

**PERMANENT MARKER INK  
BLUE**

Revision nr. 4  
Dated 17/12/2020  
Printed on 27/05/2021  
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Replaced revision:3 (Printed on: 11/07/2019)

# Safety Data Sheet

According to Annex II to REACH - Regulation 2015/830

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

### 1.1. Product identifier

Code:  
Product name **PERMANENT CAP OFF BLUE**  
UFI :

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

Intended use **PERMANENT MARKER INKS**

| Identified Uses      | Industrial | Professional | Consumer |
|----------------------|------------|--------------|----------|
| Inks                 | ✓          | ✓            | ✓        |
| Uses Advised Against |            |              |          |

Do not use for purposes other than those specified

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

Name Hainenko Limited  
Full address 284 Chase Road  
District and Country London  
N14 6HF  
Tel: 0044 (0) 20 8882 8734  
Fax: 0044 (0) 20 8882 7749

e-mail address of the competent person  
responsible for the Safety Data Sheet **d.ashpole@hainenko.com**

### 1.4. Emergency telephone number

For urgent inquiries refer to 0044 (0) 20 8882 8734 (only available during office hours)



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### 2.3. Other hazards

On the basis of available data, the product does not contain any PBT or vPvB in percentage  $\geq$  than 0,1%.

## SECTION 3. Composition/information on ingredients

### 3.2. Mixtures

Contains:

| Identification                  | x = Conc. %      | Classification 1272/2008 (CLP)  |
|---------------------------------|------------------|---|
| <b>ETHANOL</b>                  |                  |   |
| CAS 64-17-5                     | $55 \leq x < 60$ | Flam. Liq. 2 H225, Eye Irrit. 2 H319  |
| EC 200-578-6                    |                  |   |
| INDEX 603-002-00-5              |                  |   |
| Reg. no. 01-2119457610-43-xxxx  |                  |   |
| <b>1-METHOXYPROPAN-2-OL</b>     |                  |   |
| CAS 107-98-2                    | $10 \leq x < 13$ | Flam. Liq. 3 H226, STOT SE 3 H336   |
| EC 203-539-1                    |                  |   |
| INDEX 603-064-00-3              |                  |   |
| Reg. no. 01-2119457435-35-xxxx  |                  |   |
| <b>PROPAN-2-OL</b>              |                  |   |
| CAS 67-63-0                     | $5 \leq x < 7$   | Flam. Liq. 2 H225, Eye Irrit. 2 H319, STOT SE 3 H336  |
| EC 200-661-7                    |                  |   |
| INDEX 603-117-00-0              |                  |   |
| Reg. no. 01-2119457558-25-xxxx  |                  |   |
| <b>SOLVENT BLUE 4 &lt; 0,1%</b> |                  |   |
| <b>MICHLER'S KETONE</b>         |                  |   |
| CAS 6786-83-0                   | $3 \leq x < 5$   | Eye Dam. 1 H318, Skin Sens. 1B H317, Classification note/notes according to Annex VI to the CLP Regulation: 1 |
| EC 229-851-8                    |                  |   |
| INDEX -                         |                  |   |
| Reg. no. 01-2119950688-22-xxxx  |                  |   |
| <b>ISOBUTYL ALCOHOL</b>         |                  |   |
| CAS 78-83-1                     | $1 \leq x < 3$   | Flam. Liq. 3 H226, Eye Dam. 1 H318, Skin Irrit. 2 H315, STOT SE 3 H335, STOT SE 3 H336                        |
| EC 201-148-0                    |                  |   |
| INDEX 603-108-00-1              |                  |   |
| Reg. no. 01-2119484609-23-xxxx  |                  |   |
| <b>METHANOL</b>                 |                  |   |
| CAS 67-56-1                     | $0 \leq x < 0,5$ | Flam. Liq. 2 H225, Acute Tox. 3 H301, Acute Tox. 3 H311, Acute Tox. 3 H331, STOT SE 1 H370                    |
| EC 200-659-6                    |                  |   |
| INDEX 603-001-00-X              |                  |   |
| Reg. no. 01-2119433307-44-xxxx  |                  |   |

|                                      |  |   |
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The full wording of hazard (H) phrases is given in section 16 of the sheet.

## SECTION 4. First aid measures

### 4.1. Description of first aid measures

EYES: Remove contact lenses, if present. Wash immediately with plenty of water for at least 15 minutes, opening the eyelids fully. If problem persists, seek medical advice.

SKIN: Remove contaminated clothing. Rinse skin with a shower immediately. Wash contaminated clothing before using it again.

INHALATION: Remove to open air. If the subject stops breathing, administer artificial respiration. Get medical advice/attention immediately.

INGESTION: Get medical advice/attention immediately. Do not induce vomiting. Do not administer anything not explicitly authorised by a doctor.

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

Specific information on symptoms and effects caused by the product are unknown.

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

Information not available

## SECTION 5. Firefighting measures

### 5.1. Extinguishing media

#### SUITABLE EXTINGUISHING EQUIPMENT

Extinguishing substances are: carbon dioxide, foam, chemical powder. For product loss or leakage that has not caught fire, water spray can be used to disperse flammable vapours and protect those trying to stem the leak.

#### UNSUITABLE EXTINGUISHING EQUIPMENT

Do not use jets of water. Water is not effective for putting out fires but can be used to cool containers exposed to flames to prevent explosions.

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

#### HAZARDS CAUSED BY EXPOSURE IN THE EVENT OF FIRE

Excess pressure may form in containers exposed to fire at a risk of explosion. Do not breathe combustion products.

