of isomers.

**Additional Information**

Under normal conditions of use, the substance is released from a cartridge only inside an appropriate printing system, and therefore, exposure is limited. The liquid within the cartridges is considered hazardous, and the MSDS has been prepared in case of exposure to the liquid.

TITANIUM DIOXIDE is present in a low concentration, dispersed in a liquid

## * * *Section 4 - FIRST AID MEASURES* * *

### 4.1 Description of First Aid Measures

**Inhalation**

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.

**Skin**

IF ON SKIN: Wash with plenty of soap and water. If skin irritation or rash occurs: Get medical advice/attention. Take off contaminated clothing and wash before re-use.

**Eyes**

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician.

**Ingestion**

IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell. Rinse mouth.

### 4.2 Most Important Symptoms and Effects, both Acute and Delayed

**Acute**

respiratory tract irritation, eye damage, skin irritation, allergic skin reaction

**Delayed**

allergic reactions, reproductive effects

### 4.3 Indication of any Immediate Medical Attention and Special Treatment Needed

**Note to Physicians**

IF exposed or concerned: Get medical advice/attention.

## * * *Section 5 - FIRE FIGHTING MEASURES* * *

### 5.1 Extinguishing Media

Use extinguishing agents appropriate for surrounding fire. Class B fires: Use carbon dioxide ($CO_2$), regular dry chemical (sodium bicarbonate), regular form (Aqueous Film Forming Foam-AFFF), or water spray to cool containers.

**Unsuitable Extinguishing Media**

None known.

### 5.2 Special Hazards Arising from the Substance or Mixture

Slight fire hazard.

**Thermal Decomposition Products**

**Combustion:** oxides of carbon

### 5.3 Advice for Firefighters

**Fire Fighting Measures**

Move container from fire area if it can be done without risk. Cool containers with water spray until well after the fire is out. Keep unnecessary people away, isolate hazard area and deny entry. Keep out of water supplies and sewers. Avoid inhalation of material or combustion by-products.

**Protective Equipment and Precautions for Firefighters**

Wear full protective fire fighting gear including self contained breathing apparatus (SCBA) for protection against possible exposure. Avoid inhalation of material or combustion by-products.

## * * *Section 6 - ACCIDENTAL RELEASE MEASURES* * *

**Occupational Spill / Release**

Intact cartridges do not pose a leak or spill hazard. Damaged cartridges may leak uncured ink. Stop leak if possible without personal risk. Reduce vapors with water spray. Absorb with sand or other non-combustible material. Collect spilled material in appropriate container for disposal. Keep out of water supplies and sewers.

**6.1 Personal Precautions, Protective Equipment and Emergency Procedures**

Wear personal protective clothing and equipment, see Section 8.

**6.2 Environmental Precautions**

Avoid release to the environment.

**6.3 Methods and Material for Containment and Cleaning up**

Collect spilled material with an inert absorbent such as sand or vermiculite. Place in properly labeled closed container. Flush area with water to remove trace residue.

**6.4 Reference to Other Sections**

See Section 7 for Handling Procedures. See Section 8 for Personal Protective Equipment recommendations. See Section 13 for Disposal Considerations.

## * * *Section 7 - HANDLING AND STORAGE* * *

**7.1 Precautions for Safe Handling**

Do not breathe vapor or mist. Use only outdoors or in a well-ventilated area. Wear protective gloves and eye/face protection. Contaminated work clothing should not be allowed out of the workplace. Wash thoroughly after handling. Do not eat, drink, or smoke when using this product. Avoid release to the environment.

**7.2 Conditions for Safe Storage, Including any Incompatibilities**

Store in accordance with all current regulations and standards. Store locked up. Store in a well-ventilated place. Keep container tightly closed. Store between 15 °C and 25 °C. Shipment temperature (up to 5 weeks) is -20 °C to 50 °C. Store in a combustible storage area away from heat and open flame. Store in a cool, dry place. Avoid direct sunlight. Keep in the dark. Keep separated from incompatible substances.

## * * *Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION* * *

### 8.1 Control Parameters

**Component Exposure Limits**

**Titanium dioxide (13463-67-7)**

| | |
|---|---|
| **Austria:** | 5 mg/m3 TWA (alveolar dust, respirable fraction) |
| | 10 mg/m3 STEL (alveolar dust, respirable fraction, 2 X 60 min) |
| **Belgium:** | 10 mg/m3 TWA |
| **Bulgaria:** | 10.0 mg/m3 TWA (respirable dust) |
| **Denmark:** | 6 mg/m3 TWA (as Ti) |
| **Estonia:** | 5 mg/m3 TWA |
| **France:** | 10 mg/m3 TWA (as Ti) |
| **Greece:** | 10 mg/m3 TWA (inhalable fraction); 5 mg/m3 TWA (respirable fraction) |
| **Ireland:** | 10 mg/m3 TWA (total inhalable dust); 4 mg/m3 TWA (respirable dust) |
| **Latvia:** | 10 mg/m3 TWA |
| **Lithuania:** | 5 mg/m3 TWA |
| **Poland:** | 10.0 mg/m3 TWA (<2% free crystalline silica and containing no asbestos, total inhalable dust) |
| **Portugal:** | 10 mg/m3 TWA [VLE-MP] |
| **Romania:** | 15 mg/m3 STEL |
| | 10 mg/m3 TWA |
| **Spain:** | 10 mg/m3 TWA [VLA-ED] |
| **Sweden:** | 5 mg/m3 LLV (total dust) |
| **United Kingdom:** | 10 mg/m3 TWA (total inhalable); 4 mg/m3 TWA (respirable) |
| | 30 mg/m3 STEL (calculated, total inhalable); 12 mg/m3 STEL (calculated, respirable) |
| | 10 mg/m3 TWA |

