# 151103 Lyreco Permanent Marker C/Tip Black

**Lyreco Group (Lyreco France)**

Chemwatch Hazard Alert Code: **3**

Chemwatch: **4854-64**
Version No: **2.1.1.1**
Safety Data Sheet (Conforms to Regulations (EC) No 453/2010)

Issue Date: **06/04/2013**
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Initial Date: **Not Available**
S.REACH.GBR.EN

## SECTION 1 IDENTIFICATION OF THE SUBSTANCE / MIXTURE AND OF THE COMPANY / UNDERTAKING

### 1.1.Product Identifier

| | |
|---|---|
| **Product name** | 151103 Lyreco Permanent Marker C/Tip Black |
| **Synonyms** | 151147 PK4 Lyreco Perm Marker C/Tip Asstd Col |
| **Proper shipping name** | PAINT or PAINT RELATED MATERIAL |
| **Other means of identification** | Not Available |
| **Index number** | Not Applicable |

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

| | |
|---|---|
| **Relevant identified uses** | Permanent Marker. NOTE: Information on this SDS refers to ink used in pens and markers, however, it applies to these inks in bulk. |
| **Uses advised against** | Not Applicable |

### 1.3.Details of the manufacturer/importer

| | |
|---|---|
| **Registered company name** | Lyreco Group (Lyreco France) |
| **Address** | Rue du 19 Mars 1962 Marly 59770 France |
| **Telephone** | +33 3 27 23 64 00 (9a.m-5p.m. CET.) |
| **Fax** | Not Available |
| **Website** | Not Available |
| **Email** | Not Available |

### 1.4.Emergency telephone number

| | |
|---|---|
| **Association / Organisation** | Not Available |
| **Emergency telephone numbers** | +33 3 27 23 64 00 (9a.m-5p.m. CET.) |
| **Other emergency telephone numbers** | Not Available |

## SECTION 2 HAZARDS IDENTIFICATION

### 2.1.Classification of the substance or mixture

**Considered a dangerous mixture according to Directive 1999/45/EC, Reg. (EC) No 1272/2008 (if applicable) and their amendments. Classified as Dangerous Goods for transport purposes.**

**CHEMWATCH HAZARD RATINGS**

| | | Min | Max |
|---|---|---|---|
| Flammability | 3 | | |
| Toxicity | 2 | | |
| Body Contact | 2 | | |
| Reactivity | 1 | | |
| Chronic | 2 | | |

0 = Minimum
1 = Low
2 = Moderate
3 = High
4 = Extreme

| | |
|---|---|
| **DSD classification** | In case of mixtures, classification has been prepared by following DPD (Directive 1999/45/EC) and CLP Regulation (EC) No 1272/2008 regulations |
| **DPD classification [1]** | R36/38 Irritating to eyes and skin.<br>R52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.<br>R67 Vapours may cause drowsiness and dizziness.<br>R68(3) Possible risk of irreversible effects.<br>R63(3) Possible risk of harm to the unborn child.<br>R11 Highly flammable. |
| ***Legend:*** | *1. Classified by Chemwatch; 2. Classification drawn from EC Directive 67/548/EEC - Annex I ; 3. Classification drawn from EC Directive 1272/2008 - Annex VI* |
| **Classification according to regulation (EC) No 1272/2008 [CLP] [1]** | Flammable Liquid Category 2, Skin Corrosion/Irritation Category 2, Eye Irritation Category 2, Germ Cell Mutagen Category 2, Reproductive Toxicity Category 2, STOT - SE (Narcosis) Category 3, Chronic Aquatic Hazard Category 3 |

**Continued...**

| | |
|---|---|
| ***Legend:*** | *1. Classified by Chemwatch; 2. Classification drawn from EC Directive 67/548/EEC - Annex I ; 3. Classification drawn from EC Directive 1272/2008 - Annex VI* |

### 2.2. Label elements

| | |
|---|---|
| **CLP label elements** |  |
| SIGNAL WORD | **DANGER** |

### Hazard statement(s)

| | |
|---|---|
| **H225** | Highly flammable liquid and vapour |
| **H315** | Causes skin irritation |
| **H319** | Causes serious eye irritation |
| **H341** | Suspected of causing genetic defects |
| **H361** | Suspected of damaging fertility or the unborn child |
| **H336** | May cause drowsiness or dizziness |
| **H412** | Harmful to aquatic life with long lasting effects |