### 5.3. Advice for firefighters

#### GENERAL INFORMATION

Use jets of water to cool the containers to prevent product decomposition and the development of substances potentially hazardous for health. Always wear full fire prevention gear. Collect extinguishing water to prevent it from draining into the sewer system. Dispose of contaminated water used for extinction and the remains of the fire according to applicable regulations.

#### SPECIAL PROTECTIVE EQUIPMENT FOR FIRE-FIGHTERS

Normal fire fighting clothing i.e. fire kit (BS EN 469), gloves (BS EN 659) and boots (HO specification A29 and A30) in combination with self-contained open circuit positive pressure compressed air breathing apparatus (BS EN 137).

## SECTION 6. Accidental release measures

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

Block the leakage if there is no hazard.

Wear suitable protective equipment (including personal protective equipment referred to under Section 8 of the safety data sheet) to prevent any contamination of skin, eyes and personal clothing. These indications apply for both processing staff and those involved in emergency procedures.

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Send away individuals who are not suitably equipped. Use explosion-proof equipment. Eliminate all sources of ignition (cigarettes, flames, sparks, etc.) from the leakage site.

## 6.2. Environmental precautions

The product must not penetrate into the sewer system or come into contact with surface water or ground water.

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

Collect the leaked product into a suitable container. Evaluate the compatibility of the container to be used, by checking section 10. Absorb the remainder with inert absorbent material.

Make sure the leakage site is well aired. Contaminated material should be disposed of in compliance with the provisions set forth in point 13.

## 6.4. Reference to other sections

Any information on personal protection and disposal is given in sections 8 and 13.

## SECTION 7. Handling and storage

### 7.1. Precautions for safe handling

Keep away from heat, sparks and naked flames; do not smoke or use matches or lighters. Without adequate ventilation, vapours may accumulate at ground level and, if ignited, catch fire even at a distance, with the danger of backfire. Avoid bunching of electrostatic charges. When performing transfer operations involving large containers, connect to an earthing system and wear antistatic footwear. Vigorous stirring and flow through the tubes and equipment may cause the formation and accumulation of electrostatic charges. In order to avoid the risk of fires and explosions, never use compressed air when handling. Open containers with caution as they may be pressurised. Do not eat, drink or smoke during use. Avoid leakage of the product into the environment.

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

Store only in the original container. Store the containers sealed, in a well ventilated place, away from direct sunlight. Store in a cool and well ventilated place, keep far away from sources of heat, naked flames and sparks and other sources of ignition. Keep containers away from any incompatible materials, see section 10 for details.

### 7.3. Specific end use(s)

Information not available

## SECTION 8. Exposure controls/personal protection

### 8.1. Control parameters

Regulatory References:

|     |                 |   |
|-----|-----------------|---|
| BGR | България        | МИНИСТЕРСТВО НА ТРУДА И СОЦИАЛНАТА ПОЛИТИКА МИНИСТЕРСТВО НА ЗДРАВЕОПАЗВАНЕТО НАРЕДБА No 13 от 30 декември 2003 г (4 Септември 2018г)  |
| CZE | Česká Republika | Nařízení vlády č. 246/2018 Sb. Nařízení vlády, kterým se mění nařízení vlády č. 361/2007 Sb., kterým se stanoví podmínky ochrany zdraví při práci, ve znění pozdějších předpisů   |
| DEU | Deutschland     | TRGS 900 - Seite 1 von 69 (Fassung 29.03.2019)- Liste der Arbeitsplatzgrenzwerte und Kurzzeitwerte  |
| ESP | España          | LÍMITES DE EXPOSICIÓN PROFESIONAL PARA AGENTES QUÍMICOS EN ESPAÑA 2019 (INSST)  |
| FRA | France          | Valeurs limites d'exposition professionnelle aux agents chimiques en France. ED 984 - INRS  |
| ITA | Italia          | Decreto Legislativo 9 Aprile 2008, n.81   |
| NLD | Nederland       | Regeling van de Staatssecretaris van Sociale Zaken en Werkgelegenheid van 13 juli 2018, 2018-0000118517 tot wijziging van de Arbeidsomstandighedenregeling in verband met de implementatie van Richtlijn 2017/164 in Bijlage XIII |
| POL | Polska          | ROZPORZĄDZENIE MINISTRA RODZINY, PRACY I POLITYKI SPOŁECZNEJ z dnia 12 czerwca 2018 r   |
| SWE | Sverige         | Hygieniska gränsvärden, AFS 2018:1  |

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GBR United Kingdom EH40/2005 Workplace exposure limits (Third edition, published 2018)  
 EU OEL EU Directive (EU) 2019/1831; Directive (EU) 2019/130; Directive (EU) 2019/983; Directive (EU) 2017/2398;  
 Directive (EU) 2017/164; Directive 2009/161/EU; Directive 2006/15/EC; Directive 2004/37/EC; Directive  
 2000/39/EC; Directive 98/24/EC; Directive 91/322/EEC.  
 TLV-ACGIH ACGIH 2020

### ETHANOL

#### Threshold Limit Value

| Type      | Country | TWA/8h |      | STEL/15min |      | Remarks /<br>Observations |
|-----------|---------|--------|------|------------|------|---------------------------|
|           |         | mg/m3  | ppm  | mg/m3      | ppm  |                           |
| TLV       | BGR     | 1000   |      |            |      |                           |
| TLV       | CZE     | 1000   |      | 3000       |      |                           |
| AGW       | DEU     | 960    | 500  | 1920       | 1000 |                           |
| MAK       | DEU     | 960    | 500  | 1920       | 1000 |                           |
| VLA       | ESP     |        |      | 1910       | 1000 |                           |
| VLEP      | FRA     | 1900   | 1000 | 9500       | 5000 |                           |
| TGG       | NLD     | 260    |      | 1900       |      | SKIN                      |
| NDS/NDSCh | POL     | 1900   |      |            |      |                           |
| NGV/KGV   | SWE     | 1000   | 500  | 1900       | 1000 |                           |
| WEL       | GBR     | 1920   | 1000 |            |      |                           |
| TLV-ACGIH |         | 1884   | 1000 |            |      |                           |