**Xylenes (o-, m-, p- isomers) (1330-20-7)**

| | |
|---|---|
| **EU (IOELV):** | 50 ppm TWA (pure); 221 mg/m3 TWA (pure) |
| | 100 ppm STEL (pure); 442 mg/m3 STEL (pure) |
| | Possibility of significant uptake through the skin |
| **Austria:** | 50 ppm TWA; 221 mg/m3 TWA (all isomers) |
| | 100 ppm STEL (all isomers, 4 X 15 min); 442 mg/m3 STEL (all isomers, 4 X 15 min) |
| | skin notation |
| **Belgium:** | 50 ppm TWA; 221 mg/m3 TWA |
| | 100 ppm STEL; 442 mg/m3 STEL |
| | Skin |
| **Bulgaria:** | Skin notation (pure) |
| | 442.0 mg/m3 STEL (pure); 100 ppm STEL |
| | 221.0 mg/m3 TWA (pure); 50 ppm TWA |
| **Czech Republic:** | 400 mg/m3 Ceiling |
| | Potential for cutaneous absorption |
| **Cyprus:** | Skin-potential for cutaneous absorption |
| | 100 ppm STEL; 442 mg/m3 STEL |
| | 50 ppm TWA; 221 mg/m3 TWA |
| **Denmark:** | Present |
| | Potential for cutaneous absorption |
| | 25 ppm TWA; 109 mg/m3 TWA |
| **Estonia:** | Skin notation |

| | |
|---|---|
| | 100 ppm STEL; 450 mg/m3 STEL |
| | 50 ppm TWA; 221 mg/m3 TWA |
| **Finland:** | 50 ppm TWA; 220 mg/m3 TWA |
| | 100 ppm STEL; 440 mg/m3 STEL |
| | Potential for cutaneous absorption |
| **France:** | 50 ppm TWA (restrictive limit); 221 mg/m3 TWA (restrictive limit) |
| | 100 ppm STEL [VLCT] (restrictive limit); 442 mg/m3 STEL [VLCT] (restrictive limit) |
| | Risk of cutaneous absorption |
| **Germany (TRGS):** | 100 ppm TWA AGW (all isomers, exposure factor 2); 440 mg/m3 TWA AGW (all isomers, exposure factor 2) |
| | skin notation (all isomers) |
| **Germany (DFG):** | 100 ppm TWA MAK (all isomers); 440 mg/m3 TWA MAK (all isomers) |
| | 200 ppm Peak (all isomers); 880 mg/m3 Peak (all isomers) |
| | skin notation (all isomers) |
| **Gibraltar:** | Skin notation |
| | 100 ppm STEL (pure); 442 mg/m3 STEL (pure) |
| | 50 ppm TWA (pure); 221 mg/m3 TWA (pure) |
| **Greece:** | 100 ppm TWA; 435 mg/m3 TWA |
| | 150 ppm STEL; 650 mg/m3 STEL |
| | skin - potential for cutaneous absorption |
| **Hungary:** | potential for cutaneous absorption |
| | 442 mg/m3 STEL [CK] |
| | 221 mg/m3 TWA [AK] |
| **Ireland:** | 50 ppm TWA; 221 mg/m3 TWA |
| | 100 ppm STEL; 442 mg/m3 STEL |
| | Potential for cutaneous absorption |
| **Italy:** | 50 ppm TWA (pure); 221 mg/m3 TWA (pure) |
| | 100 ppm STEL (pure); 442 mg/m3 STEL (pure) |
| | skin - potential for cutaneous absorption (pure) |
| **Latvia:** | skin - potential for cutaneous exposure |
| | 100 ppm STEL; 442 mg/m3 STEL |
| | 50 ppm TWA; 221 mg/m3 TWA |
| **Lithuania:** | Skin notation |
| | 100 ppm STEL; 450 mg/m3 STEL |
| | 50 ppm TWA; 200 mg/m3 TWA |
| **Luxembourg:** | 100 ppm STEL; 442 mg/m3 STEL |
| | 50 ppm TWA; 221 mg/m3 TWA |
| **Malta:** | possibility of significant uptake through the skin (pure) |
| | 100 ppm STEL (pure); 442 mg/m3 STEL (pure) |
| | 50 ppm TWA (pure); 221 mg/m3 TWA (pure) |
| **Netherlands:** | 210 mg/m3 TWA |
| | 442 mg/m3 STEL |
| | skin notation |
| **Poland:** | Irritant |
| | Skin notation |
| | 100 mg/m3 TWA |
| **Portugal:** | 100 ppm TWA [VLE-MP] |
| | 150 ppm STEL [VLE-CD |

**Romania:** 3 g/L Medium: urine Time: end of shift Parameter: Methylhippuric acid
Skin notation
100 ppm STEL; 442 mg/m3 STEL
50 ppm TWA; 221 mg/m3 TWA

**Slovak Republic:** 442 mg/m3 Ceiling
Potential for cutaneous absorption
50 ppm TWA; 221 mg/m3 TWA

**Slovenia:** Potential for cutaneous absorption
100 ppm STEL; 442 mg/m3 STEL
50 ppm TWA; 221 mg/m3 TWA

**Spain:** 50 ppm TWA [VLA-ED] (indicative limit value); 221 mg/m3 TWA [VLA-ED] (indicative limit value)
100 ppm STEL [VLA-EC]; 442 mg/m3 STEL [VLA-EC]
skin - potential for cutaneous exposure

**Sweden:** 50 ppm LLV; 221 mg/m3 LLV
100 ppm STV; 442 mg/m3 STV
Skin notation

**United Kingdom:** 50 ppm TWA; 220 mg/m3 TWA
100 ppm STEL; 441 mg/m3 STEL
Potential for cutaneous absorption
100 ppm TWA
150 ppm STEL