### Supplementary statement(s)

Not Applicable

### Precautionary statement(s) Prevention

| | |
|---|---|
| **P101** | If medical advice is needed, have product container or label at hand. |
| **P201** | Obtain special instructions before use. |

### Precautionary statement(s) Response

| | |
|---|---|
| **P308+P313** | IF exposed or concerned: Get medical advice/attention. |

### Precautionary statement(s) Storage

| | |
|---|---|
| **P403+P235** | Store in a well-ventilated place. Keep cool. |

### Precautionary statement(s) Disposal

| | |
|---|---|
| **P501** | Dispose of contents/container to authorised chemical landfill or if organic to high temperature incineration |

### 2.3. Other hazards

| | |
|---|---|
| | Inhalation, skin contact and/or ingestion may produce health damage*. |
| | Cumulative effects may result following exposure*. |
| | May produce discomfort of the respiratory system*. |
| | Limited evidence of a carcinogenic effect*. |
| | Possible skin sensitizer*. |

REACh - Art.57-59: The mixture does not contain Substances of Very High Concern (SVHC) at the SDS print date.

## SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

### 3.1.Substances

See 'Composition on ingredients' in Section 3.2

### 3.2.Mixtures

| 1.CAS No<br>2.EC No<br>3.Index No<br>4.REACH No | %[weight] | Name | Classification according to directive 67/548/EEC [DSD] | Classification according to regulation (EC) No 1272/2008 [CLP] |
|---|---|---|---|---|
| 1.64-17-5<br>2.200-578-6<br>3.603-002-00-5<br>4.01-2119457610-43-XXXX | >50 | ethanol | R11 [2] | Flam. Liq. 2; H225 [3] |
| 1.107-98-2<br>2.203-539-1, 215-306-1, 216-455-5<br>3.603-064-00-3, 603-106-00-0<br>4.01-2119457435-35-XXXX | 10-25 | propylene glycol monomethyl ether - alpha isomer | R10, R67, R61, R37/38, R41 [2] | Flam. Liq. 3, STOT SE 3, Flam. Liq. 3, Repr. 1B, STOT SE 3, Skin Irrit. 2, Eye Dam. 1; H226, H336, H360D ***, H335, H315, H318 [3] |
| 1.298-07-7<br>2.206-056-4<br>3.Not Available | 2.5-10 | di(2-ethylhexyl) acid phosphate | R68(3), R63(3), R34, R21, R53, R41 [1] | Metal Corrosion Category 1, Acute Toxicity (Dermal) Category 4, Skin Corrosion/Irritation Category 1B, Serious Eye Damage Category 1, Germ Cell Mutagen Category 2, Reproductive Toxicity Category 2, Chronic Aquatic Hazard |

**Continued...**

| | | | | |
|---|---|---|---|---|
| 4.Not Available | | | | Category 4; H290, H312, H314, H318, H341, H361, H413 [1] |
| 1.Not Available<br>2.Not Available<br>3.Not Available<br>4.Not Available | <5 | ingredients, non-hazardous | Not Applicable | Not Applicable |

| | |
|---|---|
| ***Legend:*** | *1. Classified by Chemwatch; 2. Classification drawn from EC Directive 67/548/EEC - Annex I; 3. Classification drawn from EC Directive 1272/2008 - Annex VI 4. Classification drawn from C&L* |