#### Predicted no-effect concentration - PNEC

|   |      |       |
|---|------|-------|
| Normal value in fresh water                           | 0,96 | mg/l  |
| Normal value in marine water                          | 0,79 | mg/l  |
| Normal value for fresh water sediment                 | 3,6  | mg/kg |
| Normal value for marine water sediment                | 2,9  | mg/kg |
| Normal value for water, intermittent release          | 2,75 | mg/l  |
| Normal value of STP microorganisms                    | 580  | mg/l  |
| Normal value for the food chain (secondary poisoning) | 380  | mg/kg |
| Normal value for the terrestrial compartment          | 0,63 | mg/kg |

#### Health - Derived no-effect level - DNEL / DMEL

| Route of exposure | Effects on consumers |                |               | Chronic systemic  | Effects on workers |                |               |                   |
|-------------------|----------------------|----------------|---------------|-------------------|--------------------|----------------|---------------|-------------------|
|                   | Acute local          | Acute systemic | Chronic local |                   | Acute local        | Acute systemic | Chronic local | Chronic systemic  |
| Oral              |                      |                | NPI           | 87 mg/kg<br>bw/d  |                    |                |               |                   |
| Inhalation        | NPI                  | NPI            | NPI           | 114 mg/m3         | NPI                | NPI            | NPI           | 950 mg/m3         |
| Skin              | NPI                  | NPI            | NPI           | 206 mg/kg<br>bw/d | NPI                | NPI            | NPI           | 343 mg/kg<br>bw/d |

### 1-METHOXYPROPAN-2-OL

#### Threshold Limit Value

| Type | Country | TWA/8h |       | STEL/15min |        | Remarks /<br>Observations |
|------|---------|--------|-------|------------|--------|---------------------------|
|      |         | mg/m3  | ppm   | mg/m3      | ppm    |                           |
| TLV  | BGR     | 375    | 100   | 568        | 150    | SKIN                      |
| TLV  | CZE     | 270    | 72,09 | 550        | 146,85 | SKIN                      |
| AGW  | DEU     | 370    | 100   | 740        | 200    |                           |
| MAK  | DEU     | 370    | 100   | 740        | 200    |                           |

|  |  |                                      |  |  |  |  |   |
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|           |     |     |     |     |     |      |
|-----------|-----|-----|-----|-----|-----|------|
| VLA       | ESP | 375 | 100 | 568 | 150 | SKIN |
| VLEP      | FRA | 188 | 50  | 375 | 100 | SKIN |
| VLEP      | ITA | 375 | 100 | 568 | 150 | SKIN |
| TGG       | NLD | 375 |     | 563 |     | SKIN |
| NDS/NDSCh | POL | 180 |     | 360 |     | SKIN |
| NGV/KGV   | SWE | 190 | 50  | 568 | 150 | SKIN |
| WEL       | GBR | 375 | 100 | 560 | 150 | SKIN |
| OEL       | EU  | 375 | 100 | 568 | 150 | SKIN |
| TLV-ACGIH |     | 184 | 50  | 368 | 100 |      |

|   |  |  |  |      |  |       |
|---|--|--|--|------|--|-------|
| <b>Predicted no-effect concentration - PNEC</b> |  |  |  |      |  |       |
| Normal value in fresh water                     |  |  |  | 10   |  | mg/l  |
| Normal value in marine water                    |  |  |  | 1    |  | mg/l  |
| Normal value for fresh water sediment           |  |  |  | 52,3 |  | mg/kg |
| Normal value for marine water sediment          |  |  |  | 5,2  |  | mg/kg |
| Normal value for water, intermittent release    |  |  |  | 100  |  | mg/l  |
| Normal value of STP microorganisms              |  |  |  | 100  |  | mg/l  |
| Normal value for the terrestrial compartment    |  |  |  | 4,59 |  | mg/kg |
| Normal value for the atmosphere                 |  |  |  | NPI  |  |       |

|   |                      |                |               |                  |                    |                |               |                  |
|---|----------------------|----------------|---------------|------------------|--------------------|----------------|---------------|------------------|
| <b>Health - Derived no-effect level - DNEL / DMEL</b> |                      |                |               |                  |                    |                |               |                  |
|   | Effects on consumers |                |               |                  | Effects on workers |                |               |                  |
| Route of exposure                                     | Acute local          | Acute systemic | Chronic local | Chronic systemic | Acute local        | Acute systemic | Chronic local | Chronic systemic |
| Oral  |                      |                | VND           | 33 mg/kg bw/d    |                    |                |               |                  |
| Inhalation  |                      |                | NPI           | 43,9 mg/m3       | 553,5 mg/m3        | 553,5 mg/m3    | NPI           | 369 mg/m3        |
| Skin  |                      |                | NPI           | 78 mg/kg bw/d    |                    |                | NPI           | 183 mg/kg bw/d   |