**n-Butyl acetate (123-86-4)**

**Austria:** 100 ppm TWA; 480 mg/m3 TWA (all isomers except tert-Butyl acetate)
100 ppm STEL (all isomers except tert-Butyl acetate); 480 mg/m3 STEL (all isomers except tert-Butyl acetate)
100 ppm Ceiling; 480 mg/m3 Ceiling

**Belgium:** 150 ppm TWA; 723 mg/m3 TWA
200 ppm STEL; 964 mg/m3 STEL

**Bulgaria:** 950.0 mg/m3 STEL
710.0 mg/m3 TWA

**Czech Republic:** 1200 mg/m3 Ceiling

**Denmark:** Present
150 ppm TWA; 710 mg/m3 TWA

**Finland:** 150 ppm TWA; 720 mg/m3 TWA
200 ppm STEL; 960 mg/m3 STEL

**France:** 150 ppm TWA; 710 mg/m3 TWA
200 ppm STEL [VLCT]; 940 mg/m3 STEL [VLCT]

**Germany (TRGS):** 62 ppm TWA AGW (The risk of damage to the embryo or fetus can be excluded when AGW and BGW values are observed, exposure factor 2); 300 mg/m3 TWA AGW (The risk of damage to the embryo or fetus can be excluded when AGW and BGW values are observed, exposure factor 2)

**Germany (DFG):** 100 ppm TWA MAK; 480 mg/m3 TWA MAK
200 ppm Peak; 960 mg/m3 Peak

**Greece:** 150 ppm TWA; 710 mg/m3 TWA
200 ppm STEL; 950 mg/m3 STEL

**Hungary:** sensitizer
950 mg/m3 STEL [CK]

950 mg/m3 TWA [AK]
**Latvia:** 200 mg/m3 TWA
**Poland:** 950 mg/m3 STEL [NDSCh]
200 mg/m3 TWA
**Portugal:** 150 ppm TWA [VLE-MP]
200 ppm STEL [VLE-CD
**Romania:** 200 ppm STEL; 950 mg/m3 STEL
**Slovak Republic:** 700 mg/m3 Ceiling
100 ppm TWA; 480 mg/m3 TWA
**Slovenia:** 100 ppm STEL; 480 mg/m3 STEL
100 ppm TWA; 480 mg/m3 TWA
**Spain:** 150 ppm TWA [VLA-ED]; 724 mg/m3 TWA [VLA-ED]
200 ppm STEL [VLA-EC]; 965 mg/m3 STEL [VLA-EC]
**Sweden:** 100 ppm LLV; 500 mg/m3 LLV
150 ppm STV; 700 mg/m3 STV
150 ppm TWA
200 ppm STEL

**Ethylbenzene (100-41-4)**
**EU (IOELV):** 100 ppm TWA; 442 mg/m3 TWA
200 ppm STEL; 884 mg/m3 STEL
Possibility of significant uptake through the skin
**Austria:** 100 ppm TWA; 440 mg/m3 TWA
200 ppm STEL; 880 mg/m3 STEL
skin notation
**Belgium:** 100 ppm TWA; 442 mg/m3 TWA
125 ppm STEL; 551 mg/m3 STEL
Skin
**Bulgaria:** Skin notation
545.0 mg/m3 STEL
435.0 mg/m3 TWA
**Czech Republic:** 500 mg/m3 Ceiling
Potential for cutaneous absorption
**Cyprus:** Skin-potential for cutaneous absorption
200 ppm STEL; 884 mg/m3 STEL
100 ppm TWA; 442 mg/m3 TWA
**Denmark:** Present
Present
Potential for cutaneous absorption
50 ppm TWA; 217 mg/m3 TWA
**Estonia:** Sensitizer
Skin notation
200 ppm STEL; 884 mg/m3 STEL
100 ppm TWA; 442 mg/m3 TWA
**Finland:** 50 ppm TWA; 220 mg/m3 TWA
200 ppm STEL; 880 mg/m3 STEL
Potential for cutaneous absorption
**France:** 20 ppm TWA (restrictive limit); 88.4 mg/m3 TWA (restrictive limit)
100 ppm STEL [VLCT] (restrictive limit); 442 mg/m3 STEL [VLCT] (restrictive limit)

| | |
|---|---|
| | Risk of cutaneous absorption |
| **Germany (TRGS):** | 20 ppm TWA AGW (The risk of damage to the embryo or fetus can be excluded when AGW and BGW values are observed, exposure factor 2); 88 mg/m3 TWA AGW (The risk of damage to the embryo or fetus can be excluded when AGW and BGW values are observed, exposure factor 2) |
| | skin notation |
| **Germany (DFG):** | 20 ppm TWA MAK; 88 mg/m3 TWA MAK |
| | 40 ppm Peak; 176 mg/m3 Peak |
| | skin notation |
| **Gibraltar:** | Skin notation |
| | 200 ppm STEL; 884 mg/m3 STEL |
| | 100 ppm TWA; 442 mg/m3 TWA |
| **Greece:** | 100 ppm TWA; 435 mg/m3 TWA |
| | 125 ppm STEL; 545 mg/m3 STEL |
| **Hungary:** | potential for cutaneous absorption |
| | 884 mg/m3 STEL [CK] |
| | 442 mg/m3 TWA [AK] |
| **Ireland:** | 100 ppm TWA; 442 mg/m3 TWA |
| | 200 ppm STEL; 884 mg/m3 STEL |
| | Potential for cutaneous absorption |
| **Italy:** | 100 ppm TWA; 442 mg/m3 TWA |
| | 200 ppm STEL; 884 mg/m3 STEL |
| | skin - potential for cutaneous absorption |
| **Latvia:** | skin - potential for cutaneous exposure |
| | 200 ppm STEL; 884 mg/m3 STEL |
| | 100 ppm TWA; 442 mg/m3 TWA |
| **Lithuania:** | Skin notation |
| | 200 ppm STEL; 884 mg/m3 STEL |
| | 100 ppm TWA; 442 mg/m3 TWA |
| **Luxembourg:** | Possibility of significant uptake through the skin |
| | 200 ppm STEL; 884 mg/m3 STEL |
| | 100 ppm TWA; 442 mg/m3 TWA |
| **Malta:** | possibility of significant uptake through the skin |
| | 200 ppm STEL; 884 mg/m3 STEL |
| | 100 ppm TWA; 442 mg/m3 TWA |
| **Netherlands:** | 215 mg/m3 TWA |
| | 430 mg/m3 STEL |
| | skin notation |
| **Poland:** | Skin notation |
| | 400 mg/m3 STEL [NDSCh] |
| | 200 mg/m3 TWA |
| **Portugal:** | 100 ppm TWA [VLE-MP] |
| | 125 ppm STEL [VLE-CD |
| **Romania:** | 1.5 g/g Creatinine Medium: urine Time: end of work week Parameter: Mandelic acid |
| | Skin notation |
| | 200 ppm STEL; 884 mg/m3 STEL |
| | 100 ppm TWA; 442 mg/m3 TWA |
| **Slovak Republic:** | 884 mg/m3 Ceiling |

