



# SAFETY DATA SHEET

This safety data sheet was created pursuant to the requirements of:  
Regulation (EC) No. 1907/2006 as amended by Commission Regulation (EU) 2020/878 and  
Regulation (EC) No. 1272/2008

Issuing Date 23-Mar-2016

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Revision Number 2

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

### 1.1. Product identifier

**Product Code(s)** A10: #10101 Black;#10102 Blue;#10103 Green;#10104 Red;#10105 White;#10106 Yellow;#10107 Orange;#10109 Light Green;#10111 Pink;#10112 Violet;#10113 Light Blue, #10115 Brown  
A20: #10701 Black;#10702 Blue;#10703 Green;#10704 Red;#10705 White;#10706 Yellow;#10707 Orange;#10709 Light Green;#10711 Pink;#10712 Violet;#10713 Light Blue;#10715 Brown;#10717 Gray  
A30: #10301 Black;#10302 Blue, #10303 Green;#10304 Red;#10305 White;#10306 Yellow;#10307 Orange;#10309 Light Green;#10311 Pink;#10312 Violet;#10313 Light Blue

**Product Name** A10 PAINT MARKER - A20 PAINT MARKER WITH REVERSIBLE TIP - A30 BROAD TIP PAINT MARKER - MOST COLORS

**Synonyms** None

**Pure substance/mixture** Mixture

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

**Recommended use** Solvent based marker

**Uses advised against** Not to be used for skin  
Keep away from children

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

#### Manufacturer

U-Mark, Inc  
102 Iowa Ave.  
Belleville, IL 62220  
TEL: 618-235-7500

#### For further information, please contact

**E-mail address** [compliance@umarkers.com](mailto:compliance@umarkers.com)

### 1.4. Emergency telephone number

**Emergency telephone** 24-hour Emergency Phone: Infotrac 1-800-535-5053 (USA & Canada), 1-352-323-3500 (International)

Emergency telephone - §45 - (EC)1272/2008

Europe 112

## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

Regulation (EC) No 1272/2008

|   |                       |
|---|-----------------------|
| <b>Flammable liquids</b>                                | Category 3 - (H226)   |
| <b>Serious eye damage/eye irritation</b>                | Category 1 - (H318)   |
| <b>Carcinogenicity</b>                                  | Category 1A - (H350i) |
| <b>Specific target organ toxicity (single exposure)</b> | Category 3 - (H336)   |
| Category 3 Narcotic effects                             |                       |
| <b>Acute aquatic toxicity</b>                           | Category 1 - (H400)   |

**2.2. Label elements**

Contains Propyl alcohol, Quartz, Titanium dioxide



**Signal word**  
Danger

**Hazard statements**

- H318 - Causes serious eye damage
- H336 - May cause drowsiness or dizziness
- H350i - May cause cancer by inhalation
- H400 - Very toxic to aquatic life
- H226 - Flammable liquid and vapor

**Precautionary Statements - EU (§28, 1272/2008)**

- P201 - Obtain special instructions before use
- P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking
- P273 - Avoid release to the environment
- P280 - Wear protective gloves/protective clothing/eye protection/face protection
- 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
- P370 + P378 - In case of fire: Use dry chemical, CO2, water spray or alcohol-resistant foam to extinguish
- P391 - Collect spillage

**2.3. Other hazards**

**Endocrine Disruptor Information** This product does not contain any known or suspected endocrine disruptors.

**SECTION 3: Composition/information on ingredients**

**3.1 Substances**

Not applicable

**3.2 Mixtures**

| Chemical name | Weight-% | REACH registration number | EC No (EU Index No) | Classification according to Regulation | Specific concentration limit (SCL) | M-Factor | M-Factor (long-term) |
|---------------|----------|---------------------------|---------------------|--|------------------------------------|----------|----------------------|
|               |          |                           |                     |  |                                    |          |                      |

|   |       |                   |                             | (EC) No.<br>1272/2008<br>[CLP]                               |   |   |   |
|---|-------|-------------------|-----------------------------|--|---|---|---|
| Propyl alcohol<br>71-23-8   | 30-70 | No data available | (603-003-00-0)<br>200-746-9 | Eye Dam. 1 (H318)<br>STOT SE 3 (H336)<br>Flam. Liq. 2 (H225) | - | - | - |
| Titanium dioxide<br>13463-67-7  | 1-<20 | No data available | (022-006-00-2)<br>236-675-5 | Carc. 2 (H351i)  | - | - | - |
| Iron oxide<br>1309-37-1   | 0-6   | No data available | 215-168-2                   | [C]  | - | - | - |
| Carbon black<br>1333-86-4   | 0-5   | No data available | 215-609-9<br>435-640-3      | [C] [I]  | - | - | - |
| C.I. Pigment Blue 15<br>147-14-8  | 0-5   | No data available | 205-685-1                   | [C], [I]   | - | - | - |
| 3H-Pyrazol-3-one,<br>4,4'-[(3,3'-dichloro[1,<br>1'-biphenyl]-4,4'-diyl)<br>bis(azo)]bis[2,4-dihydro-<br>5-methyl-2-phenyl-<br>3520-72-7 | 3     | No data available | 222-530-3                   | [C]  | - | - | - |
| Silicon dioxide<br>7631-86-9  | 1-3   | No data available | 231-545-4                   | No data available  | - | - | - |
| Copper<br>7440-50-8   | 0.252 | No data available | (029-024-00-X)<br>231-159-6 | Aquatic Chronic 2 (H411)                                     | - | - | - |
| Quartz<br>14808-60-7  | 0-<1  | No data available | 238-878-4                   | Carc. 1A (H350i)<br>STOT RE 2 (H373)                         | - | - | - |

*Classification according to Regulation (EC) No. 1272/2008 [CLP] - Notes*

[C] - Components with occupational exposure limits and/or biological occupational exposure limits requiring monitoring

[I] - Restricted substance per REACH Annex XVII

**Full text of H- and EUH-phrases: see section 16**

Acute Toxicity Estimate

If LD50/LC50 data is not available or does not correspond to the classification category, then the appropriate conversion value from CLP Annex I, Table 3.1.2, is used to calculate the acute toxicity estimate (ATEmix) for classifying a mixture based on its components

| Chemical name                    | Oral LD50 mg/kg | Dermal LD50 mg/kg | Inhalation LC50 - 4 hour - dust/mist - mg/L | Inhalation LC50 - 4 hour - vapor - mg/L | Inhalation LC50 - 4 hour - gas - ppm |
|----------------------------------|-----------------|-------------------|---|---|--------------------------------------|
| Propyl alcohol<br>71-23-8        | 1870            | 4049              | 33.8  | No data available                       | No data available                    |
| Titanium dioxide<br>13463-67-7   | 10000           | No data available | 5.09  | No data available                       | No data available                    |
| Iron oxide<br>1309-37-1          | 10000           | No data available | No data available                           | No data available                       | No data available                    |
| Carbon black<br>1333-86-4        | 15400           | No data available | 0.0046                                      | No data available                       | No data available                    |
| C.I. Pigment Blue 15<br>147-14-8 | 10000           | 5000              | No data available                           | No data available                       | No data available                    |
| 3H-Pyrazol-3-one,                | 5000            | 2000              | No data available                           | No data available                       | No data available                    |

| Chemical name  | Oral LD50 mg/kg   | Dermal LD50 mg/kg | Inhalation LC50 - 4 hour - dust/mist - mg/L | Inhalation LC50 - 4 hour - vapor - mg/L | Inhalation LC50 - 4 hour - gas - ppm |
|--|-------------------|-------------------|---|---|--------------------------------------|
| 4,4'-[(3,3'-dichloro[1,1'-biphenyl]-4,4'-diyl)bis(azo)]bis[2,4-dihydro-5-methyl-2-phenyl-3520-72-7 |                   |                   |   |   |                                      |
| Silicon dioxide<br>7631-86-9   | 7900              | 5000              | 58.8  | No data available                       | No data available                    |
| Copper<br>7440-50-8  | No data available | No data available | 5.11  | No data available                       | No data available                    |

