

**Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH) and (EC) No. 1272/2008 (CLP)**  
**Permanent ink PP170\*, SP117\*, PCM Bases\*, PCM's**  
**\*all colours except those covered by DS504**

Data Sheet No: DS505

Version No: 001

Issue Date: 24<sup>th</sup> September 2018

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## 1.0 – Identification of the substance/mixture and of the company/undertaking

### 1.1 – Product Identification

Trade name: Permanent ink PP170\*, SP117\*, PCM Bases\*, PCM's  
 Substance name: n/a  
 Index No: n/a  
 CAS-No: n/a  
 EC-No: n/a

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

Use of the substance/mixture: Preparation for use in writing instruments  
 Recommended restrictions on use: No information available

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

Company: Multichem Limited, Tyne Mills Industrial Estate, Hexham, Northumberland NE46 1XL UK  
 Telephone: +44 1434 606 085  
 Fax: +44 1434 601 804  
 e-mail: [mail@multichem.net](mailto:mail@multichem.net)

### 1.4 – Emergency telephone number

+44 7887 612 787

## 2.0 - Hazards Identification

### 2.1 – Classification of the substance or mixture

| Regulation (EC) No. 1272/2008     |                 |               |                   |
|-----------------------------------|-----------------|---------------|-------------------|
| Hazard class                      | Hazard category | Target organs | Hazard statements |
| Flammable liquids                 | 2               | n/a           | H225              |
| Skin corrosion/irritation         | 1               | skin          | H314              |
| Serious eye damage/eye irritation | 1               | eyes          | H318              |
| STOT-SE                           | 3               | CNS           | H336              |
| Aquatic chronic                   | 2               | n/a           | H411              |

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

Most important adverse effects: Highly flammable liquid and vapour. Causes severe skin burns and eye damage. May cause drowsiness or dizziness. Toxic to aquatic life with long lasting effects.

### 2.2 – Label Elements

Labelling according to Regulation (EC) No. 1272/2008

Hazard Symbols:



Signal word:

**DANGER**

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|                           |   |
|---------------------------|---|
| Hazard statements:        | H225 Highly flammable liquid and vapour<br>H314 Causes severe skin burns and eye damage<br>H318 Causes serious eye damage<br>H336 May cause drowsiness or dizziness<br>H411 Toxic to aquatic life with long lasting effects   |
| Precautionary statements: | P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking<br>P233 Keep container tightly closed<br>P240 Ground/bond container and receiving equipment<br>P243 Take precautionary measures against static discharge<br>P280 Wear protective gloves/protective clothing/eye protection<br>P305/P351/P338 IF IN EYES: rinse cautiously with water for several minutes<br>Remove contact lenses, if present and easy to do. Continue rinsing<br>P337/P313 If eye irritation persists: get medical advice/attention<br>P303/P361/P353 IF ON SKIN (or hair): remove/take off immediately all contaminated clothing. Rinse skin with water/shower<br>P403/P235 Store in a well-ventilated place. Keep cool. |

**2.3 – Other hazards**

<10.5% of the mixture consists of ingredient(s) of unknown toxicity.

**3.0 - Composition / information on ingredients**

**3.1 – Substances**

Chemical nature: mixture

| Chemical name            | REACH Reg. No.        | CAS No.   | EC No.    | Amount (%) |
|--------------------------|-----------------------|-----------|-----------|------------|
| 1-Methoxy-2-propanol     | 01-2119457435-35      | 107-98-2  | 203-539-1 | <75%       |
| Propan-2-ol              | 01-2119457558-25      | 67-63-0   | 200-661-7 | <20%       |
| Basic Yellow 37          |                       | 6358-36-7 | 228-770-5 | <7%        |
| Basic Blue 7             |                       | 2390-60-5 | 219-232-0 | <3.5%      |
| 2-amino-2-methylpropanol | 01-2119475788-16-xxxx | 124-68-5  | 204-709-8 | <1%        |

| Chemical name            | Classification according to Regulation (EC) No. 1272/2008 |
|--------------------------|---|
| 1-Methoxy-2-propanol     | H226 (3), H336 (3)  |
| Propan-2-ol              | H225 (2), H319 (2), H336 (3)                              |
| Basic Yellow 37          | H301 (3), H314 (1), H319 (2), H410 (1)                    |
| Basic Blue 7             | H301 (3), H318 (1), H410 (1)                              |
| 2-amino-2-methylpropanol | H315 (2), H319 (2), H412 (3)                              |