Potential for cutaneous absorption
100 ppm TWA; 442 mg/m3 TWA

**Slovenia:** Potential for cutaneous absorption
200 ppm STEL; 884 mg/m3 STEL
100 ppm TWA; 442 mg/m3 TWA

**Spain:** 100 ppm TWA [VLA-ED] (indicative limit value); 441 mg/m3 TWA [VLA-ED] (indicative limit value)
200 ppm STEL [VLA-EC]; 884 mg/m3 STEL [VLA-EC]
skin - potential for cutaneous exposure

**Sweden:** 50 ppm LLV; 200 mg/m3 LLV
100 ppm STV; 450 mg/m3 STV

**United Kingdom:** 100 ppm TWA; 441 mg/m3 TWA
125 ppm STEL; 552 mg/m3 STEL
Potential for cutaneous absorption
20 ppm TWA

**Propylene glycol monomethyl ether acetate (108-65-6)**

**EU (IOELV):** 50 ppm TWA; 275 mg/m3 TWA
100 ppm STEL; 550 mg/m3 STEL
Possibility of significant uptake through the skin

**Austria:** 50 ppm TWA; 275 mg/m3 TWA
100 ppm STEL; 550 mg/m3 STEL
skin notation

**Belgium:** 50 ppm TWA; 275 mg/m3 TWA
100 ppm STEL; 550 mg/m3 STEL
Skin

**Bulgaria:** Skin notation
550.0 mg/m3 STEL; 100 ppm STEL
275.0 mg/m3 TWA; 50 ppm TWA

**Czech Republic:** 550 mg/m3 Ceiling
Potential for cutaneous absorption

**Cyprus:** Skin-potential for cutaneous absorption
100 ppm STEL; 550 mg/m3 STEL
50 ppm TWA; 275 mg/m3 TWA

**Denmark:** Present
Potential for cutaneous absorption
50 ppm TWA; 275 mg/m3 TWA

**Estonia:** Sensitizer
Skin notation
100 ppm STEL; 550 mg/m3 STEL
50 ppm TWA; 275 mg/m3 TWA

**Finland:** 50 ppm TWA; 270 mg/m3 TWA
100 ppm STEL; 550 mg/m3 STEL
Potential for cutaneous absorption

**France:** 50 ppm TWA (restrictive limit); 275 mg/m3 TWA (restrictive limit)
100 ppm STEL [VLCT] (restrictive limit); 550 mg/m3 STEL [VLCT] (restrictive limit)
Risk of cutaneous absorption

**Germany (TRGS):** 50 ppm TWA AGW (The risk of damage to the embryo or fetus can be excluded when AGW and BGW values are observed, exposure factor 1); 270 mg/m3 TWA AGW (The

| | |
|---|---|
| | risk of damage to the embryo or fetus can be excluded when AGW and BGW values are observed, exposure factor 1) |
| **Germany (DFG):** | 50 ppm TWA MAK; 270 mg/m3 TWA MAK<br>50 ppm Peak; 270 mg/m3 Peak |
| **Gibraltar:** | Skin notation<br>100 ppm STEL; 550 mg/m3 STEL<br>50 ppm TWA; 275 mg/m3 TWA |
| **Greece:** | 50 ppm TWA; 275 mg/m3 TWA<br>100 ppm STEL; 550 mg/m3 STEL<br>skin - potential for cutaneous absorption |
| **Hungary:** | 550 mg/m3 STEL [CK]<br>275 mg/m3 TWA [AK] |
| **Ireland:** | 50 ppm TWA; 275 mg/m3 TWA<br>100 ppm STEL; 550 mg/m3 STEL<br>Potential for cutaneous absorption |
| **Italy:** | 50 ppm TWA; 275 mg/m3 TWA<br>100 ppm STEL; 550 mg/m3 STEL<br>skin - potential for cutaneous absorption |
| **Latvia:** | skin - potential for cutaneous exposure<br>100 ppm STEL; 550 mg/m3 STEL<br>50 ppm TWA; 275 mg/m3 TWA |
| **Lithuania:** | Skin notation<br>75 ppm STEL; 400 mg/m3 STEL<br>50 ppm TWA; 250 mg/m3 TWA |
| **Luxembourg:** | Possibility of significant uptake through the skin<br>100 ppm STEL; 550 mg/m3 STEL<br>50 ppm TWA; 275 mg/m3 TWA |
| **Malta:** | possibility of significant uptake through the skin<br>100 ppm STEL; 550 mg/m3 STEL<br>50 ppm TWA; 275 mg/m3 TWA |
| **Netherlands:** | 550 mg/m3 TWA |
| **Poland:** | 520 mg/m3 STEL [NDSCh]<br>260 mg/m3 TWA |
| **Romania:** | Skin notation<br>100 ppm STEL; 550 mg/m3 STEL<br>50 ppm TWA; 275 mg/m3 TWA |
| **Slovak Republic:** | 550 mg/m3 Ceiling<br>Potential for cutaneous absorption<br>50 ppm TWA; 275 mg/m3 TWA |
| **Slovenia:** | Potential for cutaneous absorption<br>100 ppm STEL; 550 mg/m3 STEL<br>50 ppm TWA; 275 mg/m3 TWA |
| **Spain:** | 50 ppm TWA [VLA-ED] (indicative limit value); 275 mg/m3 TWA [VLA-ED] (indicative limit value)<br>100 ppm STEL [VLA-EC]; 550 mg/m3 STEL [VLA-EC]<br>skin - potential for cutaneous exposure |
| **Sweden:** | 50 ppm LLV; 250 mg/m3 LLV<br>75 ppm STV; 400 mg/m3 STV |