This product does not contain candidate substances of very high concern at a concentration  $\geq 0.1\%$  (Regulation (EC) No. 1907/2006 (REACH), Article 59)

## **SECTION 4: First aid measures**

### **4.1. Description of first aid measures**

|   |  |
|---|--|
| <b>General advice</b>                     | Under normal conditions of use first aid is not required. Immediate medical attention is required. Show this safety data sheet to the doctor in attendance. IF exposed or concerned: Get medical advice/attention.   |
| <b>Inhalation</b>                         | If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician. Remove to fresh air. Get medical attention immediately if symptoms occur. IF exposed or concerned: Get medical advice/attention.   |
| <b>Eye contact</b>                        | Call a physician or poison control center immediately. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Do not rub affected area. Get immediate medical attention. Remove contact lenses, if present and easy to do. Continue rinsing.   |
| <b>Skin contact</b>                       | Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Get medical attention if irritation develops and persists.   |
| <b>Ingestion</b>                          | Call a POISON CENTER or doctor/physician if you feel unwell. Rinse mouth. Never give anything by mouth to an unconscious person. Do NOT induce vomiting. Call a physician.   |
| <b>Self-protection of the first aider</b> | Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves. Remove all sources of ignition. Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Use personal protective equipment as required. See section 8 for more information. Avoid contact with skin, eyes or clothing. |

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

|                            |   |
|----------------------------|---|
| <b>Symptoms</b>            | Burning sensation. Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting. |
| <b>Effects of Exposure</b> | No information available.   |

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

|                           |                        |
|---------------------------|------------------------|
| <b>Note to physicians</b> | Treat symptomatically. |
|---------------------------|------------------------|

## **SECTION 5: Firefighting measures**

### **5.1. Extinguishing media**

**Suitable Extinguishing Media** Dry chemical. Carbon dioxide (CO<sub>2</sub>). Water spray. Alcohol resistant foam.

**Unsuitable extinguishing media** None known.

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

**Specific hazards arising from the chemical** The ink contained in this product is flammable but not readily ignited. Risk of ignition. Keep product and empty container away from heat and sources of ignition. In the event of fire, cool tanks with water spray. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

### **5.3. Advice for firefighters**

**Special protective equipment and precautions for fire-fighters** Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

## **SECTION 6: Accidental release measures**

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

**Personal precautions** Evacuate personnel to safe areas. Use personal protective equipment as required. See section 8 for more information. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Keep people away from and upwind of spill/leak. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Pay attention to flashback. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Do not touch or walk through spilled material.

**Other information** Ventilate the area. Refer to protective measures listed in Sections 7 and 8.

**For emergency responders** Use personal protection recommended in Section 8.

### **6.2. Environmental precautions**

**Environmental precautions** Avoid release to the environment. Dispose of contents/containers in accordance with local regulations. Refer to protective measures listed in Sections 7 and 8. Prevent further leakage or spillage if safe to do so. Prevent product from entering drains.

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

**Methods for containment** Stop leak if you can do it without risk. Do not touch or walk through spilled material. A vapor suppressing foam may be used to reduce vapors. Dike far ahead of spill to collect runoff water. Keep out of drains, sewers, ditches and waterways. Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal.

**Methods for cleaning up** Take precautionary measures against static discharges. Dam up. Soak up with inert absorbent material. Pick up and transfer to properly labeled containers.

**Prevention of secondary hazards** Clean contaminated objects and areas thoroughly observing environmental regulations.

### **6.4. Reference to other sections**

**Reference to other sections** See Section 12 for more information

**SECTION 7: Handling and storage**

**7.1. Precautions for safe handling**

**Advice on safe handling** Use personal protection equipment. Avoid breathing vapors or mists. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use grounding and bonding connection when transferring this material to prevent static discharge, fire or explosion. Use with local exhaust ventilation. Use spark-proof tools and explosion-proof equipment. Keep in an area equipped with sprinklers. Use according to package label instructions. Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Do not eat, drink or smoke when using this product. In case of insufficient ventilation, wear suitable respiratory equipment.

**General hygiene considerations** Do not eat, drink or smoke when using this product. Contaminated work clothing should not be allowed out of the workplace. Regular cleaning of equipment, work area and clothing is recommended. Wash hands before breaks and immediately after handling the product. Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection.

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

**Storage Conditions** Store in a well-ventilated place. Keep cool. Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from heat, sparks, flame and other sources of ignition (i.e., pilot lights, electric motors and static electricity). Keep in properly labeled containers. Do not store near combustible materials. Keep in an area equipped with sprinklers. Store in accordance with the particular national regulations. Store in accordance with local regulations. Store locked up. Keep out of the reach of children.

**Storage class (TRGS 510)** Storage class 3.

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

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

**SECTION 8: Exposure controls/personal protection**

**8.1. Control parameters**

**Exposure Limits** The following exposure limits are provided for information only; exposure is not expected under normal conditions of use or storage.

| Chemical name                    | European Union | Austria  | Belgium                                    | Bulgaria  | Croatia   |
|----------------------------------|----------------|--|--|---|---|
| Propyl alcohol<br>71-23-8        | -              | TWA: 200 ppm<br>TWA: 500 mg/m <sup>3</sup>   | TWA: 100 ppm<br>TWA: 250 mg/m <sup>3</sup> | STEL: 500.0 mg/m <sup>3</sup><br>TWA: 300.0 mg/m <sup>3</sup> | TWA: 200 ppm<br>TWA: 500 mg/m <sup>3</sup><br>STEL: 250 ppm<br>STEL: 625 mg/m <sup>3</sup>                      |
| Titanium dioxide<br>13463-67-7   | -              | TWA: 5 mg/m <sup>3</sup><br>STEL 10 mg/m <sup>3</sup>  | TWA: 10 mg/m <sup>3</sup>                  | TWA: 10.0 mg/m <sup>3</sup>                                   | TWA: 10 mg/m <sup>3</sup><br>TWA: 4 mg/m <sup>3</sup>   |
| Iron oxide<br>1309-37-1          | -              | TWA: 5 mg/m <sup>3</sup><br>STEL 10 mg/m <sup>3</sup>  | TWA: 5 mg/m <sup>3</sup>                   | TWA: 5.0 mg/m <sup>3</sup>                                    | TWA: 4 mg/m <sup>3</sup><br>TWA: 5 mg/m <sup>3</sup><br>TWA: 10 mg/m <sup>3</sup><br>STEL: 10 mg/m <sup>3</sup> |
| Carbon black<br>1333-86-4        | -              | -  | TWA: 3 mg/m <sup>3</sup>                   | -   | TWA: 3.5 mg/m <sup>3</sup><br>STEL: 7 mg/m <sup>3</sup>   |
| C.I. Pigment Blue 15<br>147-14-8 | -              | TWA: 1 mg/m <sup>3</sup><br>TWA: 0.1 mg/m <sup>3</sup><br>STEL 4 mg/m <sup>3</sup><br>STEL 0.4 mg/m <sup>3</sup> | -  | -   | -   |

