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Safety data sheet

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

1.1. Product identifier

Code: SPM00091021AA
Product name: PERMANENT CAP OFF BLACK 1853

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, Southgate, N14 6HF
District and Country: London

Tel. 020 8882 8734

Fax 020 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: 020 8882 8734

SECTION 2. Hazards identification.

2.1. Classification of the substance or mixture.

The product is classified as hazardous pursuant to the provisions set forth in EC Regulation 1272/2008 (CLP) (and subsequent amendments and supplements). The product thus requires a safety datasheet that complies with the provisions of EC Regulation 1907/2006 and subsequent amendments. Any additional information concerning the risks for health and/or the environment are given in sections 11 and 12 of this sheet.

Hazard classification and indication:

Flammable liquid, category 2

Eye irritation, category 2

H225

H319

Highly flammable liquid and vapour.

Causes serious eye irritation.

2.2. Label elements.

Hazard labelling pursuant to EC Regulation 1272/2008 (CLP) and subsequent amendments and supplements.

Hazard pictograms:

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Signal words:

Danger

Hazard statements:

H225 Highly flammable liquid and vapour.
H319 Causes serious eye irritation.

Precautionary statements:

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233 Keep container tightly closed.
P264 Wash thoroughly after handling.
P280 Wear protective gloves / eye protection / face protection.
P303+P361+P353 IF ON SKIN (or hair): take off immediately all contaminated clothing. Rinse skin with water / shower.
P337+P313 If eye irritation persists: Get medical advice / attention.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

2.3. Other hazards.

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

SECTION 3. Composition/information on ingredients.

3.1. Substances.

Information not relevant.

3.2. Mixtures.

Contains:

| Identification. | Conc. %. | Classification 1272/2008 (CLP). |
|--------------------------------|----------|--------------------------------------|
| ETHANOL | | |
| CAS. 64-17-5 | 50 - 70 | Flam. Liq. 2 H225, Eye Irrit. 2 H319 |
| EC. 200-578-6 | | |
| INDEX. 603-002-00-5 | | |
| Reg. no. 01-2119457610-43-xxxx | | |
| 1-METHOXY-2-PROPANOL | | |
| CAS. 107-98-2 | 10 - 20 | Flam. Liq. 3 H226, STOT SE 3 H336 |
| EC. 203-539-1 | | |
| INDEX. 603-064-00-3 | | |
| Reg. no. 01-2119457435-35-xxxx | | |
| PROPAN-2-OL | | |

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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.

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. Check incompatibility for container material in section 7. 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. Vapours may catch fire and an explosion may occur; vapour accumulation is therefore to be avoided by leaving windows and doors open and ensuring good cross ventilation. 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

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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 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 |
| CZE | Česká Republika | Nařízení vlády č. 361/2007 Sb. kterým se stanoví podmínky ochrany zdraví při práci |
| DEU | Deutschland | MAK-und BAT-Werte-Liste 2012 |
| ESP | España | INSHT - Límites de exposición profesional para agentes químicos en España 2015 |
| FRA | France | JORF n°0109 du 10 mai 2012 page 8773 texte n° 102 |
| GBR | United Kingdom | EH40/2005 Workplace exposure limits |
| ITA | Italia | Decreto Legislativo 9 Aprile 2008, n.81 |
| NLD | Nederland | Databank of the social and Economic Concil of Netherlands (SER) Values, AF 2011:18 |
| EU | OEL EU | Directive 2009/161/EU; Directive 2006/15/EC; Directive 2004/37/EC; Directive 2000/39/EC. |
| | TLV-ACGIH | ACGIH 2014 |

ETHANOL

Threshold Limit Value.

| Type | Country | TWA/8h | | STEL/15min | |
|------|---------|--------|------|------------|-------|
| | | 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 |
| WEL | GBR | 1920 | 1000 | | |
| OEL | NLD | 260 | | 1900 | SKIN. |

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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) | 720 | 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. | Acute systemic | Chronic local | Chronic systemic | Effects on workers | Acute systemic | Chronic local | Chronic systemic |
|-------------------|-----------------------|----------------|---------------|------------------|--------------------|----------------|---------------|------------------|
| | Acute local | | | | Acute local | | | |
| Oral. | | | VND | 87 mg/kg bw/d | | | | |
| Inhalation. | 950 mg/m3 | VND | VND | 114 mg/m3 | 1900 mg/m3 | VND | VND | 950 mg/m3 |
| Skin. | | | VND | 206 mg/kg bw/d | | | | 343 mg/kg bw/d |

1-METHOXY-2-PROPANOL

Threshold Limit Value.

| Type | Country | TWA/8h | ppm | STEL/15min | ppm | |
|-----------|---------|--------|-----|------------|-----|-------|
| | | mg/m3 | | mg/m3 | | |
| TLV | BGR | 375 | | 568 | | SKIN. |
| TLV | CZE | 270 | | 550 | | SKIN. |
| AGW | DEU | 370 | 100 | 740 | 200 | |
| MAK | DEU | 370 | 100 | 740 | 200 | |
| VLA | ESP | 375 | 100 | 568 | 150 | SKIN. |
| VLEP | FRA | 188 | 50 | 375 | 10 | SKIN. |
| WEL | GBR | 375 | 100 | 560 | 150 | SKIN. |
| TLV | ITA | 375 | 100 | 568 | 150 | SKIN. |
| OEL | NLD | 375 | | 563 | | SKIN. |
| OEL | EU | 375 | 100 | 568 | 150 | SKIN. |
| TLV-ACGIH | | 369 | 100 | 553 | 150 | |