| | |
|---|---|
| | Skin notation |
| **United Kingdom:** | 50 ppm TWA; 274 mg/m3 TWA |
| | 100 ppm STEL; 548 mg/m3 STEL |
| | Potential for cutaneous absorption |

**Carbon black (1333-86-4)**

| | |
|---|---|
| **Belgium:** | 3.5 mg/m3 TWA |
| **Denmark:** | Present |
| | 3.5 mg/m3 TWA |
| **Estonia:** | 3 mg/m3 TWA (dust) |
| **Finland:** | 3.5 mg/m3 TWA |
| | 7 mg/m3 STEL |
| **France:** | 3.5 mg/m3 TWA |
| **Greece:** | 3.5 mg/m3 TWA |
| | 7 mg/m3 STEL |
| **Ireland:** | 3.5 mg/m3 TWA |
| | 7 mg/m3 STEL |
| **Poland:** | 4.0 mg/m3 TWA (< 0,0035% Benzo(a)pyrene, total inhalable dust) |
| **Portugal:** | 3.5 mg/m3 TWA [VLE-MP] |
| **Slovak Republic:** | 2 mg/m3 TWA (respirable fraction, 5% or less fibrogenic component); 10 mg/m3 TWA (respirable fraction, greater than 5% fibrogenic component); 10 mg/m3 TWA (total aerosol) |
| **Spain:** | 3.5 mg/m3 TWA [VLA-ED] |
| **Sweden:** | 3 mg/m3 LLV (total dust) |
| **United Kingdom:** | 3.5 mg/m3 TWA |
| | 7 mg/m3 STEL |
| | 3 mg/m3 TWA (inhalable fraction) |

**Phosphoric acid (7664-38-2)**

| | |
|---|---|
| **EU (IOELV):** | 1 mg/m3 TWA |
| | 2 mg/m3 STEL |
| **Austria:** | 1 mg/m3 TWA |
| | 2 mg/m3 STEL (4 X 15 min) |
| **Belgium:** | 1 mg/m3 TWA |
| | 2 mg/m3 STEL |
| **Bulgaria:** | 2.0 mg/m3 STEL |
| | 1.0 mg/m3 TWA |
| **Czech Republic:** | 2 mg/m3 Ceiling |
| **Cyprus:** | 2.0 mg/m3 STEL |
| | 1 mg/m3 TWA |
| **Denmark:** | 1 mg/m3 TWA |
| **Estonia:** | 2 mg/m3 STEL (vapor) |
| | 1 mg/m3 TWA (vapor) |
| **Finland:** | 1 mg/m3 TWA |
| | 2 mg/m3 STEL |
| **France:** | 0.2 ppm TWA (indicative limit); 1 mg/m3 TWA (indicative limit) |
| | 0.5 ppm STEL [VLCT] (indicative limit); 2 mg/m3 STEL [VLCT] (indicative limit) |
| **Germany (TRGS):** | 2 mg/m3 TWA AGW (The risk of damage to the embryo or fetus can be excluded when AGW and BGW values are observed, inhalable fraction, exposure factor 2) |
| **Germany (DFG):** | 2 mg/m3 TWA MAK (inhalable fraction) |

| | |
|---|---|
| | 4 mg/m3 Peak (inhalable fraction) |
| **Gibraltar:** | 2 mg/m3 STEL |
| | 1 mg/m3 TWA |
| **Greece:** | 1 mg/m3 TWA |
| | 3 mg/m3 STEL |
| **Hungary:** | 2 mg/m3 STEL [CK] |
| | 1 mg/m3 TWA [AK] |
| **Ireland:** | 1 mg/m3 TWA |
| | 2 mg/m3 STEL |
| **Italy:** | 1 mg/m3 TWA |
| | 2 mg/m3 STEL |
| **Latvia:** | 2 mg/m3 STEL |
| | 1 mg/m3 TWA |
| **Lithuania:** | 2 mg/m3 STEL |
| | 1 mg/m3 TWA |
| **Luxembourg:** | 2 mg/m3 STEL |
| | 1 mg/m3 TWA |
| **Malta:** | 2 mg/m3 STEL |
| | 1 mg/m3 TWA |
| **Netherlands:** | 1 mg/m3 TWA |
| | 2 mg/m3 STEL |
| **Poland:** | Corrosive substance |
| | 2 mg/m3 STEL [NDSCh] |
| | 1 mg/m3 TWA |
| **Portugal:** | 1 mg/m3 TWA [VLE-MP] |
| | 3 mg/m3 STEL [VLE-CD |
| **Romania:** | 2 mg/m3 STEL |
| | 1 mg/m3 TWA |
| **Slovak Republic:** | 2 mg/m3 Ceiling |
| | 1 mg/m3 TWA |
| **Slovenia:** | 2 mg/m3 STEL |
| | 1 mg/m3 TWA |
| **Spain:** | 1 mg/m3 TWA [VLA-ED] (indicative limit value; it is prohibited the partial or complete commercialization or use of this substance as a phytosanitary or biocide compound) |
| | 2 mg/m3 STEL [VLA-EC] |
| **Sweden:** | 1 mg/m3 LLV |
| | 3 mg/m3 STV |
| **United Kingdom:** | 1 mg/m3 TWA |
| | 2 mg/m3 STEL |
| | 1 mg/m3 TWA |
| | 3 mg/m3 STEL |