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

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## 4.0 - Description of first aid measures

### 4.1 – Description of first aid measures

|                          |  |
|--------------------------|--|
| General advice:          | Take off all contaminated clothing immediately   |
| In case of inhalation:   | Remove to fresh air. If symptoms persist, seek medical advice. If unconscious place in recovery position |
| In case of skin contact: | Wash off with plenty of water. If skin irritation persists, seek medical advice                          |
| In case of eye contact:  | Rinse thoroughly with plenty of water, also under the eyelids. Consult an eye specialist immediately     |

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

No information available

### 4.3 - Indication of immediate medical attention and special treatment needed

Treat symptomatically. No further information available

## 5.0 – Firefighting measures

### 5.1 – Extinguishing media

|                                 |   |
|---------------------------------|---|
| Suitable extinguishing media:   | Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide |
| Unsuitable extinguishing media: | High volume water jet   |

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

|  |   |
|--|---|
| Specific hazards during fire-fighting: | Highly flammable. Vapours may form explosive mixtures with air. In case of fire hazardous decomposition products may be produced, such as carbon monoxide (CO) and carbon dioxide (CO <sub>2</sub> ). |
|--|---|

### 5.3 - Advice for firefighter

|  |  |
|--|--|
| Special protective equipment for firefighters: | In the event of fire, wear self-contained breathing apparatus. Wear appropriate body protection (full protective suit)   |
| Further information:                           | Cool closed containers exposed to fire with water spray. Heating will cause a pressure rise – with risk of bursting. Collect contaminated fire extinguishing water separately. This must not be discharged into drains |

## 6.0 – Accidental release measures

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

|                       |   |
|-----------------------|---|
| Personal precautions: | Use personal protective equipment. Provide adequate ventilation. Keep away from heat and sources of ignition. Avoid contact with skin and eyes. Do not breathe vapours. |
|-----------------------|---|

### 6.2 – Environmental precautions

|                            |   |
|----------------------------|---|
| Environmental precautions: | Do not flush into surface water or sanitary sewer system. Avoid subsoil penetration |
|----------------------------|---|

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### 6.3 – Methods and materials for containment and cleaning up

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

Further information: Treat recovered material as described in Section 13

### 6.4 – Reference to other sections

For personal protection see Section 8

## 7.0 – Handling and storage

### 7.1 – Precautions for safe handling

Advice on safe handling: Keep container tightly closed. Ensure adequate ventilation. Avoid contact with skin and eyes. Do not breathe vapours. Emergency eye wash fountains and emergency showers should be available in the immediate vicinity

Hygiene measures: Keep away from food, drink and animal feeding stuffs. Smoking, eating and drinking should be prohibited in the application area. Wash hands before breaks and at the end of the working day. Take off all contaminated clothing immediately. Avoid contact with skin and eyes. Do not breathe vapours of spray mist

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

Requirements for storage areas and containers: Keep in an area equipped with solvent resistant flooring. Store in original container

Advice on protection against fire and explosion: Combustible liquid. Keep away from sources of ignition – no smoking. Take measures to prevent the build-up of electrostatic charge. Vapours may form explosive mixtures in air. Use only in an area containing explosion proof equipment

Further information on storage conditions: Keep tightly closed in a dry and cool place. Keep in a well-ventilated place. Keep away from heat. Keep away from direct sunlight

Advice on common storage: Incompatible with oxidizing agents. Keep away from food, drink and animal feeding stuffs

### 7.3 – Specific end uses

Specific uses(s): No information available

## 8.0 – Exposure controls/personal protection

### 8.1 – Control parameters

#### 1-methoxy-2-propanol (CAS No. 107-98-2)

Regulatory basis: UK. EH40 Workplace Exposure Limits (WELs)

Regulatory list: EH40 WEL

Value type: Time Weighted Average (TWA)