|                              |         |        |     |            |     |                        |
|------------------------------|---------|--------|-----|------------|-----|------------------------|
| <b>PROPAN-2-OL</b>           |         |        |     |            |     |                        |
| <b>Threshold Limit Value</b> |         |        |     |            |     |                        |
| Type                         | Country | TWA/8h |     | STEL/15min |     | Remarks / Observations |
|                              |         | mg/m3  | ppm | mg/m3      | ppm |                        |
| TLV                          | BGR     | 980    |     | 1225       |     |                        |
| TLV                          | CZE     | 500    |     | 1000       |     | SKIN                   |
| AGW                          | DEU     | 500    | 200 | 1000       | 400 |                        |
| MAK                          | DEU     | 500    | 200 | 1000       | 400 |                        |
| VLA                          | ESP     | 500    | 200 | 1000       | 400 |                        |
| VLEP                         | FRA     |        |     | 980        | 400 |                        |
| TGG                          | NLD     | 650    |     |            |     |                        |
| NDS/NDSCh                    | POL     | 900    |     | 1200       |     |                        |
| NGV/KGV                      | SWE     | 350    | 150 | 600        | 250 |                        |
| WEL                          | GBR     | 999    | 400 | 1250       | 500 |                        |
| TLV-ACGIH                    |         | 492    | 200 | 983        | 400 |                        |

|   |  |  |  |       |  |      |
|---|--|--|--|-------|--|------|
| <b>Predicted no-effect concentration - PNEC</b> |  |  |  |       |  |      |
| Normal value in fresh water                     |  |  |  | 140,9 |  | mg/l |

|                                      |  |   |
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|   |       |       |
|---|-------|-------|
| Normal value in marine water                          | 140,9 | mg/l  |
| Normal value for fresh water sediment                 | 552   | mg/kg |
| Normal value for marine water sediment                | 552   | mg/kg |
| Normal value for water, intermittent release          | 140,9 | mg/l  |
| Normal value of STP microorganisms                    | 2251  | mg/l  |
| Normal value for the food chain (secondary poisoning) | 160   | mg/kg |
| Normal value for the terrestrial compartment          | 28    | mg/kg |

#### Health - Derived no-effect level - DNEL / DMEL

| Route of exposure | Effects on consumers |                |               | Effects on workers |             |                |               |                  |
|-------------------|----------------------|----------------|---------------|--------------------|-------------|----------------|---------------|------------------|
|                   | Acute local          | Acute systemic | Chronic local | Chronic systemic   | Acute local | Acute systemic | Chronic local | Chronic systemic |
| Oral              |                      |                | VND           | 26 mg/kg bw/d      |             |                |               |                  |
| Inhalation        |                      |                | VND           | 89 mg/m3           |             |                | VND           | 500 mg/m3        |
| Skin              |                      |                | VND           | 319 mg/kg bw/d     |             |                | VND           | 888 mg/kg bw/d   |

#### SOLVENT BLUE 4 < 0,1% MICHLER'S KETONE

#### Health - Derived no-effect level - DNEL / DMEL

| Route of exposure | Effects on consumers |                |               | Effects on workers |             |                |               |                  |
|-------------------|----------------------|----------------|---------------|--------------------|-------------|----------------|---------------|------------------|
|                   | Acute local          | Acute systemic | Chronic local | Chronic systemic   | Acute local | Acute systemic | Chronic local | Chronic systemic |
| Oral              |                      |                | VND           | 0,12 mg/kg bw/d    |             |                |               |                  |
| Inhalation        |                      |                | NPI           | 0,208 mg/m3        |             |                | NPI           | 0,844 mg/m3      |
| Skin              |                      |                | NPI           | 0,239 mg/kg bw/d   |             |                | NPI           | 0,479 mg/kg bw/d |

#### ISOBUTYL ALCOHOL

#### Threshold Limit Value

| Type      | Country | TWA/8h |     | STEL/15min |     | Remarks / Observations |
|-----------|---------|--------|-----|------------|-----|------------------------|
|           |         | mg/m3  | ppm | mg/m3      | ppm |                        |
| TLV       | CZE     | 300    |     | 600        |     | SKIN                   |
| AGW       | DEU     | 310    | 100 | 310        | 100 |                        |
| MAK       | DEU     | 310    | 100 | 310        | 100 |                        |
| VLA       | ESP     | 154    | 50  |            |     |                        |
| VLEP      | FRA     | 150    | 50  |            |     |                        |
| TGG       | NLD     | 150    |     |            |     |                        |
| NDS/NDSCh | POL     | 100    |     | 200        |     |                        |
| NGV/KGV   | SWE     | 150    | 50  | 250        | 75  |                        |
| WEL       | GBR     | 154    | 50  | 231        | 75  |                        |
| TLV-ACGIH |         | 152    | 50  |            |     |                        |

#### Predicted no-effect concentration - PNEC

|  |       |       |
|--|-------|-------|
| Normal value in fresh water                  | 0,4   | mg/l  |
| Normal value in marine water                 | 0,04  | mg/l  |
| Normal value for fresh water sediment        | 1,56  | mg/kg |
| Normal value for marine water sediment       | 0,156 | mg/kg |
| Normal value for water, intermittent release | 11    | mg/l  |



|                                      |  |   |
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Normal value of STP microorganisms 10 mg/l

Normal value for the terrestrial compartment 0,076 mg/kg

**Health - Derived no-effect level - DNEL / DMEL**

| Route of exposure | Effects on consumers |                |               | Effects on workers |             |                |               |                  |
|-------------------|----------------------|----------------|---------------|--------------------|-------------|----------------|---------------|------------------|
|                   | Acute local          | Acute systemic | Chronic local | Chronic systemic   | Acute local | Acute systemic | Chronic local | Chronic systemic |
| Inhalation        |                      |                | 55 mg/m3      | VND                |             |                | 310 mg/m3     | VND              |