**Biological Limit Value**

**Component Analysis**

There are no biological limit values for any of this product's components.

**Derived No Effect Levels (DNELs)**

No DNELs available.

**Predicted No Effect Concentrations (PNECs)**

No PNECs available.

**Ventilation**

Provide local exhaust ventilation system. Ensure compliance with applicable exposure limits.

## 8.2 Exposure Controls

**Appropriate Engineering Controls**

**Eye / Face Protection**

Eye protection not required under normal conditions. Chemical goggles or safety glasses with side shields should be worn when handling a damaged cartridge.

**Skin Protection**

Protective clothing is not required under normal conditions. Wear neoprene or nitrile impervious gloves when handling damaged cartridge. Wash contaminated clothing before reuse.

**Glove Recommendations**

Wear neoprene or nitrile impervious gloves when handling damaged cartridge.

**Respiratory Protection**

Respiratory protection is not generally needed when using this product.

## * * *Section 9 - PHYSICAL AND CHEMICAL PROPERTIES* * *

### 9.1 Information on Basic Physical and Chemical Properties

| | | | |
|---|---|---|---|
| **Physical State:** | Liquid | **Appearance:** | ink cartridge containing beige liquid ink |
| **Color:** | beige | **Physical Form:** | liquid |
| **Odor:** | characteristic odor | **Odor Threshold:** | Not available |
| **pH:** | Not applicable | **Melting Point:** | Not available |
| **Boiling Point:** | Not available | **Decomposition:** | Not available |
| **Flash Point:** | >100 °C | **Evaporation Rate:** | Not available |
| **LEL:** | Not available | **UEL:** | Not available |
| **Vapor Pressure:** | Not available | **Vapor Density (air = 1):** | Not available |
| **Density:** | Not available | **Specific Gravity (water = 1):** | Not available |
| **Water Solubility:** | Not available | **Coeff. Water/Oil Dist:** | Not available |
| **Auto Ignition:** | Not available | **Viscosity:** | 13-14 cps |
| **Volatility:** | Not available | | |

## * * *Section 10 - STABILITY AND REACTIVITY* * *

**10.1 Reactivity**

Heating may cause a fire

**10.2 Chemical Stability**

Unstable on exposure to light. Unstable on exposure to heat.

**10.3 Possibility of Hazardous Reactions**

Uncured ink will polymerize on exposure to light.

**10.4 Conditions to Avoid**

Avoid exposure to heat and light.

**10.5 Incompatible Materials**

Not applicable under normal conditions of use and storage.

**10.6 Hazardous Decomposition Products**

**Thermal Decomposition Products**

**Combustion:** oxides of carbon

## * * *Section 11 - TOXICOLOGICAL INFORMATION* * *

## 11.1 Information on Toxicological Effects

**Acute and Chronic Toxicity**

No hazard is expected from the normal use of this product. While unlikely, uncured ink may leak from damaged ink cartridges and cause skin and eye irritation. Contact with eyes may cause eye irritation, inflammation, or eye damage. Contact with skin may cause tingling sensation or skin irritation.

**Component Analysis - LD50/LC50**

The components of this material have been reviewed in various sources and the following selected endpoints are published:

**Titanium dioxide (13463-67-7)**

Oral LD50 Rat >10000 mg/kg

**Xylenes (o-, m-, p- isomers) (1330-20-7)**

Inhalation LC50 Rat 47635 mg/L 4 h; Oral LD50 Rat 4300 mg/kg

**n-Butyl acetate (123-86-4)**

Dermal LD50 Rabbit >17600 mg/kg; Inhalation LC50 Rat 390 ppm 4 h; Inhalation LC50 Rat 390 ppm 4 h

**Ethylbenzene (100-41-4)**

Inhalation LC50 Rat 17.2 mg/L 4 h; Oral LD50 Rat 3500 mg/kg; Dermal LD50 Rabbit 15354 mg/kg

**Propylene glycol monomethyl ether acetate (108-65-6)**

Dermal LD50 Rabbit >5 g/kg; Oral LD50 Rat 8532 mg/kg

**Phosphoric acid (7664-38-2)**

Oral LD50 Rat 1530 mg/kg; Dermal LD50 Rabbit 2730 mg/kg; Inhalation LC50 Rat >850 mg/m3 1 h

**Irritation / Corrosivity**

Contact with uncured ink may cause eye damage and skin irritation. Inhalation may cause respiratory tract irritation.

**Respiratory Sensitization**

No data available for the mixture.

**Skin Sensitization**

Component data indicate the substance is sensitizing. Uncured ink may cause an allergic response in sensitized individuals.

**Germ Cell Mutagenicity**

No data available for the mixture.