Value: 100 ppm

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|                   |  |
|-------------------|--|
| Value :           | 375 mg/m <sup>3</sup>  |
| Regulatory basis: | UK. EH40 Workplace Exposure Limits (WELs)  |
| Regulatory list:  | EH40 WEL   |
| Value type:       | Short Term Exposure Limit (STEL)   |
| Value:            | 150 ppm  |
| Value :           | 560 mg/m <sup>3</sup>  |
| Regulatory basis: | EU. Indicative Exposure Limit Values in Directives 91/322/EEC, 2000/39/EC, 2006/15/EC, 2009/161/EU |
| Value type:       | Short Term Exposure Limit (STEL)   |
| Value:            | 150 ppm  |
| Value :           | 568 mg/m <sup>3</sup>  |
| Regulatory basis: | EU. Indicative Exposure Limit Values in Directives 91/322/EEC, 2000/39/EC, 2006/15/EC, 2009/161/EU |
| Value type:       | Short Term Exposure Limit (TWA)  |
| Value:            | 100 ppm  |
| Value :           | 375 mg/m <sup>3</sup>  |
| Regulatory basis: | ELV (IE)   |
| Regulatory list:  | Indicative OELV  |
| Value type:       | Short Term Exposure Limit (STEL)   |
| Value:            | 150 ppm  |
| Value :           | 568 mg/m <sup>3</sup>  |
| Regulatory basis: | ELV (IE)   |
| Regulatory list:  | Indicative OELV  |
| Value type:       | Time Weighted Average (TWA)  |
| Value:            | 100 ppm  |
| Value :           | 375 mg/m <sup>3</sup>  |

**Propan-2-ol (CAS No. 67-63-0)**

|                   |   |
|-------------------|---|
| Regulatory basis: | UK. EH40 Workplace Exposure Limits (WELs) |
| Regulatory list:  | EH40 WEL                                  |
| Value type:       | Time Weighted Average (TWA)               |
| Value:            | 400 ppm                                   |
| Value :           | 999 mg/m <sup>3</sup>                     |
| Regulatory basis: | UK. EH40 Workplace Exposure Limits (WELs) |
| Regulatory list:  | EH40 WEL                                  |
| Value type:       | Short Term Exposure Limit (STEL)          |
| Value:            | 500 ppm                                   |
| Value :           | 1250 mg/m <sup>3</sup>                    |

**8.2 – Exposure controls**

|                          |  |
|--------------------------|--|
| Engineering measures:    | Refer to protective measures listed in Sections 7 and 8  |
| Respiratory protection : | Required, if exposure limit is exceeded (e.g. OEL). Respirator with a gas filter. Recommended filter type: AX                                      |
| Hand protection:         | Wear suitable gloves. Take note of the information given by the producer concerning permeability and break through times, and of special workplace |

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|                           |   |
|---------------------------|---|
| Eye protection:           | conditions (mechanical strain, duration of contact). Protective gloves should be replaced at first signs of wear      |
| Skin and body protection: | Butyl rubber, 0.5mm, Fluorocarbon rubber, 0.4mm   |
| Environmental protection: | Tight fitting safety goggles  |
|                           | Wear suitable protective clothing   |
|                           | Do not let product enter drains. If the product contaminates rivers and lakes or drains inform respective authorities |

## 9.0 – Physical and chemical properties

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

|   |   |
|---|---|
| Appearance:                                   | Various colours, liquid                           |
| Odour:  | Alcohol-like                                      |
| Odour threshold:                              | No data available                                 |
| pH:   | No data available                                 |
| Melting point / freezing point:               | -89.5°C   |
| Initial boiling point/boiling range:          | 82°C  |
| Flash point:                                  | 12°C  |
| Evaporation rate:                             | No data available                                 |
| Flammability:                                 | No data available                                 |
| Upper/lower flammability or explosive limits: | 12% (V), 2% (V)                                   |
| Vapour pressure:                              | No data available                                 |
| Vapour density:                               | No data available                                 |
| Relative density:                             | No data available                                 |
| Solubility:                                   | Miscible in water, readily miscible with solvents |
| Partition coefficient: n-octanol/water:       | No data available                                 |
| Auto-ignition temperature:                    | 425°C   |
| Decomposition temperature:                    | No data available                                 |
| Viscosity:                                    | No data available                                 |
| Explosive properties:                         | No data available                                 |
| Oxidising properties:                         | No data available                                 |

### 9.2 – Other information

No further information available

## 10.0 – Stability and reactivity

### 10.1 – Reactivity

Advice: Stable under recommended storage conditions

### 10.2 – Chemical Stability

Advice: Stable under normal conditions

### 10.3 – Possibility of hazardous reactions

Hazardous reactions: No information available

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**10.4 – Conditions to avoid**