Predicted no-effect concentration - PNEC.

| | | |
|--|------|-------|
| 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 | |

Health - Derived no-effect level - DNEL / DMEL

| Route of exposure | Effects on consumers. | Acute systemic | Chronic local | Chronic systemic | Effects on workers | Acute systemic | Chronic local | Chronic systemic |
|-------------------|-----------------------|----------------|---------------|------------------|--------------------|----------------|---------------|------------------|
| | Acute local | | | | Acute local | | | |
| 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 |

PROPAN-2-OL

Threshold Limit Value.

| Type | Country | TWA/8h | ppm | STEL/15min | ppm |
|------|---------|--------|-----|------------|-----|
| | | mg/m3 | | mg/m3 | |

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|-----------|-----|-----|-----|------|-----|-------|
| 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 | |
| WEL | GBR | 999 | 400 | 1250 | 500 | |
| OEL | NLD | 650 | | | | |
| TLV-ACGIH | | 492 | 200 | 983 | 400 | |

Predicted no-effect concentration - PNEC.

| | | |
|---|-------|-------|
| Normal value in fresh water | 140,9 | mg/l |
| 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. | Acute systemic | Chronic local | Chronic systemic | Effects on workers | Acute systemic | Chronic local | Chronic systemic |
|-------------------|-----------------------|----------------|---------------|------------------|--------------------|----------------|---------------|------------------|
| | Acute local | | | | Acute local | | | |
| 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 |

METHANOL

Threshold Limit Value.

| Type | Country | TWA/8h | ppm | STEL/15min | ppm | |
|-----------|---------|--------|-----|------------|------|-------|
| | | mg/m3 | | mg/m3 | | |
| 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. |
| WEL | GBR | 266 | 200 | 333 | 250 | SKIN. |
| TLV | ITA | 260 | 200 | | | SKIN. |
| OEL | NLD | 133 | 100 | | | 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 | 3,18 | mg/kg |

Health - Derived no-effect level - DNEL / DMEL

| Route of exposure | Effects on consumers. | Acute systemic | Chronic local | Chronic systemic | Effects on workers | Acute systemic | Chronic local | Chronic systemic |
|-------------------|-----------------------|----------------|---------------|------------------|--------------------|----------------|---------------|------------------|
| | Acute local | | | | Acute local | | | |

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|----------------------|-----------------|--------------------------|-----------------|--------------------------|------------------|-------------------------------|------------------|-------------------------------|
| Inhalation. Skin. | 50 mg/m3 VND | 50 mg/m3 8 mg/kg bw/d | 50 mg/m3 VND | 50 mg/m3 8 mg/kg bw/d | 260 mg/m3 VND | 260 mg/m3 40 mg/kg bw/d | 260 mg/m3 VND | 260 mg/m3 40 mg/kg bw/d |
|----------------------|-----------------|--------------------------|-----------------|--------------------------|------------------|-------------------------------|------------------|-------------------------------|

Legend:

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

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. 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 I professional long-sleeved overalls and safety footwear (see Directive 89/686/EEC 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 | black |
| Odour | alcoholic |
| Odour threshold. | Not available. |
| pH. | Not available. |
| Melting point / freezing point. | Not available. |

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| Initial boiling point. | > 60 °C. |
| Boiling range. | Not available. |
| Flash point. | < 23 °C. |
| Evaporation Rate | Not available. |
| Flammability of solids and gases | Not available. |
| Lower inflammability limit. | Not available. |
| Upper inflammability limit. | Not available. |
| Lower explosive limit. | Not available. |
| Upper explosive limit. | Not available. |
| Vapour pressure. | Not available. |
| Vapour density | Not available. |
| Relative density. | 0,900 +/- 0,050 |
| Solubility | partially soluble in water |
| Partition coefficient: n-octanol/water | Not available. |
| Auto-ignition temperature. | Not available. |
| Decomposition temperature. | Not available. |
| Viscosity | Not available. |
| Explosive properties | Not available. |
| Oxidising properties | Not available. |

9.2. Other information.

| | | | | |
|------------------------------|---------|---|--------|----------|
| VOC (Directive 2010/75/EC) : | 74,17 % | - | 667,51 | g/litre. |
| VOC (volatile carbon) : | 39,14 % | - | 352,29 | g/litre. |

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.

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

SECTION 11. Toxicological information.

11.1. Information on toxicological effects.

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.

Acute effects: stinging eyes. Symptoms may include: rubescence, edema, pain and lachrymation. Ingestion may cause health problems, including stomach pain and sting, nausea and sickness.

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).