**METHANOL**

**Threshold Limit Value**

| Type      | Country | TWA/8h |     | STEL/15min |      | Remarks / Observations |
|-----------|---------|--------|-----|------------|------|------------------------|
|           |         | mg/m3  | ppm | mg/m3      | ppm  |                        |
| TLV       | BGR     | 50     |     |            |      | SKIN                   |
| TLV       | CZE     | 250    |     | 1000       |      | SKIN                   |
| AGW       | DEU     | 270    | 200 | 1080       | 800  | SKIN                   |
| MAK       | DEU     | 270    | 200 | 1080       | 800  | SKIN                   |
| VLA       | ESP     | 266    | 200 |            |      | SKIN                   |
| VLEP      | FRA     | 260    | 200 | 1300       | 1000 | SKIN                   |
| VLEP      | ITA     | 260    | 200 |            |      | SKIN                   |
| TGG       | NLD     | 133    | 100 |            |      | SKIN                   |
| NDS/NDSCh | POL     | 100    |     | 300        |      |                        |
| NGV/KGV   | SWE     | 250    | 200 | 350        | 250  | SKIN                   |
| WEL       | GBR     | 266    | 200 | 333        | 250  | SKIN                   |
| OEL       | EU      | 260    | 200 |            |      | SKIN                   |
| TLV-ACGIH |         | 262    | 200 | 328        | 250  |                        |

**Predicted no-effect concentration - PNEC**

Normal value in fresh water 20,8 mg/l

Normal value in marine water 2,08 mg/l

Normal value for fresh water sediment 77 mg/kg

Normal value for marine water sediment 7,7 mg/kg

Normal value for water, intermittent release 1540 mg/l

Normal value of STP microorganisms 100 mg/l

Normal value for the terrestrial compartment 100 mg/kg

**Health - Derived no-effect level - DNEL / DMEL**

| Route of exposure | Effects on consumers |                |               | Effects on workers |             |                |               |                  |
|-------------------|----------------------|----------------|---------------|--------------------|-------------|----------------|---------------|------------------|
|                   | Acute local          | Acute systemic | Chronic local | Chronic systemic   | Acute local | Acute systemic | Chronic local | Chronic systemic |
| Oral              |                      | 4 mg/kg bw/d   |               | 4 mg/kg bw/d       |             |                |               |                  |
| Inhalation        | 26 mg/m3             | 26 mg/m3       | 26 mg/m3      | 26 mg/m3           | 130 mg/m3   | 130 mg/m3      | 130 mg/m3     | 130 mg/m3        |
| Skin              | NPI                  | 4 mg/kg bw/d   | NPI           | 4 mg/kg bw/d       | NPI         | 20 mg/kg bw/d  | NPI           | 20 mg/kg bw/d    |

Legend:

(C) = CEILING ; INHAL = Inhalable Fraction ; RESP = Respirable Fraction ; THORA = Thoracic Fraction.

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VND = hazard identified but no DNEL/PNEC available ; NEA = no exposure expected ; NPI = no hazard identified.

## 8.2. Exposure controls

As the use of adequate technical equipment must always take priority over personal protective equipment, make sure that the workplace is well aired through effective local aspiration.

When choosing personal protective equipment, ask your chemical substance supplier for advice.

Personal protective equipment must be CE marked, showing that it complies with applicable standards.

Provide an emergency shower with face and eye wash station.

### HAND PROTECTION

Protect hands with category III work gloves (see standard EN 374).

The following should be considered when choosing work glove material: compatibility, degradation, failure time and permeability.

The work gloves' resistance to chemical agents should be checked before use, as it can be unpredictable. The gloves' wear time depends on the duration and type of use.

### SKIN PROTECTION

Wear category II professional long-sleeved overalls and safety footwear (see Regulation 2016/425 and standard EN ISO 20344). Wash body with soap and water after removing protective clothing.

Consider the appropriateness of providing antistatic clothing in the case of working environments in which there is a risk of explosion.

### EYE PROTECTION

Wear airtight protective goggles (see standard EN 166).

### RESPIRATORY PROTECTION

If the threshold value (e.g. TLV-TWA) is exceeded for the substance or one of the substances present in the product, wear a mask with a type AX filter, whose limit of use will be defined by the manufacturer (see standard EN 14387). In the presence of gases or vapours of various kinds and/or gases or vapours containing particulate (aerosol sprays, fumes, mists, etc.) combined filters are required.

Respiratory protection devices must be used if the technical measures adopted are not suitable for restricting the worker's exposure to the threshold values considered. The protection provided by masks is in any case limited.

If the substance considered is odourless or its olfactory threshold is higher than the corresponding TLV-TWA and in the case of an emergency, wear open-circuit compressed air breathing apparatus (in compliance with standard EN 137) or external air-intake breathing apparatus (in compliance with standard EN 138). For a correct choice of respiratory protection device, see standard EN 529.

### ENVIRONMENTAL EXPOSURE CONTROLS

The emissions generated by manufacturing processes, including those generated by ventilation equipment, should be checked to ensure compliance with environmental standards.