Conditions to avoid: Heat, flames and sparks

**10.5 – Incompatible materials**

Materials to avoid: Alkali metals, alkaline earth metals, strong oxidizing agents, nitric acid, sulphuric acid, peroxides (e.g. hydrogen peroxide)

**10.6 – Hazardous decomposition products**

Hazardous decomposition: Under fire conditions: carbon monoxide (CO), carbon dioxide (CO<sub>2</sub>)

**11.0 – Toxicological information**

**11.1 – Information on toxicological effects**

**1-methoxy-2-propanol (CAS No. 107-98-2)**

Oral

Value type: LD50  
Value: 4016 mg/Kg  
Species: rat

Inhalation

Value type: LC50  
Value: >25.8 mg/L  
Exposure time: 6 h  
Species: rat

Dermal

Value type: LD50  
Value: >2000 mg/Kg  
Species: rabbit

**Propan-2-ol (CAS No. 67-63-0)**

Oral

Value type: LD50  
Value: 5840 mg/Kg  
Species: rat

Inhalation

Value type: LC50  
Value: >25 mg/L  
Exposure time: 6 h  
Species: rat

Dermal

Value type: LD50  
Value: >13900 mg/Kg  
Species: rabbit

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**Basic Yellow 37 (CAS No. 6358-36-7)**

Oral

Value type: LD50  
Value: 50 - 300 mg/Kg  
Species: rat

Dermal

Value type: LD50  
Value: 2000 mg/Kg  
Species: rabbit

**12.0 – Ecological information**

**12.1 – Toxicity**

**1-methoxy-2-propanol (CAS No. 107-98-2)**

Fish

Species: Pimephales promelas (fathead minnow)  
Value type: LC50  
Value: 20800 mg/L  
Exposure time: 96 h

Daphnia and other aquatic invertebrates

Species: daphnia magna  
Value type: LC50  
Value: 21100 - 25900 mg/L  
Exposure time: 48 h

Algae

Species: Chlorella vulgaris (Fresh water algae)  
Value type: EC50  
Value: >1000 mg/L  
Exposure time: 7 d

Bacteria

Species: activated sludge  
Value type: IC50  
Value: 1000 mg/L  
Exposure time: 3 h

**Propan-2-ol (CAS No 67-63-0)**

Fish

Species: Pimephales promelas (fathead minnow)  
Value type: LC50  
Value: 9640 mg/L  
Exposure time: 96 h

Daphnia and other aquatic invertebrates

Species: daphnia magna  
Value type: EC50  
Value: 9714 mg/L  
Exposure time: 24 h



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|                |                              |
|----------------|------------------------------|
| Algae          |                              |
| Species:       | Scenedesmus subspicatus      |
| Value type:    | EC50                         |
| Value:         | >100 mg/L                    |
| Exposure time: | 72 h                         |
| Bacteria       |                              |
| Value type:    | EC50                         |
| Value:         | >100 mg/L, no harming action |

**Basic Yellow 37 (CAS No. 6358-36-7)**

|   |                               |
|---|-------------------------------|
| Fish                                    |                               |
| Species:                                | Zebrafish (brachydanio rerio) |
| Value type:                             | LC50                          |
| Value:                                  | 0.625 mg/L                    |
| Exposure time:                          | 96 h                          |
| Daphnia and other aquatic invertebrates |                               |
| Species:                                | daphnia magna                 |
| Value type:                             | EC50                          |
| Value:                                  | 0.016 mg/L                    |
| Exposure time:                          | 48 h                          |

**12.2 – Persistence and biodegradability**

No data available

**12.3 – Bioaccumulative potential**

No data available

**12.4 – Mobility in soil**

Mobile in water environment

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

No data available

**12.6 – Other adverse effects**

Do not flush into surface water or sanitary sewer system. Avoid subsoil penetration.