|                                  |   |  |  |  |  |
|----------------------------------|---|--|--|--|--|
| Silicon dioxide<br>7631-86-9     | TWA: 0.1 mg/m <sup>3</sup>  | TWA: 4 mg/m <sup>3</sup>   | -  | TWA: 0.1 mg/m <sup>3</sup>   | -  |
| Copper<br>7440-50-8              | -   | TWA: 1 mg/m <sup>3</sup><br>TWA: 0.1 mg/m <sup>3</sup><br>STEL 4 mg/m <sup>3</sup><br>STEL 0.4 mg/m <sup>3</sup>         | TWA: 0.2 mg/m <sup>3</sup><br>TWA: 1 mg/m <sup>3</sup>   | TWA: 0.1 mg/m <sup>3</sup>   | TWA: 0.2 mg/m <sup>3</sup><br>TWA: 1 mg/m <sup>3</sup><br>STEL: 2 mg/m <sup>3</sup>        |
| Quartz<br>14808-60-7             | TWA: 0.1 mg/m <sup>3</sup>  | TWA: 0.05 mg/m <sup>3</sup>  | TWA: 0.1 mg/m <sup>3</sup>   | TWA: 0.1 mg/m <sup>3</sup>   | TWA: 0.1 mg/m <sup>3</sup>   |
| <b>Chemical name</b>             | <b>Cyprus</b>   | <b>Czech Republic</b>  | <b>Denmark</b>   | <b>Estonia</b>   | <b>Finland</b>   |
| Propyl alcohol<br>71-23-8        | -   | TWA: 500 mg/m <sup>3</sup><br>Ceiling: 1000 mg/m <sup>3</sup><br>D*  | TWA: 200 ppm<br>TWA: 500 mg/m <sup>3</sup><br>H*<br>STEL: 400 ppm<br>STEL: 1000 mg/m <sup>3</sup>                      | -  | TWA: 200 ppm<br>TWA: 500 mg/m <sup>3</sup><br>STEL: 250 ppm<br>STEL: 620 mg/m <sup>3</sup> |
| Titanium dioxide<br>13463-67-7   | -   | -  | TWA: 6 mg/m <sup>3</sup><br>STEL: 12 mg/m <sup>3</sup>   | TWA: 5 mg/m <sup>3</sup>   | -  |
| Iron oxide<br>1309-37-1          | -   | -  | TWA: 3.5 mg/m <sup>3</sup><br>STEL: 7 mg/m <sup>3</sup>  | TWA: 3.5 mg/m <sup>3</sup>   | TWA: 5 mg/m <sup>3</sup>   |
| Carbon black<br>1333-86-4        | -   | TWA: 2.0 mg/m <sup>3</sup>   | TWA: 3.5 mg/m <sup>3</sup><br>STEL: 7 mg/m <sup>3</sup>  | TWA: 3 mg/m <sup>3</sup>   | TWA: 3.5 mg/m <sup>3</sup><br>STEL: 7 mg/m <sup>3</sup>                                    |
| C.I. Pigment Blue 15<br>147-14-8 | -   | -  | -  | -  | TWA: 0.02 mg/m <sup>3</sup>  |
| Silicon dioxide<br>7631-86-9     | TWA: 0.1 mg/m <sup>3</sup>  | TWA: 0.1 mg/m <sup>3</sup><br>TWA: 4.0 mg/m <sup>3</sup>   | -  | TWA: 2 mg/m <sup>3</sup>   | TWA: 5 mg/m <sup>3</sup>   |
| Copper<br>7440-50-8              | -   | TWA: 1 mg/m <sup>3</sup><br>TWA: 0.1 mg/m <sup>3</sup><br>Ceiling: 2 mg/m <sup>3</sup><br>Ceiling: 0.2 mg/m <sup>3</sup> | TWA: 1.0 mg/m <sup>3</sup><br>TWA: 0.1 mg/m <sup>3</sup><br>STEL: 2 mg/m <sup>3</sup><br>STEL: 0.2 mg/m <sup>3</sup>   | TWA: 1 mg/m <sup>3</sup><br>TWA: 0.2 mg/m <sup>3</sup>                                     | TWA: 0.02 mg/m <sup>3</sup>  |
| Quartz<br>14808-60-7             | TWA: 0.1 mg/m <sup>3</sup>  | TWA: 0.1 mg/m <sup>3</sup>   | TWA: 0.3 mg/m <sup>3</sup><br>TWA: 0.1 mg/m <sup>3</sup><br>STEL: 0.6 mg/m <sup>3</sup><br>STEL: 0.2 mg/m <sup>3</sup> | TWA: 0.1 mg/m <sup>3</sup>   | TWA: 0.05 mg/m <sup>3</sup>  |
| <b>Chemical name</b>             | <b>France</b>   | <b>Germany TRGS</b>  | <b>Germany DFG</b>   | <b>Greece</b>  | <b>Hungary</b>   |
| Propyl alcohol<br>71-23-8        | TWA: 200 ppm<br>TWA: 500 mg/m <sup>3</sup>  | -  | -  | TWA: 200 ppm<br>TWA: 500 mg/m <sup>3</sup><br>STEL: 250 ppm<br>STEL: 625 mg/m <sup>3</sup> | -  |
| Titanium dioxide<br>13463-67-7   | TWA: 10 mg/m <sup>3</sup>   | TWA: 1.25 mg/m <sup>3</sup><br>TWA: 10 mg/m <sup>3</sup>   | TWA: 0.3 mg/m <sup>3</sup><br>Peak: 2.4 mg/m <sup>3</sup>  | TWA: 10 mg/m <sup>3</sup><br>TWA: 5 mg/m <sup>3</sup>                                      | -  |
| Iron oxide<br>1309-37-1          | TWA: 5 mg/m <sup>3</sup><br>TWA: 10 mg/m <sup>3</sup>                               | -  | -  | TWA: 10 mg/m <sup>3</sup><br>STEL: 10 mg/m <sup>3</sup>                                    | TWA: 4 mg/m <sup>3</sup>   |
| Carbon black<br>1333-86-4        | TWA: 3.5 mg/m <sup>3</sup>  | -  | -  | TWA: 3.5 mg/m <sup>3</sup><br>STEL: 7 mg/m <sup>3</sup>                                    | TWA: 3 mg/m <sup>3</sup>   |
| C.I. Pigment Blue 15<br>147-14-8 | -   | -  | -  | -  | TWA: 0.1 mg/m <sup>3</sup><br>STEL: 0.2 mg/m <sup>3</sup>                                  |
| Silicon dioxide<br>7631-86-9     | -   | TWA: 4 mg/m <sup>3</sup>   | TWA: 0.02 mg/m <sup>3</sup><br>Peak: 0.16 mg/m <sup>3</sup>  | TWA: 0.1 mg/m <sup>3</sup>   | -  |
| Copper<br>7440-50-8              | TWA: 0.2 mg/m <sup>3</sup><br>TWA: 1 mg/m <sup>3</sup><br>STEL: 2 mg/m <sup>3</sup> | -  | TWA: 0.01 mg/m <sup>3</sup><br>Peak: 0.02 mg/m <sup>3</sup>  | TWA: 0.2 mg/m <sup>3</sup><br>TWA: 1 mg/m <sup>3</sup><br>STEL: 2 mg/m <sup>3</sup>        | TWA: 0.1 mg/m <sup>3</sup><br>TWA: 0.01 mg/m <sup>3</sup><br>STEL: 0.2 mg/m <sup>3</sup>   |
| Quartz<br>14808-60-7             | TWA: 0.1 mg/m <sup>3</sup>  | -  | -  | TWA: 0.1 mg/m <sup>3</sup>   | TWA: 0.1 mg/m <sup>3</sup>   |
| <b>Chemical name</b>             | <b>Ireland</b>  | <b>Italy MDLPS</b>   | <b>Italy AIDII</b>   | <b>Latvia</b>  | <b>Lithuania</b>   |
| Propyl alcohol<br>71-23-8        | TWA: 100 ppm<br>STEL: 300 ppm<br>Sk*  | -  | TWA: 100 ppm<br>TWA: 246 mg/m <sup>3</sup>   | TWA: 10 mg/m <sup>3</sup>  | -  |
| Titanium dioxide                 | TWA: 10 mg/m <sup>3</sup>   | -  | TWA: 10 mg/m <sup>3</sup>  | TWA: 10 mg/m <sup>3</sup>  | TWA: 5 mg/m <sup>3</sup>   |