## SECTION 9. Physical and chemical properties

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

|                                |                |
|--------------------------------|----------------|
| Appearance                     | liquid         |
| Colour                         | blue           |
| Odour                          | alcoholic      |
| Odour threshold                | Not determined |
| pH                             | Not applicable |
| Melting point / freezing point | Not determined |
| Initial boiling point          | > 60 °C        |
| Boiling range                  | Not determined |
| Flash point                    | < 23 °C        |

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|  |                            |
|--|----------------------------|
| Evaporation Rate                       | Not determined             |
| Flammability of solids and gases       | Not available              |
| Lower inflammability limit             | Not determined             |
| Upper inflammability limit             | Not determined             |
| Lower explosive limit                  | Not determined             |
| Upper explosive limit                  | Not determined             |
| Vapour pressure                        | Not determined             |
| Vapour density                         | Not determined             |
| Relative density                       | 0,900 +/- 0,050 Kg/L       |
| Solubility                             | partially soluble in water |
| Partition coefficient: n-octanol/water | Not determined             |
| Auto-ignition temperature              | Not determined             |
| Decomposition temperature              | Not determined             |
| Viscosity                              | Not determined             |
| Explosive properties                   | Not available              |
| Oxidising properties                   | Not available              |

### 9.2. Other information

|                              |         |
|------------------------------|---------|
| VOC (Directive 2010/75/EC) : | 77,74 % |
| VOC (volatile carbon) :      | 41,28 % |

## SECTION 10. Stability and reactivity

### 10.1. Reactivity

There are no particular risks of reaction with other substances in normal conditions of use.

### 10.2. Chemical stability

The product is stable in normal conditions of use and storage.

### 10.3. Possibility of hazardous reactions

The vapours may also form explosive mixtures with the air.

### 10.4. Conditions to avoid

Avoid overheating. Avoid bunching of electrostatic charges. Avoid all sources of ignition.

### 10.5. Incompatible materials

Information not available

### 10.6. Hazardous decomposition products

In the event of thermal decomposition or fire, gases and vapours that are potentially dangerous to health may be released.

|                                      |  |  |
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## SECTION 11. Toxicological information

In the absence of experimental data for the product itself, health hazards are evaluated according to the properties of the substances it contains, using the criteria specified in the applicable regulation for classification. It is therefore necessary to take into account the concentration of the individual hazardous substances indicated in section 3, to evaluate the toxicological effects of exposure to the product.

### 11.1. Information on toxicological effects

#### METHANOL

METHANOL: The minimal lethal dose following ingestion is considered to be in the range of 300-1000 mg/kg. Ingestion of as little as 4-10 ml methanol in adults may cause permanent blindness (IPCS).

#### Metabolism, toxicokinetics, mechanism of action and other information

Information not available

#### Information on likely routes of exposure

Information not available

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

Information not available

#### Interactive effects

Information not available

#### ACUTE TOXICITY

ATE (Inhalation) of the mixture:

> 20 mg/l

ATE (Oral) of the mixture:

>2000 mg/kg

ATE (Dermal) of the mixture:

>2000 mg/kg

#### ISOBUTYL ALCOHOL

LD50 (Oral) > 2830 mg/kg Rat (Sprague-Dawley) (female) - OECD Guideline 401

LD50 (Dermal) > 2000 mg/kg Rabbit (New Zealand White) (male) - OECD Guideline 402

LC50 (Inhalation) > 18,18 mg/l/6h Rat (Sprague-Dawley)

#### SOLVENT BLUE 4 < 0,1% MICHLER'S KETONE

LD50 (Oral) 2000 mg/kg Rat (Wistar) (female) - OECD Guideline 423

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LD50 (Dermal) > 2000 mg/kg Rat (Wistar) - OECD Guideline 402

#### ETHANOL

LD50 (Oral) 10470 mg/kg Rat - OECD Guideline 401

LD50 (Dermal) 17100 mg/kg Rabbit - Standard acute method

LC50 (Inhalation) 124,7 mg/l/4h Rat (Sprague-Dawley) - OECD Guideline 403

#### 1-METHOXYPROPAN-2-OL

LD50 (Oral) 4016 mg/kg Rat (Fischer 344) - EU Method B.1

LD50 (Dermal) > 2000 mg/kg Rat (Fischer 344) - EU Method B.3

LC50 (Inhalation) < 6000 ppm/6h Mouse (B6C3F1) (female) - OECD Guideline 403

#### METHANOL

LD50 (Oral) > 5000 mg/kg Pig (female)

LD50 (Dermal) 17100 mg/kg Rabbit

LC50 (Inhalation) 128,2 mg/l/4h Rat (Sprague-Dawley)

#### PROPAN-2-OL

LD50 (Oral) 5000 mg/kg Rat

LD50 (Dermal) 12800 mg/kg Rabbit

LC50 (Inhalation) > 40,86 mg/l/4h Rat

#### SKIN CORROSION / IRRITATION

Does not meet the classification criteria for this hazard class

#### SERIOUS EYE DAMAGE / IRRITATION

Causes serious eye damage

#### RESPIRATORY OR SKIN SENSITISATION

Sensitising for the skin

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GERM CELL MUTAGENICITY

Does not meet the classification criteria for this hazard class

CARCINOGENICITY

Does not meet the classification criteria for this hazard class

REPRODUCTIVE TOXICITY

Does not meet the classification criteria for this hazard class

STOT - SINGLE EXPOSURE

May cause drowsiness or dizziness

STOT - REPEATED EXPOSURE

Does not meet the classification criteria for this hazard class

ASPIRATION HAZARD

Does not meet the classification criteria for this hazard class

## SECTION 12. Ecological information

Use this product according to good working practices. Avoid littering. Inform the competent authorities, should the product reach waterways or contaminate soil or vegetation.