**13.0 – Disposal considerations**

**13.1 – Waste treatment methods**

|                         |   |
|-------------------------|---|
| Product:                | Disposal together with normal waste is not allowed. Special disposal required according to local regulations. Do not empty into drains. Contact waste disposal services |
| Contaminated packaging: | Empty contaminated packaging thoroughly. They can be recycled after thorough and proper cleaning. Packaging that cannot be cleaned is to be                             |

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disposed of in the same manner as the product. Do not burn, or use a cutting torch on the empty drum. Risk of explosion

## 14.0 – Transport Information

### 14.1 – UN Number

1993

### 14.2 – UN proper shipping name

ADR: Flammable Liquid n.o.s (contains iso-propanol)  
RID: Flammable Liquid n.o.s (contains iso-propanol)  
IMDG: Flammable Liquid n.o.s (contains iso-propanol)

### 14.3 – Transport hazardous class(es)

Labels/classification code/ hazard identification number /tunnel restriction code

ADR: 3 ; F1 ; 33 : (D/E)  
RID: 3 ; F1 ; 33  
IMDG : 3; (F-E, S-E)

### 14.4 – Packing group

ADR: II  
RID: II  
IMDG: II

### 14.5 – Environmental hazards

Labelling according to 5.2.1.8 ADR:

Labelling according to 5.2.1.8 RID:

Labelling according to 5.2.1.6.3 IMDG:

Classification as environmentally hazardous according to 2.9.3 IMDG:

Classified as 'P' according to 2.10 IMDG:



Yes

Yes

### 14.6 – Special precautions for user

Not applicable

### 14.7 – Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

IMDG: Not applicable

## 15.0 – Regulatory Information

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

All components are REACH registered or are exempt from REACH registration

Our inks do not contain substances of very high concern (Regulation (EC) No 1907/2006 (REACH), Article 57)

All components are listed on TSCA list of active substances

### 15.2 – Chemical safety assessment

No information available

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## 16.0 – Other Information

### 16.1 – Full text of H-Statements referred to under Sections 2 and 3

|       |  |
|-------|--|
| H225: | Highly flammable liquid and vapour                   |
| H226: | Flammable liquid and vapour                          |
| H301: | Toxic if swallowed                                   |
| H314: | Causes severe skin burns and eye damage              |
| H315: | Causes skin irritation                               |
| H318: | Causes serious eye damage                            |
| H319: | Causes serious eye irritation                        |
| H336: | May cause drowsiness or dizziness                    |
| H410: | Very toxic to aquatic life with long lasting effects |
| H411: | Toxic to aquatic life with long lasting effects      |
| H412: | Harmful to aquatic life with long lasting effects    |

### 16.2 – Further information

|                 |   |
|-----------------|---|
| Other:          | The information provided in this safety data sheet is correct to our knowledge at the date of its revision. The information given only describes the products with regard to safety arrangements and is not to be considered as a warranty or quality specification and does not constitute a legal relationship. The information contained in this safety data sheet relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text |
| HS Tariff code: | 32159070  |

**LEADERART INDUSTRIES (M) SDN BHD****Safety Data Sheet****1907/2006/EC, 1272/2008/EC**

Trade Name: Permanent marker COL-PMT Inks (all colors)

SDS No.: SDS-LDT-INK-0119

Revision Date: 16-May-2019

Revision No.: 0

**1 Identification of the substance / mixture and of the company / undertaking**

- **Product Identifier**
  - Trade Name: Permanent marker COL-PMT Inks (all colors)
  - Product Reference:-
- **Relevant identified uses of the substance or mixture**
  - Permanent Ink of permanent marker used for office product.
- **Detail of the supplier of the safety data sheet**
  - Manufacturer / Supplier: Leaderart Industries (M) SDN. BHD.
  - Full Address: 7, Jalan Kukoh, Tampoi, 80350 Johor Bahru, Johor, Malaysia
  - Phone number: (07) 236 4011
  - FAX: (07) 236 1793
- **Emergency contact**
  - Phone number: (07) 236 4011
  - Email: iriskam@leaderart.com.my

**2 Hazards identification**

- **Classification of Mixture**
  - Classification according to Regulation (EC) 1272/2008

| Hazard Class      | Hazard Category | Hazard code |
|-------------------|-----------------|-------------|
| Flammable liquids | 2               | H225        |
| Acute toxicity    | 4               | H302        |
| Skin Irritation   | 2               | H315        |
| Eye Damage        | 1               | H318        |
| STOT-SE           | 3               | H335        |

- **Label elements**
  - Labeling according to Regulation (EC) no. 1272/2008
    - Hazard Pictograms:



- Signal word: DANGER

- **Hazard statements:**

| H-Code | H-statements                      |
|--------|-----------------------------------|
| H225   | Highly flammable liquid and vapor |
| H302   | Harmful if swallowed              |
| H315   | Causes skin irritation            |
| H318   | Causes serious eye damage         |
| H335   | May cause respiratory irritation  |