|                                  |   |   |                              |   |   |
|----------------------------------|---|---|------------------------------|---|---|
| 13463-67-7                       | TWA: 4 mg/m <sup>3</sup><br>STEL: 30 mg/m <sup>3</sup><br>STEL: 12 mg/m <sup>3</sup>  |   |                              |   |   |
| Iron oxide<br>1309-37-1          | TWA: 5 mg/m <sup>3</sup><br>TWA: 10 mg/m <sup>3</sup><br>TWA: 4 mg/m <sup>3</sup><br>STEL: 10 mg/m <sup>3</sup><br>STEL: 12 mg/m <sup>3</sup><br>STEL: 30 mg/m <sup>3</sup> | -   | TWA: 5 mg/m <sup>3</sup>     | -   | TWA: 3.5 mg/m <sup>3</sup>  |
| Carbon black<br>1333-86-4        | TWA: 3 mg/m <sup>3</sup><br>STEL: 15 mg/m <sup>3</sup>  | -   | TWA: 3 mg/m <sup>3</sup>     | -   | -   |
| C.I. Pigment Blue 15<br>147-14-8 | -   | -   | TWA: 1 mg/m <sup>3</sup>     | TWA: 5 mg/m <sup>3</sup>  | TWA: 5 mg/m <sup>3</sup>  |
| Silicon dioxide<br>7631-86-9     | TWA: 6 mg/m <sup>3</sup><br>TWA: 2.4 mg/m <sup>3</sup><br>STEL: 18 mg/m <sup>3</sup><br>STEL: 7.2 mg/m <sup>3</sup>   | TWA: 0.1 mg/m <sup>3</sup>  | -                            | TWA: 1 mg/m <sup>3</sup>  | -   |
| Copper<br>7440-50-8              | TWA: 0.2 mg/m <sup>3</sup><br>TWA: 1 mg/m <sup>3</sup><br>STEL: 2 mg/m <sup>3</sup><br>STEL: 0.6 mg/m <sup>3</sup>  | -   | TWA: 0.2 mg/m <sup>3</sup>   | TWA: 0.5 mg/m <sup>3</sup><br>STEL: 1 mg/m <sup>3</sup>   | TWA: 1 mg/m <sup>3</sup><br>TWA: 0.2 mg/m <sup>3</sup>  |
| Quartz<br>14808-60-7             | TWA: 0.1 mg/m <sup>3</sup><br>STEL: 0.3 mg/m <sup>3</sup>   | TWA: 0.1 mg/m <sup>3</sup>  | TWA: 0.025 mg/m <sup>3</sup> | TWA: 0.1 mg/m <sup>3</sup>  | TWA: 0.1 ppm  |
| <b>Chemical name</b>             | <b>Luxembourg</b>   | <b>Malta</b>  | <b>Netherlands</b>           | <b>Norway</b>   | <b>Poland</b>   |
| Propyl alcohol<br>71-23-8        | -   | -   | -                            | TWA: 100 ppm<br>TWA: 245 mg/m <sup>3</sup><br>STEL: 150 ppm<br>STEL: 306.25 mg/m <sup>3</sup><br>H*   | STEL: 600 mg/m <sup>3</sup><br>TWA: 200 mg/m <sup>3</sup><br>skóra*   |
| Titanium dioxide<br>13463-67-7   | -   | -   | -                            | TWA: 5 mg/m <sup>3</sup><br>STEL: 10 mg/m <sup>3</sup>  | STEL: 30 mg/m <sup>3</sup><br>TWA: 10 mg/m <sup>3</sup>   |
| Iron oxide<br>1309-37-1          | -   | -   | -                            | TWA: 3 mg/m <sup>3</sup><br>STEL: 6 mg/m <sup>3</sup>   | STEL: 10 mg/m <sup>3</sup><br>STEL: 5 mg/m <sup>3</sup><br>TWA: 2.5 mg/m <sup>3</sup><br>TWA: 5 mg/m <sup>3</sup> |
| Carbon black<br>1333-86-4        | -   | -   | -                            | TWA: 3.5 mg/m <sup>3</sup><br>STEL: 7 mg/m <sup>3</sup>   | TWA: 4 mg/m <sup>3</sup>  |
| Silicon dioxide<br>7631-86-9     | -   | -   | TWA: 0.75 mg/m <sup>3</sup>  | TWA: 1.5 mg/m <sup>3</sup><br>STEL: 3 mg/m <sup>3</sup>   | -   |
| Copper<br>7440-50-8              | -   | -   | TWA: 0.1 mg/m <sup>3</sup>   | TWA: 0.1 mg/m <sup>3</sup><br>TWA: 1 mg/m <sup>3</sup><br>STEL: 3 mg/m <sup>3</sup><br>STEL: 0.3 mg/m <sup>3</sup>  | TWA: 0.2 mg/m <sup>3</sup>  |
| Quartz<br>14808-60-7             | -   | -   | TWA: 0.075 mg/m <sup>3</sup> | TWA: 0.05 mg/m <sup>3</sup><br>TWA: 0.1 mg/m <sup>3</sup><br>TWA: 0.3 mg/m <sup>3</sup><br>STEL: 0.9 mg/m <sup>3</sup><br>STEL: 0.15 mg/m <sup>3</sup><br>STEL: 0.3 mg/m <sup>3</sup> | TWA: 0.1 mg/m <sup>3</sup>  |
| <b>Chemical name</b>             | <b>Portugal</b>   | <b>Romania</b>  | <b>Slovakia</b>              | <b>Slovenia</b>   | <b>Spain</b>  |
| Propyl alcohol<br>71-23-8        | TWA: 200 ppm<br>STEL: 400 ppm   | TWA: 81 ppm<br>TWA: 200 mg/m <sup>3</sup><br>STEL: 203 ppm<br>STEL: 500 mg/m <sup>3</sup> | -                            | -   | TWA: 200 ppm<br>TWA: 500 mg/m <sup>3</sup><br>STEL: 400 ppm<br>STEL: 1000 mg/m <sup>3</sup><br>vía dérmica*       |
| Titanium dioxide<br>13463-67-7   | TWA: 10 mg/m <sup>3</sup>   | TWA: 10 mg/m <sup>3</sup><br>STEL: 15 mg/m <sup>3</sup>                                   | TWA: 5 mg/m <sup>3</sup>     | -   | TWA: 10 mg/m <sup>3</sup>   |