## SECTION 4 FIRST AID MEASURES

### 4.1. Description of first aid measures

| | |
|---|---|
| **General** | ▸ If swallowed do **NOT** induce vomiting.<br>▸ If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration.<br>▸ Observe the patient carefully.<br>▸ Never give liquid to a person showing signs of being sleepy or with reduced awareness; i.e. becoming unconscious.<br>▸ Give water to rinse out mouth, then provide liquid slowly and as much as casualty can comfortably drink.<br>▸ Seek medical advice.<br>▸ If fumes or combustion products are inhaled remove from contaminated area.<br>▸ Lay patient down. Keep warm and rested.<br>▸ Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures.<br>▸ Apply artificial respiration if not breathing, preferably with a demand valve resuscitator, bag-valve mask device, or pocket mask as trained. Perform CPR if necessary.<br>▸ Transport to hospital, or doctor.<br>If this product comes in contact with the eyes:<br>▸ Wash out immediately with fresh running water.<br>▸ Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids.<br>▸ Seek medical attention without delay; if pain persists or recurs seek medical attention.<br>▸ Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.<br>If skin contact occurs:<br>▸ Immediately remove all contaminated clothing, including footwear.<br>▸ Flush skin and hair with running water (and soap if available).<br>▸ Seek medical attention in event of irritation. |
| **Eye Contact** | If this product comes in contact with the eyes:<br>▸ Wash out immediately with fresh running water.<br>▸ Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids.<br>▸ Seek medical attention without delay; if pain persists or recurs seek medical attention.<br>▸ Removal of contact lenses after an eye injury should only be undertaken by skilled personnel. |
| **Skin Contact** | If skin contact occurs:<br>▸ Immediately remove all contaminated clothing, including footwear.<br>▸ Flush skin and hair with running water (and soap if available).<br>▸ Seek medical attention in event of irritation. |
| **Inhalation** | ▸ If fumes or combustion products are inhaled remove from contaminated area.<br>▸ Lay patient down. Keep warm and rested.<br>▸ Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures.<br>▸ Apply artificial respiration if not breathing, preferably with a demand valve resuscitator, bag-valve mask device, or pocket mask as trained. Perform CPR if necessary.<br>▸ Transport to hospital, or doctor. |
| **Ingestion** | ▸ If swallowed do **NOT** induce vomiting.<br>▸ If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration.<br>▸ Observe the patient carefully.<br>▸ Never give liquid to a person showing signs of being sleepy or with reduced awareness; i.e. becoming unconscious.<br>▸ Give water to rinse out mouth, then provide liquid slowly and as much as casualty can comfortably drink.<br>▸ Seek medical advice. |

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

| | |
|---|---|
| | See Section 11 |

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

All persons handling organic phosphorus ester materials regularly should undergo regular medical examination with special stress on the central nervous systems. Whilst atropine or pyridine-2-aldoxime methiodide (PAM) are beneficial antidotes for acute phosphate ester poisonings, they are of little value in reversing acute or chronic neurological damage due to phosphites and some types of aryl phosphate.
For acute or short term repeated exposures to ethanol:

- Acute ingestion in non-tolerant patients usually responds to supportive care with special attention to prevention of aspiration, replacement of fluid and correction of nutritional deficiencies (magnesium, thiamine pyridoxine, Vitamins C and K).
- Give 50% dextrose (50-100 ml) IV to obtunded patients following blood draw for glucose determination.
- Comatose patients should be treated with initial attention to airway, breathing, circulation and drugs of immediate importance (glucose, thiamine).
- Decontamination is probably unnecessary more than 1 hour after a single observed ingestion. Cathartics and charcoal may be given but are probably not effective in single ingestions.
- Fructose administration is contra-indicated due to side effects.

## SECTION 5 FIREFIGHTING MEASURES

### 5.1. Extinguishing media

| | |
|---|---|
| | ▸ Alcohol stable foam. |

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

| | |
|---|---|
| **Fire Incompatibility** | ▸ Avoid contamination with oxidising agents i.e. nitrates, oxidising acids, chlorine bleaches, pool chlorine etc. as ignition may result |

**Continued...**

### 5.3. Advice for firefighters

| | |
|---|---|
| **Fire Fighting** | ▸ Alert Fire Brigade and tell them location and nature of hazard. |
| **Fire/Explosion Hazard** | ▸ Liquid and vapour are highly flammable. |

## SECTION 6 ACCIDENTAL RELEASE MEASURES

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

| | |
|---|---|
| | See section 8 |

### 6.2. Environmental precautions

| | |
|---|---|
| | See section 12 |

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

| | |
|---|---|
| **Minor Spills** | ▸ Remove all ignition sources. |
| **Major Spills** | ▸ Clear area of personnel and move upwind. |