**LEADERART INDUSTRIES (M) SDN BHD****Safety Data Sheet****1907/2006/EC, 1272/2008/EC**

Trade Name: Permanent marker COL-PMT Inks (all colors)

SDS No.: SDS-LDT-INK-0119

Revision Date: 16-May-2019

Revision No.: 0

- Precautionary statements:

| Code           | General statements   |
|----------------|--|
| P210           | Keep away from heat/sparks/open flames/hot surfaces – No smoking.  |
| P233           | Keep container tightly closed.   |
| P243           | Take precautionary measures against static discharge.  |
| P264           | Wash hands thoroughly after handling.  |
| P270           | Do not eat, drink, or smoke when using this product.   |
| P280           | Wear protective gloves/protective clothing/eye protection/face protection.   |
| P303/P353/P361 | IF ON SKIN (or hair): Remove/take off immediately all contaminated clothing. Rinse skin with water/shower.                       |
| P305/P351/P338 | If IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. |
| P337/P313      | If eye irritation persists: Get medical advice/attention.  |
| P403/P235      | Store in well ventilated place. Keep cool.   |

- Other hazards

- None

**3 Composition / information on ingredients**

- Chemical characterization:** Mixtures of the following substances (containing combination of color dyes and solvents).

| Chemical name        | REACH Reg. No.        | CAS no.    | EC No.    | Amount (%) | Classification according to EU Regulation (EC) no. 1272/2008   |
|----------------------|-----------------------|------------|-----------|------------|--|
| Ethanol              | 01-2119457610-43-0546 | 64-17-5    | 200-578-6 | < 50%      | Flam. Liq. 2; H225   |
| 1-methoxy-2-propanol | 01-2119457435-35-0039 | 107-98-2   | 203-539-1 | < 50%      | Flam. Liq. 3; H226<br>STOT-SE 3; H336  |
| N-butanol            | 01-2119484630-38-0073 | 71-36-3    | 200-751-6 | < 25%      | Flam. Liq. 3; H226<br>Acute.Tox.4 (oral); H302<br>Skin Irrit. 2; H315<br>Eye Dam. 1; H318<br>STOT-SE 3; H336 |
| Solvent yellow 34    | -                     | 492-80-8   | 207-762-5 | < 1%       | Acute.Tox.4 (oral); H302<br>Eye Irrit. 2; H319   |
| Solvent yellow 82    | -                     | 85029-58-9 | 285-083-3 | < 2%       | Aquatic Acute 1; H400<br>Aquatic Chronic 1; H410   |
| Basic blue 7         | -                     | 2390-60-5  | 219-232-0 | < 4%       | Acute.Tox.4 (oral); H302<br>Eye Irrit. 2; H319<br>Skin Irrit. 2; H315  |
| Gum rosin            | -                     | 8050-09-7  | 232-475-7 | < 10%      | Eye Irrit. 2; H319<br>STOT-SE 3; H335  |

- Additional information:** Refer to section 16.

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**4 First aid measures**

- **Description of first aid measure**
  - **After inhalation:** Supply fresh air; consult doctor in case of complaints.
  - **After skin contact:** Wash skin with soap and water. If irritation persists, obtain medical attention.
  - **After eye contact:** Rinse opened eye for several minutes under running water.
  - **After swallowing:** If symptoms persist, consult doctor.
- **Most important symptoms and effects, both acute and delayed:** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed:** No further information available.

**5 Firefighting measures**

- **Suitable extinguishing agents:** CO<sub>2</sub> powder or water spray. Fight larger fires with water spray or alcohol resistant foam
- **Special hazards arising from the substance or mixture:** Highly flammable. Vapors may form explosive mixtures with air. In case of fire hazardous decomposition products may be produced, such as carbon monoxide (CO) and carbon dioxide (CO<sub>2</sub>).
- **Advice for firefighters**
  - **Protective equipment:** In the event of fire, wear self-contained breathing apparatus. Wear appropriate body protection (full protective suit).