|   |  |  |   |                             |   |
|---|--|--|---|-----------------------------|---|
| Iron oxide<br>1309-37-1   | TWA: 5 mg/m <sup>3</sup>   | TWA: 5 mg/m <sup>3</sup><br>STEL: 10 mg/m <sup>3</sup>                                   | TWA: 1.5 mg/m <sup>3</sup>                                | -                           | TWA: 5 mg/m <sup>3</sup>  |
| Carbon black<br>1333-86-4   | TWA: 3 mg/m <sup>3</sup>   | -  | TWA: 2 mg/m <sup>3</sup><br>TWA: 10 mg/m <sup>3</sup>     | -                           | TWA: 3.5 mg/m <sup>3</sup>  |
| C.I. Pigment Blue 15<br>147-14-8  | -  | -  | -   | -                           | TWA: 0.01 mg/m <sup>3</sup>   |
| 3H-Pyrazol-3-one,<br>4,4'-[(3,3'-dichloro[1,1'-bi<br>phenyl]-4,4'-diyl)bis(azo)]<br>bis[2,4-dihydro-5-methyl-<br>2-phenyl-<br>3520-72-7 | -  | -  | TWA: 8 mg/m <sup>3</sup><br>STEL: 40 mg/m <sup>3</sup>    | -                           | -   |
| Silicon dioxide<br>7631-86-9  | TWA: 0.05 mg/m <sup>3</sup><br>TWA: 0.1 mg/m <sup>3</sup>  | -  | -   | TWA: 4 mg/m <sup>3</sup>    | -   |
| Copper<br>7440-50-8   | TWA: 0.2 mg/m <sup>3</sup><br>TWA: 1 mg/m <sup>3</sup>   | TWA: 0.5 mg/m <sup>3</sup><br>STEL: 0.2 mg/m <sup>3</sup><br>STEL: 1.5 mg/m <sup>3</sup> | TWA: 1 mg/m <sup>3</sup><br>TWA: 0.2 mg/m <sup>3</sup>    | -                           | TWA: 0.01 mg/m <sup>3</sup>   |
| Quartz<br>14808-60-7  | TWA: 0.025 mg/m <sup>3</sup>   | TWA: 0.1 mg/m <sup>3</sup>   | TWA: 0.1 mg/m <sup>3</sup><br>STEL: 0.5 mg/m <sup>3</sup> | TWA: 0.05 mg/m <sup>3</sup> | TWA: 0.05 mg/m <sup>3</sup>   |
| <b>Chemical name</b>  | <b>Sweden</b>  |  | <b>Switzerland</b>  |                             | <b>United Kingdom</b>   |
| Propyl alcohol<br>71-23-8   | NGV: 150 ppm<br>NGV: 350 mg/m <sup>3</sup><br>Vägledande KGV: 250 ppm<br>Vägledande KGV: 600 mg/m <sup>3</sup> |  | TWA: 200 ppm<br>TWA: 500 mg/m <sup>3</sup><br>H*          |                             | TWA: 200 ppm<br>TWA: 500 mg/m <sup>3</sup><br>STEL: 250 ppm<br>STEL: 625 mg/m <sup>3</sup><br>Sk*   |
| Titanium dioxide<br>13463-67-7  | NGV: 5 mg/m <sup>3</sup>   |  | TWA: 3 mg/m <sup>3</sup><br>TWA: 10 mg/m <sup>3</sup>     |                             | TWA: 10 mg/m <sup>3</sup><br>TWA: 4 mg/m <sup>3</sup><br>STEL: 30 mg/m <sup>3</sup><br>STEL: 12 mg/m <sup>3</sup>   |
| Iron oxide<br>1309-37-1   | NGV: 3.5 mg/m <sup>3</sup>   |  | TWA: 3 mg/m <sup>3</sup>                                  |                             | TWA: 5 mg/m <sup>3</sup><br>TWA: 10 mg/m <sup>3</sup><br>TWA: 4 mg/m <sup>3</sup><br>STEL: 10 mg/m <sup>3</sup><br>STEL: 30 mg/m <sup>3</sup><br>STEL: 12 mg/m <sup>3</sup> |
| Carbon black<br>1333-86-4   | NGV: 3 mg/m <sup>3</sup>   |  | -   |                             | TWA: 3.5 mg/m <sup>3</sup><br>STEL: 7 mg/m <sup>3</sup>   |
| C.I. Pigment Blue 15<br>147-14-8  | -  |  | -   |                             | TWA: 1 mg/m <sup>3</sup><br>STEL: 2 mg/m <sup>3</sup>   |
| Silicon dioxide<br>7631-86-9  | -  |  | TWA: 4 mg/m <sup>3</sup>                                  |                             | TWA: 6 mg/m <sup>3</sup><br>TWA: 2.4 mg/m <sup>3</sup><br>STEL: 18 mg/m <sup>3</sup><br>STEL: 7.2 mg/m <sup>3</sup>   |
| Copper<br>7440-50-8   | NGV: 0.01 mg/m <sup>3</sup>  |  | TWA: 0.1 mg/m <sup>3</sup><br>STEL: 0.2 mg/m <sup>3</sup> |                             | TWA: 1 mg/m <sup>3</sup><br>TWA: 0.2 mg/m <sup>3</sup><br>STEL: 0.6 mg/m <sup>3</sup><br>STEL: 2 mg/m <sup>3</sup>  |
| Quartz<br>14808-60-7  | NGV: 0.1 mg/m <sup>3</sup>   |  | TWA: 0.15 mg/m <sup>3</sup>                               |                             | TWA: 0.1 mg/m <sup>3</sup><br>STEL: 0.3 mg/m <sup>3</sup>   |

**Biological occupational exposure limits**

This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies.

**Derived No Effect Level (DNEL) - Workers**

| Chemical name | Oral | Dermal | Inhalation |
|---------------|------|--------|------------|
|---------------|------|--------|------------|

| Chemical name                    | Oral | Dermal   | Inhalation  |
|----------------------------------|------|--|---|
| Propyl alcohol<br>71-23-8        | -    | 136 mg/kg bw/day [4] [6]                             | 268 mg/m <sup>3</sup> [4] [6]<br>1723 mg/m <sup>3</sup> [4] [7] |
| Carbon black<br>1333-86-4        | -    | -  | 1 mg/m <sup>3</sup> [4] [6]<br>0.5 mg/m <sup>3</sup> [5] [6]    |
| C.I. Pigment Blue 15<br>147-14-8 | -    | 450 mg/kg bw/day [4] [6]                             | 4 mg/m <sup>3</sup> [4] [6]                                     |
| Copper<br>7440-50-8              | -    | 137 mg/kg bw/day [4] [6]<br>273 mg/kg bw/day [4] [7] | -   |

**Notes**

- [4] Systemic health effects.
- [5] Local health effects.
- [6] Long term.
- [7] Short term.

**Derived No Effect Level (DNEL) - General Public**

| Chemical name                    | Oral                       | Dermal   | Inhalation   |
|----------------------------------|----------------------------|--|--|
| Propyl alcohol<br>71-23-8        | 61 mg/kg bw/day [4] [6]    | -  | 80 mg/m <sup>3</sup> [4] [6]<br>1036 mg/m <sup>3</sup> [4] [7] |
| Carbon black<br>1333-86-4        | -                          | -  | 0.06 mg/m <sup>3</sup> [4] [6]                                 |
| C.I. Pigment Blue 15<br>147-14-8 | 45 mg/kg bw/day [4] [6]    | -  | -  |
| Copper<br>7440-50-8              | 0.041 mg/kg bw/day [4] [6] | 273 mg/kg bw/day [4] [6]<br>273 mg/kg bw/day [4] [7] | 1 mg/m <sup>3</sup> [5] [6]<br>1 mg/m <sup>3</sup> [5] [7]     |

**Notes**

- [4] Systemic health effects.
- [5] Local health effects.
- [6] Long term.
- [7] Short term.