### 6.4. Reference to other sections

| | |
|---|---|
| | Personal Protective Equipment advice is contained in Section 8 of the MSDS. |

## SECTION 7 HANDLING AND STORAGE

### 7.1. Precautions for safe handling

| | |
|---|---|
| **Safe handling** | ▸ **DO NOT** allow clothing wet with material to stay in contact with skin<br>▸ Avoid all personal contact, including inhalation. |
| **Fire and explosion protection** | See section 5 |
| **Other information** | ▸ Store in original containers in approved flame-proof area. |

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

| | |
|---|---|
| **Suitable container** | ▸ Packing as supplied by manufacturer. |
| **Storage incompatibility** | ▸ Avoid oxidising agents, acids, acid chlorides, acid anhydrides, chloroformates. |

**PACKAGE MATERIAL INCOMPATIBILITIES**

Not Available

### 7.3. Specific end use(s)

See section 1.2

## SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

### 8.1. Control parameters

**DERIVED NO EFFECT LEVEL (DNEL)**

Not Available

**PREDICTED NO EFFECT LEVEL (PNEC)**

Not Available

**OCCUPATIONAL EXPOSURE LIMITS (OEL)**

**INGREDIENT DATA**

| Source | Ingredient | Material name | TWA | STEL | Peak | Notes |
|---|---|---|---|---|---|---|
| UK Workplace Exposure Limits (WELs) | ethanol | Ethanol | 1920 mg/m3 / 1000 ppm | Not Available | Not Available | Not Available |
| UK Workplace Exposure Limits (WELs) | propylene glycol monomethyl ether - alpha isomer | 1-Methoxypropan-2-ol | 375 mg/m3 / 100 ppm | 560 mg/m3 / 150 ppm | Not Available | Sk |
| European Union (EU) First List of Indicative Occupational Exposure Limit Values (IOELVs) (English) | propylene glycol monomethyl ether - alpha isomer | 1-Methoxypropanol-2 | 375 mg/m3 / 100 ppm | 568 mg/m3 / 150 ppm | Not Available | Skin |
| EU Consolidated List of Indicative Occupational Exposure Limit Values (IOELVs) | propylene glycol monomethyl ether - alpha isomer | 1-Methoxypropan-2-ol | 375 mg/m3 / 100 ppm | 568 mg/m3 / 150 ppm | Not Available | Skin |

**EMERGENCY LIMITS**

| Ingredient | Material name | TEEL-1 | TEEL-2 | TEEL-3 |
|---|---|---|---|---|
| ethanol | Ethyl alcohol; (Ethanol) | Not Available | Not Available | Not Available |
| propylene glycol monomethyl ether - alpha isomer | Propylene glycol monomethyl ether; (Ucar Triol HG-170) | 150 ppm | 150 ppm | 470 ppm |

**Continued...**

| | | | | |
|---|---|---|---|---|
| di(2-ethylhexyl) acid phosphate | Bis(2-ethylhexyl) hydrogen phosphate | 15 mg/m3 | 160 mg/m3 | 960 mg/m3 |
| di(2-ethylhexyl) acid phosphate | Butyl bis(2-ethylhexyl)phosphate | 0.6 ppm | 0.75 ppm | 0.75 ppm |

| Ingredient | Original IDLH | Revised IDLH |
|---|---|---|
| ethanol | 15,000 ppm | 3,300 [LEL] ppm |
| propylene glycol monomethyl ether - alpha isomer | Not Available | Not Available |
| di(2-ethylhexyl) acid phosphate | Not Available | Not Available |
| ingredients, non-hazardous | Not Available | Not Available |

### 8.2. Exposure controls

| | |
|---|---|
| **8.2.1. Appropriate engineering controls** | Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard. |
| **8.2.2. Personal protection** |  |
| **Eye and face protection** | ▸ Safety glasses with side shields. |
| **Skin protection** | See Hand protection below |
| **Hands/feet protection** | ▸ Wear chemical protective gloves, e.g. PVC. |
| **Body protection** | See Other protection below |
| **Other protection** | ▸ Overalls. |
| **Thermal hazards** | Not Available |