### 12.1. Toxicity

#### ISOBUTYL ALCOHOL

|   |  |
|---|--|
| LC50 - for Fish                         | 1430 mg/l/96h Pimephales promelas  |
| EC50 - for Crustacea                    | 1100 mg/l/48h Daphnia pulex  |
| EC50 - for Algae / Aquatic Plants       | 593 mg/l/72h Pseudokirchnerella subcapitata - OECD Guideline 201                           |
| Chronic NOEC for Crustacea              | 20 mg/l Daphnia magna - Total exposure duration: 21 days                                   |
| Chronic NOEC for Algae / Aquatic Plants | 53 mg/l Pseudokirchnerella subcapitata - OECD Guideline 201 - Total exposure duration: 72h |

#### ETHANOL

|                                   |  |
|-----------------------------------|--|
| LC50 - for Fish                   | 15400 mg/l/96h Lepomis macrochirus - EPA-660/3-75-009, 1975                |
| EC50 - for Crustacea              | 5012 mg/l/48h Ceriodaphnia dubia - ASTM E729-80                            |
| EC50 - for Algae / Aquatic Plants | 275 mg/l/72h Chlorella vulgaris - OECD Guideline 201                       |
| Chronic NOEC for Fish             | 250 mg/l Danio rerio - OECD Guideline 212 - Total exposure duration: 120h  |
| Chronic NOEC for Crustacea        | 9,6 mg/l Ceriodaphnia dubia (Reproduction) - Total exposure duration: 10 d |

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**1-METHOXYPROPAN-2-OL**

LC50 - for Fish

6812 mg/l/96h *Leuciscus idus* - DIN 38 412, part L15

EC50 - for Crustacea

2954 mg/l/48h *Acartia tonsa* - ISO TC147/SC5/WG2

EC50 - for Algae / Aquatic Plants

6745 mg/l/72h *Skeletonema costatum* - ISO 10253

**METHANOL**

LC50 - for Fish

290 mg/l/96h *Danio rerio* (fish embryos) - OECD Guideline 203

EC50 - for Crustacea

18260 mg/l/48h *Daphnia magna* - OECD Guideline 202

**PROPAN-2-OL**

LC50 - for Fish

9640 mg/l/96h *Pimephales promelas* - OECD Guideline 203

EC50 - for Crustacea

13299 mg/l/48h *Daphnia magna*

EC50 - for Algae / Aquatic Plants

> 1000 mg/l/72h *Desmodesmus subspicatus*

**12.2. Persistence and degradability**

**ISOBUTYL ALCOHOL**

Solubility in water

1000 - 10000 mg/l

Rapidly degradable

**SOLVENT BLUE 4 < 0,1% MICHLER'S  
KETONE**

NOT rapidly degradable

**ETHANOL**

Solubility in water

789000 mg/l

Rapidly degradable

**1-METHOXYPROPAN-2-OL**

Rapidly degradable

**METHANOL**

Solubility in water

1000 - 10000 mg/l

Rapidly degradable

**PROPAN-2-OL**

Rapidly degradable

**12.3. Bioaccumulative potential**

**ISOBUTYL ALCOHOL**

Partition coefficient: n-octanol/water

1

**ETHANOL**

Partition coefficient: n-octanol/water

-0,35

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## METHANOL

Partition coefficient: n-octanol/water -0,77

BCF 0,2

**12.4. Mobility in soil**

## ISOBUTYL ALCOHOL

Partition coefficient: soil/water 0,31

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

On the basis of available data, the product does not contain any PBT or vPvB in percentage  $\geq$  than 0,1%.

**12.6. Other adverse effects**

Information not available

**SECTION 13. Disposal considerations****13.1. Waste treatment methods**

Reuse, when possible. Product residues should be considered special hazardous waste. The hazard level of waste containing this product should be evaluated according to applicable regulations.

Disposal must be performed through an authorised waste management firm, in compliance with national and local regulations.

Waste transportation may be subject to ADR restrictions.

**CONTAMINATED PACKAGING**

Contaminated packaging must be recovered or disposed of in compliance with national waste management regulations.

**SECTION 14. Transport information****14.1. UN number**

ADR / RID, IMDG, 1210  
IATA:

**14.2. UN proper shipping name**

ADR / RID: PRINTING INK or PRINTING INK RELATED MATERIAL

IMDG: PRINTING INK or PRINTING INK RELATED MATERIAL

IATA: PRINTING INK or PRINTING INK RELATED MATERIAL

**14.3. Transport hazard class(es)**

ADR / RID: Class: 3 Label: 3







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Reg. no.: 01-  
2119488953-20-xxxx

Substances in Candidate List (Art. 59 REACH)

On the basis of available data, the product does not contain any SVHC in percentage  $\geq$  than 0,1%.

Substances subject to authorisation (Annex XIV REACH)

None

Substances subject to exportation reporting pursuant to (EC) Reg. 649/2012:

None

Substances subject to the Rotterdam Convention:

None

Substances subject to the Stockholm Convention:

None

Healthcare controls

Workers exposed to this chemical agent must not undergo health checks, provided that available risk-assessment data prove that the risks related to the workers' health and safety are modest and that the 98/24/EC directive is respected.

**15.2. Chemical safety assessment**

A chemical safety assessment has not been performed for the preparation/for the substances indicated in section 3.