**Predicted No Effect Concentration (PNEC)**

| Chemical name             | Freshwater | Freshwater<br>(intermittent release) | Marine water | Marine water<br>(intermittent release) | Air |
|---------------------------|------------|--------------------------------------|--------------|--|-----|
| Propyl alcohol<br>71-23-8 | 6.83 mg/L  | 10 mg/L                              | 0.683 mg/L   | -                                      | -   |
| Copper<br>7440-50-8       | 7.8 µg/L   | -                                    | 5.2 µg/L     | -                                      | -   |

| Chemical name                    | Freshwater<br>sediment    | Marine sediment           | Sewage treatment | Soil               | Food chain |
|----------------------------------|---------------------------|---------------------------|------------------|--------------------|------------|
| Propyl alcohol<br>71-23-8        | 27.5 mg/kg<br>sediment dw | 2.75 mg/kg<br>sediment dw | 96 mg/L          | 1.49 mg/kg soil dw | -          |
| C.I. Pigment Blue 15<br>147-14-8 | 10 mg/kg sediment<br>dw   | 1 mg/kg sediment<br>dw    | -                | 1 mg/kg soil dw    | -          |
| Copper<br>7440-50-8              | 87 mg/kg sediment<br>dw   | 676 mg/kg sediment<br>dw  | 230 µg/L         | 65 mg/kg soil dw   | -          |

**8.2. Exposure controls**

|  |  |
|--|--|
| <b>Engineering controls</b>            | Showers<br>Eyewash stations<br>Ventilation systems.  |
| <b>Personal protective equipment</b>   |  |
| <b>Eye/face protection</b>             | No protective equipment is needed under normal use conditions. Tight sealing safety goggles.   |
| <b>Hand protection</b>                 | No protective equipment is needed under normal use conditions. If there is a risk of contact: Wear suitable gloves. Impervious gloves.   |
| <b>Skin and body protection</b>        | No protective equipment is needed under normal use conditions. Wear suitable protective clothing. Long sleeved clothing. Chemical resistant apron. Antistatic boots.   |
| <b>Respiratory protection</b>          | No personal respiratory protective equipment normally required.  |
| <b>General hygiene considerations</b>  | Do not eat, drink or smoke when using this product. Contaminated work clothing should not be allowed out of the workplace. Regular cleaning of equipment, work area and clothing is recommended. Wash hands before breaks and immediately after handling the product. Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. |
| <b>Environmental exposure controls</b> | No information available.  |

**SECTION 9: Physical and chemical properties**

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

|                       |                          |
|-----------------------|--------------------------|
| <b>Appearance</b>     |                          |
| <b>Physical state</b> | Liquid                   |
| <b>Color</b>          | Varies                   |
| <b>Odor</b>           | Alcohol                  |
| <b>Odor threshold</b> | No information available |

| Property                                       | Values | Remarks • Method  |
|--|--------|-------------------|
| <b>Melting point / freezing point</b>          |        | No data available |
| <b>Initial boiling point and boiling range</b> | 96 °C  | (Liquid Ink)      |
| <b>Flammability</b>                            |        | No data available |
| <b>Flammability Limit in Air</b>               |        |                   |
| <b>Upper flammability or explosive limits</b>  | 13.5%  |                   |
| <b>Lower flammability or explosive limits</b>  | 2.1%   |                   |
| <b>Flash point</b>                             | 23 °C  | (Liquid Ink)      |
| <b>Autoignition temperature</b>                |        | No data available |
| <b>Decomposition temperature</b>               |        | No data available |
| <b>pH</b>                                      |        | No data available |
| <b>pH (as aqueous solution)</b>                |        | No data available |
| <b>Kinematic viscosity</b>                     |        | No data available |
| <b>Dynamic viscosity</b>                       |        | No data available |
| <b>Water solubility</b>                        |        | No data available |
| <b>Solubility(ies)</b>                         |        | No data available |
| <b>Partition coefficient</b>                   |        | No data available |
| <b>Vapor pressure</b>                          |        | No data available |

|                            |                   |
|----------------------------|-------------------|
| Relative density           | No data available |
| Bulk density               | No data available |
| Liquid Density             | No data available |
| Vapor density              | No data available |
| Particle characteristics   |                   |
| Particle Size              | No data available |
| Particle Size Distribution | No data available |

## 9.2. Other information

9.2.1. Information with regard to physical hazard classes  
Not applicable

9.2.2. Other safety characteristics  
No information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

Reactivity None under normal use conditions.

### 10.2. Chemical stability

Stability Stable under normal conditions.

#### Explosion data

Sensitivity to mechanical impact None.

Sensitivity to static discharge Yes.

### 10.3. Possibility of hazardous reactions

Possibility of hazardous reactions None under normal processing.

### 10.4. Conditions to avoid

Conditions to avoid Heat, flames and sparks. Excessive heat.

### 10.5. Incompatible materials

Incompatible materials Strong acids. Strong bases. Strong oxidizing agents.

### 10.6. Hazardous decomposition products

Hazardous decomposition products Thermal decomposition can lead to release of irritating gases and vapors.

## SECTION 11: Toxicological information

### 11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

#### Information on likely routes of exposure

##### Product Information

Inhalation None under normal use conditions. Specific test data for the substance or mixture is not available. May cause drowsiness or dizziness.

Eye contact None under normal use conditions. Specific test data for the substance or mixture is not

available. Causes serious eye damage. May cause irreversible damage to eyes.

**Skin contact**

None under normal use conditions. Specific test data for the substance or mixture is not available. May cause irritation.

**Ingestion**

None under normal use conditions. Specific test data for the substance or mixture is not available. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

**Symptoms related to the physical, chemical and toxicological characteristics**

**Symptoms**

Redness. Burning. May cause blindness. Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting.

**Acute toxicity**

**Numerical measures of toxicity**

The following values are calculated based on chapter 3.1 of the GHS document:

**ATEmix (oral)** 2,710.10 mg/kg

**ATEmix (dermal)** 3,797.20 mg/kg

**ATEmix (inhalation-dust/mist)** 43.30 mg/l

**Component Information**

| Chemical name  | Oral LD50             | Dermal LD50             | Inhalation LC50                     |
|--|-----------------------|-------------------------|-------------------------------------|
| Propyl alcohol   | = 1870 mg/kg ( Rat )  | = 4049 mg/kg ( Rabbit ) | > 33.8 mg/L ( Rat ) 4 h             |
| Titanium dioxide   | > 10000 mg/kg ( Rat ) | -                       | = 5.09 mg/L ( Rat ) 4 h             |
| Iron oxide   | > 10000 mg/kg ( Rat ) | -                       | -                                   |
| Carbon black   | > 15400 mg/kg ( Rat ) | -                       | > 4.6 mg/m <sup>3</sup> ( Rat ) 4 h |
| C.I. Pigment Blue 15   | > 10000 mg/kg ( Rat ) | > 5000 mg/kg ( Rat )    | -                                   |
| 3H-Pyrazol-3-one,<br>4,4'-[(3,3'-dichloro[1,1'-biphenyl]-4,4'-<br>diyl)bis(azo)]bis[2,4-dihydro-5-methyl-<br>2-phenyl- | > 5 g/kg ( Rat )      | > 2000 mg/kg ( Rat )    | -                                   |
| Silicon dioxide  | = 7900 mg/kg ( Rat )  | > 5000 mg/kg ( Rabbit ) | > 58.8 mg/L ( Rat ) 4 h             |
| Copper   | -                     | -                       | > 5.11 mg/L ( Rat ) 4 h             |

**Delayed and immediate effects as well as chronic effects from short and long-term exposure**

**Skin corrosion/irritation**

May cause skin irritation.