#### Recommended material(s)

**GLOVE SELECTION INDEX**

Glove selection is based on a modified presentation of the:
**"Forsberg Clothing Performance Index".**
The effect(s) of the following substance(s) are taken into account in the ***computer-generated*** selection:
151103 Lyreco Permanent Marker C/Tip Black

| Material | CPI |
|---|---|
| BUTYL | A |
| NEOPRENE | A |
| NITRILE | B |
| PVC | B |

* CPI - Chemwatch Performance Index
A: Best Selection
B: Satisfactory; may degrade after 4 hours continuous immersion
C: Poor to Dangerous Choice for other than short term immersion
**NOTE**: As a series of factors will influence the actual performance of the glove, a final selection must be based on detailed observation. -
* Where the glove is to be used on a short term, casual or infrequent basis, factors such as "feel" or convenience (e.g. disposability), may dictate a choice of gloves which might otherwise be unsuitable following long-term or frequent use. A qualified practitioner should be consulted.

#### Respiratory protection

Type AB-P Filter of sufficient capacity.

Where the concentration of gas/particulates in the breathing zone, approaches or exceeds the "Exposure Standard" (or ES), respiratory protection is required.
Degree of protection varies with both face-piece and Class of filter; the nature of protection varies with Type of filter.

| Required Minimum Protection Factor | Half-Face Respirator | Full-Face Respirator | Powered Air Respirator |
|---|---|---|---|
| up to 5 x ES | AB-AUS / Class 1 P2 | - | AB-PAPR-AUS / Class 1 P2 |
| up to 25 x ES | Air-line* | AB-2 P2 | AB-PAPR-2 P2 |
| up to 50 x ES | - | AB-3 P2 | - |
| 50+ x ES | - | Air-line** | - |

* - Continuous-flow; ** - Continuous-flow or positive pressure demand
^ - Full-face
A(All classes) = Organic vapours, B AUS or B1 = Acid gasses, B2 = Acid gas or hydrogen cyanide(HCN), B3 = Acid gas or hydrogen cyanide(HCN), E = Sulfur dioxide(SO2), G = Agricultural chemicals, K = Ammonia(NH3), Hg = Mercury, NO = Oxides of nitrogen, MB = Methyl bromide, AX = Low boiling point organic compounds(below 65 degC)

#### 8.2.3. Environmental exposure controls

See section 12

## SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

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

| | |
|---|---|
| **Appearance** | Black highly flammable liquid with a characteristic odour; does not mix with water. |

| | | | |
|---|---|---|---|
| **Physical state** | Liquid | **Relative density (Water = 1)** | Not Available |
| **Odour** | Not Available | **Partition coefficient n-octanol / water** | Not Available |
| **Odour threshold** | Not Available | **Auto-ignition temperature (°C)** | 270 |
| **pH (as supplied)** | 5.5 | **Decomposition temperature** | Not Available |
| **Melting point / freezing point (°C)** | Not Available | **Viscosity (cSt)** | 2 |
| **Initial boiling point and boiling range (°C)** | 78 | **Molecular weight (g/mol)** | Not Applicable |
| **Flash point (°C)** | 21 | **Taste** | Not Available |

**Continued...**

| | | | |
|---|---|---|---|
| **Evaporation rate** | Not Available | **Explosive properties** | Not Available |
| **Flammability** | HIGHLY FLAMMABLE. | **Oxidising properties** | Not Available |
| **Upper Explosive Limit (%)** | 15 | **Surface Tension (dyn/cm or mN/m)** | Not Available |
| **Lower Explosive Limit (%)** | 2.3 | **Volatile Component (%vol)** | Not Available |
| **Vapour pressure (kPa)** | 5.9 @ 20C | **Gas group** | Not Available |
| **Solubility in water (g/L)** | Immiscible | **pH as a solution(1%)** | Not Available |
| **Vapour density (Air = 1)** | Not Available | **VOC g/L** | Not Available |