**6 Accidental release measures**

- **Personal precautions, protective equipment and emergency procedures:** Use personal protective equipment. Provide adequate ventilation. Keep away from heat and sources of ignition. Avoid contact with skin and eyes. Do not breathe vapors.
- **Environmental precautions:** Do not allow to enter sewers / surface or ground water. Avoid subsoil penetration.
- **Methods and material for containment and cleaning up:** Absorb with non-combustible absorbent material (sand, diatomite, vermiculite) and place in container for disposal according to local/national regulations.
- **Reference to other sections:**  
See section 7 for information on safe handling.  
See section 8 for information on personal protection equipment.  
See section 13 for disposal information

**7 Handling and storage**

- **Precautions for safe handling:**
  - **Information for safe handling:** Keep container tightly closed. Ensure adequate ventilation. Avoid contact with skin and eyes. Do not breathe vapors. Emergency eye wash fountains and emergency showers should be available in the immediate vicinity
  - **Information of hygiene measures:** Keep away from food, drink, and animal feeding stuffs. Smoking, eating and drinking should be prohibited in the application area. Wash hands before breaks and at the end of the working day. Rake off all contaminated clothing immediately. Avoid contact with skin and eyes. Do not breathe vapors of spray mist.
  - **Information about fire and explosion protection:** Combustible liquid. Keep away from sources of ignition – no smoking. Take measures to prevent the build-up of electrostatic charge. Vapors may form explosive mixtures in air. Use only in an area containing explosion proof equipment.

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- **Conditions for safe storage:**

- **Requirements to be met by storerooms and receptacles:** *Keep in an area equipped with solvent resistant flooring. Store in original container.*
- **Information about storage in one common storage facility:** *Incompatible with oxidizing agents. Keep away from food, drink and animal feeding stuffs.*
- **Further information about storage conditions:** *Keep tightly closed in a dry and cool place. Keep in a well-ventilated place. Keep away from heat. Keep away from direct sunlight.*

**8 Exposure controls / personal protection**

- **Control parameters**

- **Ethanol (CAS no.: 64-17-5)**  
**Occupational exposure limits:**  
**PEL: 1000 ppm (TWA)**
- **1-methoxypropan-2-ol (CAS no.: 107-98-2)**  
**Occupational exposure limits:**  
**PEL: 100 ppm (TWA)**

- **Additional information about design of technical facilities:** *Use local exhaust ventilation or other engineering control to maintain the airborne levels below exposure limit requirement or guidelines in Section 7. General ventilation should be sufficient for most operations.*

- **Ingredients with limit values that require monitoring at the workplace:**

- **Personal protective equipment:**

- **General protective and hygienic measures:**  
*The usual precautionary measures are not to be adhered to when handling chemicals.*
- **Respiratory protection:** *Required if exposure limit exceeded (e.g. OEL). Respirator with a gas filter. Recommended filter type: A.*
- **Hands protection:**  
*The glove material has to be impermeable and resistant to the product / the substance / the preparation. Due to missing tests no recommendation to the glove material can be given for the product / the preparation / the chemical mixture. Protective gloves should be replaced at first signs of wear. Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation.*
  - ❖ **Material of gloves**  
*The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.*
  - ❖ **Penetration time of glove material**  
*The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.*
- **Eye protection:** *Goggles recommended during refilling.*
- **Skin and body protection:** *Wear suitable protective clothing.*
- **Environmental protection:** *Do not let product enter drains. Of the product contaminates rivers and lakes or drains, respective authorities should be informed accordingly.*

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**9 physical and chemical properties**

- **Appearance:** Colored liquid.
- **Odour:** Alcohol-like
- **Odour threshold:** Not available
- **pH:** Not available
- **Melting point / Freezing point:** -118°C
- **Initial boiling point / Boiling range:** 78°C
- **Flash Point:** Below 23°C
- **Evaporation rate:** Not available
- **Flammability:** Not available
- **Upper/Lower flammability or explosive limits:** 3.3% – 19% (by volume)
- **Vapour pressure at 20°C:** 41.4 mmHg @ 20°C
- **Vapour density:** 1.6 (air = 1.0)
- **Relative density:** 0.85 g/cm<sup>3</sup>
- **Solubility in / Miscibility with**
  - **Water :** Partly soluble in water @ 20 °C
- **Partition coefficient (n-octanol/water):** Not available
- **Auto-ignition temperature:** 363 °C
- **Decomposition temperature:** Not available
- **Viscosity:** 2.50 – 3.70 cps

**10 Stability and reactivity**

- **Reactivity:** Stable under recommended storage conditions.
- **Chemical stability:** Stable under normal conditions.
- **Possibility of hazardous reactions:** Not available
- **Thermal decomposition / conditions to be avoided:** Heat, flames and sparks.
- **Incompatible materials:** Alkali metals, alkaline earth metals, strong oxidizing agents, nitric acid, sulphuric acid, peroxides (E.g. Hydrogen peroxide)
- **Hazardous decomposition products:** Under fire conditions: carbon monoxide (CO), carbon dioxide (CO<sub>2</sub>).