**Serious eye damage/eye irritation**

Classification based on data available for ingredients. Causes burns. Causes serious eye damage.

**Respiratory or skin sensitization**

Based on available data, the classification criteria are not met.

**Germ cell mutagenicity**

Based on available data, the classification criteria are not met.

**Carcinogenicity**

Contains a known or suspected carcinogen. Classification based on data available for ingredients. May cause cancer.

The table below indicates whether each agency has listed any ingredient as a carcinogen.

| Chemical name    | European Union |
|------------------|----------------|
| Titanium dioxide | Carc. 2        |

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

**STOT - single exposure** May cause drowsiness or dizziness.

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

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

**11.2. Information on other hazards**

**11.2.1. Endocrine disrupting properties**

**Endocrine disrupting properties** This product does not contain any known or suspected endocrine disruptors.

**11.2.2. Other information**

**Other adverse effects** No information available.

**SECTION 12: Ecological information**

**12.1. Toxicity**

**Ecotoxicity** Very toxic to aquatic life.

| Chemical name                | Algae/aquatic plants   | Fish  | Toxicity to microorganisms | Crustacea  |
|------------------------------|--|---|----------------------------|--|
| Propyl alcohol<br>71-23-8    | -  | LC50: =4480mg/L (96h,<br>Pimephales promelas)   | -                          | EC50: =3642mg/L (48h,<br>Daphnia magna)<br>EC50: 3339 - 3977mg/L<br>(48h, Daphnia magna) |
| Iron oxide<br>1309-37-1      | -  | LC50: =100000mg/L<br>(96h, Danio rerio)   | -                          | -  |
| Silicon dioxide<br>7631-86-9 | EC50: =440mg/L (72h,<br>Pseudokirchneriella<br>subcapitata)  | LC50: =5000mg/L (96h,<br>Brachydanio rerio)   | -                          | EC50: =7600mg/L (48h,<br>Ceriodaphnia dubia)   |
| Copper<br>7440-50-8          | EC50: 0.0426 -<br>0.0535mg/L (72h,<br>Pseudokirchneriella<br>subcapitata)<br>EC50: 0.031 -<br>0.054mg/L (96h,<br>Pseudokirchneriella<br>subcapitata) | LC50: 0.0068 -<br>0.0156mg/L (96h,<br>Pimephales promelas)<br>LC50: <0.3mg/L (96h,<br>Pimephales promelas)<br>LC50: =0.2mg/L (96h,<br>Pimephales promelas)<br>LC50: =0.052mg/L (96h,<br>Oncorhynchus mykiss)<br>LC50: =1.25mg/L (96h,<br>Lepomis macrochirus)<br>LC50: =0.3mg/L (96h,<br>Cyprinus carpio)<br>LC50: =0.8mg/L (96h,<br>Cyprinus carpio)<br>LC50: =0.112mg/L (96h,<br>Poecilia reticulata) | -                          | EC50: =0.03mg/L (48h,<br>Daphnia magna)  |

**12.2. Persistence and degradability**

**Persistence and degradability** No information available.

**12.3. Bioaccumulative potential**

**Bioaccumulation**

**Component Information**

| Chemical name        | Partition coefficient |
|----------------------|-----------------------|
| Propyl alcohol       | 0.2                   |
| C.I. Pigment Blue 15 | 6.6                   |

**12.4. Mobility in soil**

**Mobility in soil** No information available.

**12.5. Results of PBT and vPvB assessment**

**PBT and vPvB assessment** No information available.

| Chemical name   | PBT and vPvB assessment         |
|---|---------------------------------|
| Propyl alcohol<br>71-23-8   | The substance is not PBT / vPvB |
| Titanium dioxide<br>13463-67-7  | The substance is not PBT / vPvB |
| Iron oxide<br>1309-37-1   | The substance is not PBT / vPvB |
| Carbon black<br>1333-86-4   | The substance is not PBT / vPvB |
| C.I. Pigment Blue 15<br>147-14-8  | The substance is not PBT / vPvB |
| 3H-Pyrazol-3-one,<br>4,4'-[(3,3'-dichloro[1,1'-biphenyl]-4,4'-diyl)bis(azo)]bis[2,4-dihydro-5-methyl-2-phenyl-<br>3520-72-7 | The substance is not PBT / vPvB |
| Silicon dioxide<br>7631-86-9  | The substance is not PBT / vPvB |
| Copper<br>7440-50-8   | The substance is not PBT / vPvB |

**12.6. Endocrine disrupting properties**

**Endocrine disrupting properties** This product does not contain any known or suspected endocrine disruptors.

**12.7. Other adverse effects**

**Other adverse effects** No information available.

**SECTION 13: Disposal considerations**

**13.1. Waste treatment methods**

**Waste from residues/unused products** Should not be released into the environment. Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

|  |  |
|--|--|
| <b>Contaminated packaging</b>                                  | Not applicable. Empty containers pose a potential fire and explosion hazard. Do not cut, puncture or weld containers.  |
| <b>Waste codes / waste designations according to EWC / AVV</b> | According to the European Waste Catalog, 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. |

**SECTION 14: Transport information**

**IMDG**

|   |   |
|---|---|
| <b>14.1 UN number or ID number</b>                                  | UN1210  |
| <b>14.2 UN proper shipping name</b>                                 | PRINTING INK  |
| <b>14.3 Transport hazard class(es)</b>                              | 3   |
| <b>14.4 Packing group</b>   | III   |
| <b>Description</b>  | UN1210, PRINTING INK, 3, III, (23°C C.C.), Limited Quantity |
| <b>14.5 Environmental hazards</b>                                   | Not applicable  |
| <b>14.6 Special Precautions for Users</b>                           |   |
| <b>Special Provisions</b>   | 163, 223, 367, 955  |
| <b>EmS-No</b>   | F-E, S-D  |
| <b>14.7 Maritime transport in bulk according to IMO instruments</b> | No information available                                    |

**RID**

|   |  |
|---|--|
| <b>14.1 UN number</b>                     | UN1210   |
| <b>14.2 UN proper shipping name</b>       | PRINTING INK                                   |
| <b>14.3 Transport hazard class(es)</b>    | 3  |
| <b>14.4 Packing group</b>                 | III  |
| <b>Description</b>                        | UN1210, PRINTING INK, 3, III, Limited Quantity |
| <b>14.5 Environmental hazards</b>         | Not applicable                                 |
| <b>14.6 Special Precautions for Users</b> |  |
| <b>Special Provisions</b>                 | None   |
| <b>Classification code</b>                | F1   |

**ADR**

|   |  |
|---|--|
| <b>14.1 UN number or ID number</b>        | UN1210   |
| <b>14.2 UN proper shipping name</b>       | PRINTING INK                                   |
| <b>14.3 Transport hazard class(es)</b>    | 3  |
| <b>14.4 Packing group</b>                 | III  |
| <b>Description</b>                        | UN1210, PRINTING INK, 3, III, Limited Quantity |
| <b>14.5 Environmental hazards</b>         | Not applicable                                 |
| <b>14.6 Special Precautions for Users</b> |  |
| <b>Special Provisions</b>                 | 163, 367                                       |
| <b>Classification code</b>                | F1   |
| <b>Tunnel restriction code</b>            | (D/E)  |