### 9.2. Other information

| | |
|---|---|
| | Not Available |

## SECTION 10 STABILITY AND REACTIVITY

| | |
|---|---|
| **10.1.Reactivity** | See section 7.2 |
| **10.2.Chemical stability** | ▸ Unstable in the presence of incompatible materials. |
| **10.3. Possibility of hazardous reactions** | See section 7.2 |
| **10.4. Conditions to avoid** | See section 7.2 |
| **10.5. Incompatible materials** | See section 7.2 |
| **10.6. Hazardous decomposition products** | See section 5.3 |

## SECTION 11 TOXICOLOGICAL INFORMATION

### 11.1. Information on toxicological effects

| | |
|---|---|
| **Inhaled** | Inhalation of vapours may cause drowsiness and dizziness. |
| **Ingestion** | Accidental ingestion of the material may be damaging to the health of the individual. |
| **Skin Contact** | This material can cause inflammation of the skin on contact in some persons. |
| **Eye** | This material can cause eye irritation and damage in some persons. |
| **Chronic** | Strong evidence exists that this substance may cause irreversible mutations (though not lethal) even following a single exposure. |

| | | |
|---|---|---|
| **151103 Lyreco Permanent Marker C/Tip Black** | **TOXICITY** | **IRRITATION** |
| | Not Available | Not Available |
| **ethanol** | **TOXICITY** | **IRRITATION** |
| | Dermal (rabbit) LD50: 17100 mg/kg[1] | Eye (rabbit): 500 mg SEVERE |
| | Inhalation (rat) LC50: 64000 ppm/4h[2] | Eye (rabbit):100mg/24hr-moderate |
| | Oral (rat) LD50: >11872769 mg/kg[1] | Skin (rabbit):20 mg/24hr-moderate |
| | | Skin (rabbit):400 mg (open)-mild |
| **propylene glycol monomethyl ether - alpha isomer** | **TOXICITY** | **IRRITATION** |
| | dermal (rat) LD50: >2000 mg/kg[1] | Eye (rabbit) 230 mg mild |
| | Inhalation (rat) LC50: 10000 ppm/5 h.d[2] | Eye (rabbit) 500 mg/24 h. |
| | Oral (rat) LD50: 5207.2 mg/kg[1] | Eye (rabbit): 100 mg SEVERE |
| | | Skin (rabbit) 500 mg open - mild |
| **di(2-ethylhexyl) acid phosphate** | **TOXICITY** | **IRRITATION** |
| | Dermal (rabbit) LD50: 1250 mg/kgE[2] | Eye (rabbit): 0.25 mg/24h-SEVERE |
| | Oral (rat) LD50: 4940 mg/kgd[2] | Eye (rabbit): 5 mg - moderate |
| | | Skin (rabbit): 5 mg/24h - SEVERE |
| | | Skin (rabbit):500 mg(open)-mod |
| ***Legend:*** | *1. Value obtained from Europe ECHA Registered Substances - Acute toxicity 2. Value obtained from manufacturer's msds unless otherwise specified data extracted from RTECS - Register of Toxic Effect of chemical Substances* | |

| | |
|---|---|
| **ETHANOL** | The material may cause skin irritation after prolonged or repeated exposure and may produce on contact skin redness, swelling, the production of vesicles, scaling and thickening of the skin. |
| **PROPYLENE GLYCOL MONOMETHYL ETHER - ALPHA ISOMER** | for propylene glycol ethers (PGEs):<br>Typical propylene glycol ethers include propylene glycol n-butyl ether (PnB); dipropylene glycol n-butyl ether (DPnB); dipropylene glycol methyl ether acetate (DPMA); tripropylene glycol methyl ether (TPM).<br>NOTE: For PGE - mixed isomers: Exposure of pregnant rats and rabbits to the substance did not give rise to teratogenic effects at concentrations up to 3000 ppm. |

**Continued...**

| | | | |
|---|---|---|---|
| **Acute Toxicity** | ⊘ | **Carcinogenicity** | ⊘ |
| **Skin Irritation/Corrosion** | ✔ | **Reproductivity** | ✔ |
| **Serious Eye Damage/Irritation** | ✔ | **STOT - Single Exposure** | ✔ |
| **Respiratory or Skin sensitisation** | ⊘ | **STOT - Repeated Exposure** | ⊘ |
| **Mutagenicity** | ✔ | **Aspiration Hazard** | ⊘ |