ETHANOL

LD50 (Oral).15000 mg/kg Rat

LC50 (Inhalation).> 50 mg/l/4h Rat

1-METHOXY-2-PROPANOL

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

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.

ETHANOL

LC50 - for Fish. 13000 mg/l/96h *Salmo gairdneri*

EC50 - for Crustacea. 5000 mg/l/48h *Ceriodaphnia dubia*

EC50 - for Algae / Aquatic Plants. 275 mg/l/72h *Chlorella vulgaris*

Chronic NOEC for 9600 mg/l *Ceriodaphnia dubia* (Reproduction, 10 days)

Crustacea. 7900 mg/l *Chlamydomonas eugametos*

Chronic NOEC for Algae / Aquatic Plants.

1-METHOXY-2-PROPANOL

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| LC50 - for Fish. | > 4600 mg/l/96h <i>Leuciscus idus</i> - DIN 38 412, part L15 |
| EC50 - for Crustacea. | 2954 mg/l/48h <i>Acartia tonsa</i> - ISO TC147/SC5/WG2 |
| EC50 - for Algae / Aquatic Plants. | 6745 mg/l/72h <i>Skeletonema costatum</i> - ISO 10253 |

METHANOL

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| LC50 - for Fish. | 290 mg/l/96h <i>Danio rerio</i> (fish embryos) - OECD Guideline 203 |
| EC50 - for Crustacea. | 22200 mg/l/48h <i>Daphnia obtusa</i> - OECD Guideline 202 |

PROPAN-2-OL

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| LC50 - for Fish. | 9640 mg/l/96h <i>Pimephales promelas</i> - OECD Guideline 203 |
| EC50 - for Crustacea. | 13299 mg/l/48h <i>Daphnia magna</i> |
| EC50 - for Algae / Aquatic Plants. | > 1000 mg/l/72h <i>Desmodesmus subspicatus</i> |

12.2. Persistence and degradability.

ETHANOL

| | |
|----------------------|-------------------|
| Solubility in water. | mg/l 1000 - 10000 |
|----------------------|-------------------|

Rapidly biodegradable.

(BOD20 = 84%)

1-METHOXY-2-PROPANOL

Rapidly biodegradable.

METHANOL

| | |
|----------------------|-------------------|
| Solubility in water. | mg/l 1000 - 10000 |
|----------------------|-------------------|

Rapidly biodegradable.

PROPAN-2-OL

Rapidly biodegradable.

12.3. Bioaccumulative potential.

ETHANOL

| | |
|---|-------|
| Partition coefficient: n-octanol/water. | -0,35 |
|---|-------|

METHANOL

| | |
|---|-------|
| Partition coefficient: n-octanol/water. | -0,77 |
| BCF. | 0,2 |

12.4. Mobility in soil.

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Information not available.

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 greater 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 |
| IMDG: | Class: 3 | Label: 3 |



| | | |
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IATA: Class: 3 Label: 3



14.4. Packing group.

ADR / RID, IMDG, II
IATA:

14.5. Environmental hazards.

ADR / RID: NO
IMDG: NO
IATA: NO

14.6. Special precautions for user.

| | | | |
|------------|-------------------------|-------------------------|--------------------------------|
| ADR / RID: | HIN - Kemler: 33 | Limited Quantities: 5 L | Tunnel restriction code: (D/E) |
| | Special Provision: 640D | | |
| IMDG: | EMS: F-E, S-D | Limited Quantities: 5 L | |
| IATA: | Cargo: | Maximum quantity: 60 L | Packaging instructions: 364 |
| | Pass.: | Maximum quantity: 5 L | Packaging instructions: 353 |
| | Special Instructions: | A3, A72, A192 | |

14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code.

Information not relevant.

SECTION 15. Regulatory information.

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

Seveso category. 6

Restrictions relating to the product or contained substances pursuant to Annex XVII to EC Regulation 1907/2006.

Product.
Point. 3 - 40

Substances in Candidate List (Art. 59 REACH).

None.

Substances subject to authorisation (Annex XIV REACH).

| | | |
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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.

No chemical safety assessment has been processed for the mixture and the substances it contains.

SECTION 16. Other information.

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

| | |
|---------------------|--|
| Flam. Liq. 2 | Flammable liquid, category 2 |
| Flam. Liq. 3 | Flammable liquid, category 3 |
| Acute Tox. 3 | Acute toxicity, category 3 |
| STOT SE 1 | Specific target organ toxicity - single exposure, category 1 |
| Eye Irrit. 2 | Eye irritation, category 2 |
| STOT SE 3 | Specific target organ toxicity - single exposure, category 3 |
| H225 | Highly flammable liquid and vapour. |
| H226 | Flammable liquid and vapour. |
| H301 | Toxic if swallowed. |
| H311 | Toxic in contact with skin. |
| H331 | Toxic if inhaled. |
| H370 | Causes damage to organs. |
| H319 | Causes serious eye irritation. |
| H336 | 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

| | | |
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- 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 (EU) 1907/2006 (REACH) of the European Parliament
2. Regulation (EU) 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
- 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
- ECHA website

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.

Changes to previous review:

The following sections were modified:

02 / 09 / 11.