**Carcinogenicity**

**Component Carcinogenicity**

**Titanium dioxide (13463-67-7)**

**IARC:** Monograph 93 [2010]; Monograph 47 [1989] (Group 2B (possibly carcinogenic to humans))

**DFG:** Category 3A (could be carcinogenic for man, inhalable fraction with the exception of ultra small particles)

**Xylenes (o-, m-, p- isomers) (1330-20-7)**

**IARC:** Monograph 71 [1999]; Monograph 47 [1989] (Group 3 (not classifiable))

**Ethylbenzene (100-41-4)**

**IARC:** Monograph 77 [2000] (Group 2B (possibly carcinogenic to humans))

**DFG:** Category 4 (no significant contribution to human cancer)

**Carbon black (1333-86-4)**

**IARC:** Monograph 93 [2010]; Monograph 65 [1996] (Group 2B (possibly carcinogenic to humans))

**DFG:** Category 3B (could be carcinogenic for man, inhalable fraction)

**Reproductive Toxicity**

Available data characterizes components of this product as reproductive hazards.

**Specific Target Organ Toxicity - Single Exposure**

respiratory system

**Specific Target Organ Toxicity - Repeated Exposure**

May cause damage to organs through prolonged or repeated exposure

**Aspiration Hazard**

No data available for the mixture.

## * * *Section 12 - ECOLOGICAL INFORMATION* * *

**12.1 Toxicity**

Harmful to aquatic life with long lasting effects.

**Component Analysis - Aquatic Toxicity**

Data may be available for the product or its components (if applicable, see below).

**Xylenes (o-, m-, p- isomers) (1330-20-7)**

**Fish:** 96 Hr LC50 Pimephales promelas: 13.4 mg/L [flow-through]; 96 Hr LC50 Oncorhynchus mykiss: 2.661 - 4.093 mg/L [static]; 96 Hr LC50 Oncorhynchus mykiss: 13.5 - 17.3 mg/L; 96 Hr LC50 Lepomis macrochirus: 13.1 - 16.5 mg/L [flow-through]; 96 Hr LC50 Lepomis macrochirus: 19 mg/L; 96 Hr LC50 Lepomis macrochirus: 7.711 - 9.591 mg/L [static]; 96 Hr LC50 Pimephales promelas: 23.53 - 29.97 mg/L [static]; 96 Hr LC50 Cyprinus carpio: 780 mg/L [semi-static]; 96 Hr LC50 Cyprinus carpio: >780 mg/L; 96 Hr LC50 Poecilia reticulata: 30.26 - 40.75 mg/L [static]

**Invertebrate:** 48 Hr EC50 water flea: 3.82 mg/L; 48 Hr LC50 Gammarus lacustris: 0.6 mg/L

**n-Butyl acetate (123-86-4)**

**Fish:** 96 Hr LC50 Pimephales promelas: 17 - 19 mg/L [flow-through]; 96 Hr LC50 Lepomis macrochirus: 100 mg/L [static]; 96 Hr LC50 Leuciscus idus: 62 mg/L [static]

**Algae:** 72 Hr EC50 Desmodesmus subspicatus: 674.7 mg/L

**Invertebrate:** 24 Hr EC50 Daphnia magna: 72.8 mg/L

**Ethylbenzene (100-41-4)**

**Fish:** 96 Hr LC50 Oncorhynchus mykiss: 11.0 - 18.0 mg/L [static]; 96 Hr LC50 Oncorhynchus mykiss: 4.2 mg/L [semi-static]; 96 Hr LC50 Pimephales promelas: 7.55 - 11 mg/L [flow-through]; 96 Hr LC50 Lepomis macrochirus: 32 mg/L [static]; 96 Hr LC50 Pimephales promelas: 9.1 - 15.6 mg/L [static]; 96 Hr LC50 Poecilia reticulata: 9.6 mg/L [static]

**Algae:** 72 Hr EC50 Pseudokirchneriella subcapitata: 4.6 mg/L; 96 Hr EC50 Pseudokirchneriella subcapitata: >438 mg/L; 72 Hr EC50 Pseudokirchneriella subcapitata: 2.6 - 11.3 mg/L [static]; 96 Hr EC50 Pseudokirchneriella subcapitata: 1.7 - 7.6 mg/L [static]

**Invertebrate:** 48 Hr EC50 Daphnia magna: 1.8 - 2.4 mg/L

**Propylene glycol monomethyl ether acetate (108-65-6)**

**Fish:** 96 Hr LC50 Pimephales promelas: 161 mg/L [static]

**Invertebrate:** 48 Hr EC50 Daphnia magna: >500 mg/L

**Carbon black (1333-86-4)**

**Invertebrate:** 24 Hr EC50 Daphnia magna: >5600 mg/L

**Phosphoric acid (7664-38-2)**

**Fish:** 96 Hr LC50 Gambusia affinis: 3 - 3.5 mg/L

**Invertebrate:** 12 Hr EC50 Daphnia magna: 4.6 mg/L

**12.2 Persistence and Degradability**

No data available for the mixture.

**12.3 Bioaccumulative Potential**

No data available for the mixture.

**12.4 Mobility in Soil**

No data available for the mixture.

**12.5 Results of PBT and vPvB Assessment**

No information available.

**EU - Interim Strategy for Management of PBT and vPvB Substances (PBT Assessments)**

No components of this material are listed.

**12.6 Other Adverse Effects**

No information available.

## * * *Section 13 - DISPOSAL CONSIDERATIONS* * *

**13.1 Waste Treatment Methods**

Dispose in accordance with all applicable regulations. Hazardous Waste Number(s): 08 03 12*
Refer to manufacturer/supplier for information on recovery/recycling. Do not landfill. Avoid discharge into drains or surface water. See Section 7 for Handling Procedures. See Section 8 for Personal Protective Equipment recommendations.

## * * *Section 14 - TRANSPORT INFORMATION* * *

**Transportation**

Not regulated as a hazardous material.

**International Bulk Chemical Code**

This material contains one or more of the following chemicals required by the IBC Code to be identified as dangerous chemicals in bulk.