**SECTION 16. Other information**

Text of hazard (H) indications mentioned in section 2-3 of the sheet:

|                      |  |
|----------------------|--|
| <b>Flam. Liq. 2</b>  | Flammable liquid, category 2                                 |
| <b>Flam. Liq. 3</b>  | Flammable liquid, category 3                                 |
| <b>Acute Tox. 3</b>  | Acute toxicity, category 3                                   |
| <b>STOT SE 1</b>     | Specific target organ toxicity - single exposure, category 1 |
| <b>Eye Dam. 1</b>    | Serious eye damage, category 1                               |
| <b>Eye Irrit. 2</b>  | Eye irritation, category 2                                   |
| <b>Skin Irrit. 2</b> | Skin irritation, category 2                                  |
| <b>STOT SE 3</b>     | Specific target organ toxicity - single exposure, category 3 |
| <b>Skin Sens. 1B</b> | Skin sensitization, category 1B                              |
| <b>H225</b>          | Highly flammable liquid and vapour.                          |
| <b>H226</b>          | Flammable liquid and vapour.                                 |
| <b>H301</b>          | Toxic if swallowed.  |

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|             |                                      |
|-------------|--------------------------------------|
| <b>H311</b> | Toxic in contact with skin.          |
| <b>H331</b> | Toxic if inhaled.                    |
| <b>H370</b> | Causes damage to organs.             |
| <b>H318</b> | Causes serious eye damage.           |
| <b>H319</b> | Causes serious eye irritation.       |
| <b>H315</b> | Causes skin irritation.              |
| <b>H335</b> | May cause respiratory irritation.    |
| <b>H317</b> | May cause an allergic skin reaction. |
| <b>H336</b> | May cause drowsiness or dizziness.   |

### LEGEND:

- ADR: European Agreement concerning the carriage of Dangerous goods by Road
- CAS NUMBER: Chemical Abstract Service Number
- CE50: Effective concentration (required to induce a 50% effect)
- CE NUMBER: Identifier in ESIS (European archive of existing substances)
- CLP: EC Regulation 1272/2008
- DNEL: Derived No Effect Level
- EmS: Emergency Schedule
- GHS: Globally Harmonized System of classification and labeling of chemicals
- IATA DGR: International Air Transport Association Dangerous Goods Regulation
- IC50: Immobilization Concentration 50%
- IMDG: International Maritime Code for dangerous goods
- IMO: International Maritime Organization
- INDEX NUMBER: Identifier in Annex VI of CLP
- LC50: Lethal Concentration 50%
- LD50: Lethal dose 50%
- OEL: Occupational Exposure Level
- PBT: Persistent bioaccumulative and toxic as REACH Regulation
- PEC: Predicted environmental Concentration
- PEL: Predicted exposure level
- PNEC: Predicted no effect concentration
- REACH: EC Regulation 1907/2006
- RID: Regulation concerning the international transport of dangerous goods by train
- TLV: Threshold Limit Value
- TLV CEILING: Concentration that should not be exceeded during any time of occupational exposure.
- TWA STEL: Short-term exposure limit
- TWA: Time-weighted average exposure limit
- VOC: Volatile organic Compounds
- vPvB: Very Persistent and very Bioaccumulative as for REACH Regulation
- WGK: Water hazard classes (German).

### GENERAL BIBLIOGRAPHY

1. Regulation (EC) 1907/2006 (REACH) of the European Parliament
2. Regulation (EC) 1272/2008 (CLP) of the European Parliament
3. Regulation (EU) 790/2009 (I Atp. CLP) of the European Parliament
4. Regulation (EU) 2015/830 of the European Parliament
5. Regulation (EU) 286/2011 (II Atp. CLP) of the European Parliament
6. Regulation (EU) 618/2012 (III Atp. CLP) of the European Parliament
7. Regulation (EU) 487/2013 (IV Atp. CLP) of the European Parliament
8. Regulation (EU) 944/2013 (V Atp. CLP) of the European Parliament
9. Regulation (EU) 605/2014 (VI Atp. CLP) of the European Parliament
10. Regulation (EU) 2015/1221 (VII Atp. CLP) of the European Parliament
11. Regulation (EU) 2016/918 (VIII Atp. CLP) of the European Parliament
12. Regulation (EU) 2016/1179 (IX Atp. CLP)
13. Regulation (EU) 2017/776 (X Atp. CLP)
14. Regulation (EU) 2018/669 (XI Atp. CLP)
15. Regulation (EU) 2018/1480 (XIII Atp. CLP)
16. Regulation (EU) 2019/521 (XII Atp. CLP)
17. Regulation (EU) 2019/1148

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18. Regulation (EU) 2020/217 (XIV Atp. CLP)

- The Merck Index. - 10th Edition

- Handling Chemical Safety

- INRS - Fiche Toxicologique (toxicological sheet)

- Patty - Industrial Hygiene and Toxicology

- N.I. Sax - Dangerous properties of Industrial Materials-7, 1989 Edition

- IFA GESTIS website

- ECHA website

- Database of SDS models for chemicals - Ministry of Health and ISS (Istituto Superiore di Sanità) - Italy

Note for users:

The information contained in the present sheet are based on our own knowledge on the date of the last version. Users must verify the suitability and thoroughness of provided information according to each specific use of the product.

This document must not be regarded as a guarantee on any specific product property.

The use of this product is not subject to our direct control; therefore, users must, under their own responsibility, comply with the current health and safety laws and regulations. The producer is relieved from any liability arising from improper uses.

Provide appointed staff with adequate training on how to use chemical products.

#### CALCULATION METHODS FOR CLASSIFICATION

Chemical and physical hazards: Product classification derives from criteria established by the CLP Regulation, Annex I, Part 2. The data for evaluation of chemical-physical properties are reported in section 9.

Health hazards: Product classification is based on calculation methods as per Annex I of CLP, Part 3, unless determined otherwise in Section 11.

Environmental hazards: Product classification is based on calculation methods as per Annex I of CLP, Part 4, unless determined otherwise in Section 12.

Changes to previous review:

The following sections were modified:

01 / 02 / 03 / 08 / 09 / 11 / 12 / 14 / 15 / 16.