**11 Toxicological information**

- **Information on toxicological effects**
  - **Ethanol (CAS no.: 64-17-5)**  
**LD50 rat (oral): 7,060 mg/kg**
  - **1-methoxypropan-2-ol (CAS no.: 107-98-2)**  
**LD50 rat (oral): 5,660 mg/kg**  
**LD50 rabbit (dermal): 13,000 mg/kg**



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- **Symptoms related to physical, chemical and toxicological characteristic**
  - Skin corrosion/irritation:** No further relevant information available
  - Serious eye damage/irritation:** No further relevant information available
  - Respiratory or skin sensitization:** No further relevant information available
  - Germ cell mutagenicity:** No further relevant information available
  - Carcinogenicity:** No further relevant information available
  - Reproductive toxicity:** No further relevant information available
  - STOT-SE:** May cause drowsiness or dizziness
  - STOT-RE:** No further relevant information available

**12 Ecological information**

- **Ecotoxicity**  
Water hazard Class 1 (German Regulation) (Self assessment) : slightly hazardous for water  
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
- **Persistence and degradability:** This material may biodegrade to a moderate extent.
- **Bioaccumulative potential:** No further relevant information available.
- **Mobility in soil:** Mobile in water environment.
- **Additional ecological information**
  - **General notes:**  
Do not flush into surface water or sewage system. Avoid subsoil penetration.
- **Results of PBT and vPvB assessment**
  - **PBT:** Not applicable
  - **vPvB:** Not applicable
- **Other adverse effects:** Do not empty into drains.

**13 Disposal considerations**

- **Waste treatment methods**
  - **Recommendation:** Disposal together with normal water is not allowed. Special disposal required according to local regulations. Do not empty into drains. Contact waste disposal services.
- **Contaminated packaging**
  - **Recommendation:** Empty contaminated packaging and can be recycled after proper cleaning thoroughly. Packaging that cannot be cleaned is to be disposed of in the same manner as the product. Do not burn, or use cutting torch on the empty drum. Risk of explosion.

**14 Transport information**

- **UN number:** Not available
- **UN proper shipping name:** Not available
- **Transport hazard class(es):** Not available
- **Packing group:** Not applicable
- **Maritime transport IMDG:**
  - **IMDG Class:** Not available
  - **Marine pollutant:** Not available
- **Transport in bulk:** Not available
- **Special precautions:** Not available

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**15 Regulatory information**

- **National regulations**
  - **All components are listed on TSCA list of active substances.**
- **Other regulations, limitations and prohibitive regulations**
- **SVHC Candidate List of REACH Regulation Annex XIV Authorization (15/12/2010)**
  - *None of the ingredients is listed*
- **REACH Regulation Annex XVII Restriction List** *None of the ingredients is listed*
- **REACH Regulation Annex XIV Authorization Recommendation List (17/12/2010)**
  - *None of the ingredients is listed.*

**16 Other information**

- *The contents and format of this MSDS / SDS are in according with REGULATION (EC) No. 1272/2008 & (EC) 1907/2006.*
- *For the full text of H-statement mentioned in Section 3:*

| <i>H-Code</i> | <i>H-statements</i>   |
|---------------|---|
| <i>H225</i>   | <i>Highly flammable liquid and vapor</i>                    |
| <i>H226</i>   | <i>Flammable liquid and vapor</i>                           |
| <i>H302</i>   | <i>Harmful if swallowed</i>                                 |
| <i>H315</i>   | <i>Causes skin irritation</i>                               |
| <i>H318</i>   | <i>Causes serious eye damage</i>                            |
| <i>H319</i>   | <i>Causes serious eye irritation</i>                        |
| <i>H335</i>   | <i>May cause respiratory irritation</i>                     |
| <i>H336</i>   | <i>May cause drowsiness or dizziness</i>                    |
| <i>H400</i>   | <i>Very toxic to aquatic life</i>                           |
| <i>H410</i>   | <i>Very toxic to aquatic life with long lasting effects</i> |

- **DISCLAIMER OF LIABILITY**  
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