**Titanium dioxide (13463-67-7)**
**IBC Code:** Category Z (slurry)

**Xylenes (o-, m-, p- isomers) (1330-20-7)**
**IBC Code:** Category Y

**Ethylbenzene (100-41-4)**
**IBC Code:** Category Y

**Propylene glycol monomethyl ether acetate (108-65-6)**
**IBC Code:** Category Z

**Phosphoric acid (7664-38-2)**
**IBC Code:** Category Z

## * * *Section 15 - REGULATORY INFORMATION* * *

**15.1 Safety, Health and Environmental Regulations / Legislation Specific for the Substance or Mixture**

**EU - REACH (1907/2006) - Annex XIV List of Substances Subject to Authorisation**

No components of this material are listed.

**EU - REACH (1907/2006) - Article 59(1) Candidate List of Substances for Eventual Inclusion in Annex XIV**

No components of this material are listed.

**EU - REACH (1907/2006) - Annex XVII Restrictions of Certain Dangerous Substances, Mixtures and Articles**

No components of this material are listed.

### Germany Regulations

**Germany Water Classification**

**Acrylic monomer (5117-12-4)**
ID Number 6697, hazard class 2 - hazard to waters

**2-Propenoic acid, 1,7,7-trimethylbicyclo[2.2.1]hept-2-yl ester, exo- (5888-33-5)**
ID Number 2247, hazard class 2 - hazard to waters

**Diphenyl-2,4,6-trimethylbenzoyl phosphine oxide (75980-60-8)**
ID Number 6366, hazard class 2 - hazard to waters

**Titanium dioxide (13463-67-7)**
ID Number 1345, not considered hazardous to water

**Xylenes (o-, m-, p- isomers) (1330-20-7)**
ID Number 206, hazard class 2 - hazard to waters

**n-Butyl acetate (123-86-4)**
ID Number 42, hazard class 1 - low hazard to waters
**Ethylbenzene (100-41-4)**
ID Number 99, hazard class 1 - low hazard to waters
**Propylene glycol monomethyl ether acetate (108-65-6)**
ID Number 5033, hazard class 1 - low hazard to waters
**Carbon black (1333-86-4)**
ID Number 1742, not considered hazardous to water
**Phosphoric acid (7664-38-2)**
ID Number 392, hazard class 1 - low hazard to waters

## Denmark Regulations

**Environmental Protection Agency List of Undesirable Substances**

No components of this material are listed.

**EU Inventory**

**Substance Analysis - Inventory**

| Component | CAS | EEC |
|---|---|---|
| Acrylic monomer | -- | ELN |
| 2-Propenoic acid, 1,7,7-trimethylbicyclo[2.2.1]hept-2-yl ester, exo- | 5888-33-5 | EIN |
| Acrylic Oligomer | --<br>-- | NLP |
| Photo initiator | -- | EIN |
| Titanium dioxide | 13463-67-7 | EIN |
| Acrylic acid ester | 52408-84-1 | NLP |
| Xylenes (o-, m-, p- isomers) | 1330-20-7 | EIN |
| n-Butyl acetate | 123-86-4 | EIN |
| Ethylbenzene | 100-41-4 | EIN |
| Propylene glycol monomethyl ether acetate | 108-65-6 | EIN |
| Carbon black | 1333-86-4 | EIN |
| Phosphoric acid | 7664-38-2 | EIN |

**15.2 Chemical Safety Assessment**

No chemical safety assessment has been carried out for the substance/mixture.

## * * *Section 16 - OTHER INFORMATION* * *

**16.1 Indication of changes**

New MSDS: 2/14/2013

**16.2 Key / Legend**

ADR - European Road Transport; EEC - European Economic Community; EIN (EINECS) - European Inventory of Existing Commercial Chemical Substances; ELN (ELINCS) - European List of Notified Chemical Substances; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; ICAO - International Civil Aviation Organization; IMDG - International Maritime Dangerous Goods; Kow - Octanol/water partition coefficient; LEL - Lower Explosive Limit; RID - European Rail Transport; STEL - Short-term Exposure Limit; TDG - Transportation of Dangerous Goods; TWA - Time Weighted Average; UEL - Upper Explosive Limit

**16.3 Key literature references and sources for data**

Available upon request

**16.4 Methods used for classification of mixture according to Regulation (EC) No 1272/2008**

Available upon request

**16.5 Full Text of R Phrases in Section 3**

**R10** Flammable.
**R11** Highly flammable.
**R20** Harmful by inhalation.
**R21** Harmful in contact with skin.
**R22** Harmful if swallowed.
**R34** Causes burns.
**R36/37/38** Irritating to eyes, respiratory system and skin.
**R41** Risk of serious damage to eyes.
**R43** May cause sensitization by skin contact.
**R48/22** Harmful: danger of serious damage to health by prolonged exposure if swallowed.
**R51/53** Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
**R53** May cause long-term adverse effects in the aquatic environment.
**R62** Possible risk of impaired fertility.
**R67** Vapors may cause drowsiness and dizziness.
**R66** Repeated exposure may cause skin dryness or cracking.

**16.6 Training Advice**

Read the Safety Data Sheet before handling product.

**16.7 Other Information**

The information in this safety data sheet is based on data and samples provided to a third party SDS author. The sheet was written to the best of our ability and according to the state of knowledge at that time. The safety data sheet only constitutes a guideline for the safe handling, use, consumption, storage, transport and disposal of the substances/preparations/mixtures mentioned in this safety data sheet. New safety data sheets are written from time to time. Only the most recent versions may be used. Unless indicated otherwise word for word on the safety data sheet, the information does not apply to substances/preparations/mixtures in purer form, mixed with other substances or in processes. The safety data sheet offers no quality specification for the substances/preparations/mixtures in question.

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