**IATA**

|   |                              |
|---|------------------------------|
| <b>14.1 UN number or ID number</b>        | UN1210                       |
| <b>14.2 UN proper shipping name</b>       | PRINTING INK                 |
| <b>14.3 Transport hazard class(es)</b>    | 3                            |
| <b>14.4 Packing group</b>                 | III                          |
| <b>Description</b>                        | UN1210, PRINTING INK, 3, III |
| <b>14.5 Environmental hazards</b>         | Not applicable               |
| <b>14.6 Special Precautions for Users</b> |                              |
| <b>Special Provisions</b>                 | A3, A72, A192                |
| <b>Note:</b>                              | None                         |

**SECTION 15: Regulatory information**



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

**National regulations**

**France**

**Occupational Illnesses (R-463-3, France)**

| Chemical name                  | French RG number       |
|--------------------------------|------------------------|
| Propyl alcohol<br>71-23-8      | RG 84                  |
| Titanium dioxide<br>13463-67-7 | -                      |
| Iron oxide<br>1309-37-1        | RG 44, RG 44bis, RG 94 |
| Carbon black<br>1333-86-4      | RG 16, RG 16bis        |
| Silicon dioxide<br>7631-86-9   | RG 25                  |
| Quartz<br>14808-60-7           | RG 25                  |

**Germany**

**Water hazard class (WGK)** strongly hazardous to water (WGK 3)

**Netherlands**

| Chemical name    | Netherlands - List of Carcinogens | Netherlands - List of Mutagens | Netherlands - List of Reproductive Toxins |
|------------------|-----------------------------------|--------------------------------|---|
| Titanium dioxide | -                                 | -                              | -   |
| Carbon black     | -                                 | -                              | -   |
| Quartz           | Present                           | -                              | -   |

**European Union**

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work.

**Authorizations and/or restrictions on use:**

This product contains one or more substance(s) subject to restriction (Regulation (EC) No. 1907/2006 (REACH), Annex XVII)

| Chemical name  | Restricted substance per REACH Annex XVII | Substance subject to authorization per REACH Annex XIV |
|--|---|--|
| Propyl alcohol - 71-23-8   | 75.                                       | -  |
| Titanium dioxide - 13463-67-7  | 75.                                       | -  |
| Iron oxide - 1309-37-1   | 75.                                       | -  |
| Carbon black - 1333-86-4   | 75.                                       | -  |
| C.I. Pigment Blue 15 - 147-14-8  | 75.                                       | -  |
| 3H-Pyrazol-3-one,<br>4,4'-[(3,3'-dichloro[1,1'-biphenyl]-4,4'-diyl)bis(azo)]<br>bis[2,4-dihydro-5-methyl-2-phenyl- - 3520-72-7 | 75.                                       | -  |
| Copper - 7440-50-8   | 75.                                       | -  |

**Persistent Organic Pollutants**

Not applicable

**Dangerous substance category per Seveso Directive (2012/18/EU)**

P5a - FLAMMABLE LIQUIDS

P5b - FLAMMABLE LIQUIDS

P5c - FLAMMABLE LIQUIDS

E1 - Hazardous to the Aquatic Environment in Category Acute 1 or Chronic 1

**Ozone-depleting substances (ODS) regulation (EC) 1005/2009**

Not applicable

**EU - Plant Protection Products (1107/2009/EC)**

| Chemical name            | EU - Plant Protection Products (1107/2009/EC) |
|--------------------------|---|
| Carbon black - 1333-86-4 | Plant protection agent                        |
| Quartz - 14808-60-7      | Plant protection agent                        |

**Biocidal Products Regulation (EU) No 528/2012 (BPR)**

| Chemical name            | Biocidal Products Regulation (EU) No 528/2012 (BPR)   |
|--------------------------|---|
| Propyl alcohol - 71-23-8 | Product-type 2: Disinfectants and algacides not intended for direct application to humans or animals Product-type 4: Food and feed area Product-type 1: Human hygiene |
| Copper - 7440-50-8       | Product-type 8: Wood preservatives Product-type 21: Antifouling products  |

**International Inventories**

Contact supplier for inventory compliance status

**15.2. Chemical safety assessment**

**Chemical Safety Report**

No information available

**SECTION 16: Other information**

**Key or legend to abbreviations and acronyms used in the safety data sheet**

**Full text of H-Statements referred to under section 3**

H225 - Highly flammable liquid and vapor

H318 - Causes serious eye damage

H336 - May cause drowsiness or dizziness

H350i - May cause cancer by inhalation

H351i - Suspected of causing cancer if inhaled

H373 - May cause damage to organs through prolonged or repeated exposure

H411 - Toxic to aquatic life with long lasting effects

**Legend**

ATE: Acute Toxicity Estimate

SVHC: Substances of Very High Concern for Authorization:

PBT: Persistent, Bioaccumulative, and Toxic (PBT) Chemicals

vPvB: Very Persistent and very Bioaccumulative (vPvB) Chemicals

**Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

TWA TWA (time-weighted average)

STEL

STEL (Short Term Exposure Limit)

Ceiling Maximum limit value

\*

Skin designation

Classification procedure

| Classification according to Regulation (EC) No. 1272/2008 [CLP] | Method Used        |
|---|--------------------|
| Acute oral toxicity   | Calculation method |
| Acute dermal toxicity   | Calculation method |
| Acute inhalation toxicity - gas                                 | Calculation method |
| Acute inhalation toxicity - vapor                               | Calculation method |
| Acute inhalation toxicity - dust/mist                           | Calculation method |
| Skin corrosion/irritation                                       | Calculation method |
| Serious eye damage/eye irritation                               | Calculation method |
| Respiratory sensitization                                       | Calculation method |
| Skin sensitization  | Calculation method |
| Mutagenicity  | Calculation method |
| Carcinogenicity   | Calculation method |
| Reproductive toxicity   | Calculation method |
| STOT - single exposure  | Calculation method |
| STOT - repeated exposure  | Calculation method |
| Acute aquatic toxicity  | Calculation method |
| Chronic aquatic toxicity  | Calculation method |
| Aspiration hazard   | Calculation method |
| Ozone   | Calculation method |

**Key literature references and sources for data used to compile the SDS**

U.S. Environmental Protection Agency ChemView Database  
 European Food Safety Authority (EFSA)  
 European Chemicals Agency (ECHA) Committee for Risk Assessment (ECHA\_RAC)  
 European Chemicals Agency (ECHA) (ECHA\_API)  
 EPA (Environmental Protection Agency)  
 Acute Exposure Guideline Level(s) (AEGL(s))  
 U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act  
 U.S. Environmental Protection Agency High Production Volume Chemicals  
 Food Research Journal  
 Hazardous Substance Database  
 International Uniform Chemical Information Database (IUCLID)  
 Japan GHS Classification  
 Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)  
 NIOSH (National Institute for Occupational Safety and Health)  
 National Library of Medicine's ChemID Plus (NLM CIP)  
 National Toxicology Program (NTP)  
 New Zealand's Chemical Classification and Information Database (CCID)  
 Organization for Economic Co-operation and Development Environment, Health, and Safety Publications  
 Organization for Economic Co-operation and Development High Production Volume Chemicals Program  
 Organization for Economic Co-operation and Development Screening Information Data Set  
 World Health Organization

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

**Disclaimer**

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End of Safety Data Sheet