***Legend:*** ✔ *– Data required to make classification available*
✘ *– Data available but does not fill the criteria for classification*
⊘ *– Data Not Available to make classification*

**CMR STATUS**

| | | | |
|---|---|---|---|
| **SKIN** | propylene glycol monomethyl ether - alpha isomer | European Union (EU) First List of Indicative Occupational Exposure Limit Values (IOELVs) - Skin | Skin |

## SECTION 12 ECOLOGICAL INFORMATION

### 12.1. Toxicity

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

### 12.2. Persistence and degradability

| Ingredient | Persistence: Water/Soil | Persistence: Air |
|---|---|---|
| ethanol | LOW (Half-life = 2.17 days) | LOW (Half-life = 5.08 days) |
| propylene glycol monomethyl ether - alpha isomer | LOW (Half-life = 56 days) | LOW (Half-life = 1.7 days) |
| di(2-ethylhexyl) acid phosphate | HIGH | HIGH |

### 12.3. Bioaccumulative potential

| Ingredient | Bioaccumulation |
|---|---|
| ethanol | LOW (LogKOW = -0.31) |
| propylene glycol monomethyl ether - alpha isomer | LOW (BCF = 2) |
| di(2-ethylhexyl) acid phosphate | LOW (BCF = 6) |

### 12.4. Mobility in soil

| Ingredient | Mobility |
|---|---|
| ethanol | HIGH (KOC = 1) |
| propylene glycol monomethyl ether - alpha isomer | HIGH (KOC = 1) |
| di(2-ethylhexyl) acid phosphate | LOW (KOC = 17160) |

### 12.5.Results of PBT and vPvB assessment

| | P | B | T |
|---|---|---|---|
| Relevant available data | Not Available | Not Available | Not Available |
| PBT and vPvB Criteria fulfilled? | Not Available | Not Available | Not Available |

### 12.6. Other adverse effects

No data available

## SECTION 13 DISPOSAL CONSIDERATIONS

### 13.1. Waste treatment methods

| | |
|---|---|
| **Product / Packaging disposal** | ▸ Recycle wherever possible or consult manufacturer for recycling options. |
| **Waste treatment options** | Not Available |
| **Sewage disposal options** | Not Available |

## SECTION 14 TRANSPORT INFORMATION

### Labels Required


**Continued...**

| | |
|---|---|
| **Marine Pollutant** | NO |
| **HAZCHEM** | •3YE |

### Land transport (ADR)

| | |
|---|---|
| **14.1. UN number** | 1263 |
| **14.2. Packing group** | II |
| **14.3. UN proper shipping name** | PAINT or PAINT RELATED MATERIAL |
| **14.4. Environmental hazard** | No relevant data |
| **14.5. Transport hazard class(es)** | Class: 3<br>Subrisk: Not Applicable |
| **14.6. Special precautions for user** | Special provisions: 163 640C 640D 650<br>Limited quantity: 5 L |

### Air transport (ICAO-IATA / DGR)

| | |
|---|---|
| **14.1. UN number** | 1263 |
| **14.2. Packing group** | II |
| **14.3. UN proper shipping name** | Paint (including paint, lacquer, enamel, stain, shellac, varnish, polish, liquid filler and liquid lacquer base); Paint related material (including paint thinning or reducing compounds) |
| **14.4. Environmental hazard** | No relevant data |
| **14.5. Transport hazard class(es)** | ICAO/IATA Class: 3<br>ICAO / IATA Subrisk: Not Applicable<br>ERG Code: 3L |
| **14.6. Special precautions for user** | Special provisions: A3 A72 A192<br>Cargo Only Packing Instructions: 364<br>Cargo Only Maximum Qty / Pack: 60 L<br>Passenger and Cargo Packing Instructions: 353<br>Passenger and Cargo Maximum Qty / Pack: 5 L<br>Passenger and Cargo Limited Quantity Packing Instructions: Y341<br>Passenger and Cargo Limited Maximum Qty / Pack: 1 L |

### Sea transport (IMDG-Code / GGVSee)

| | |
|---|---|
| **14.1. UN number** | 1263 |
| **14.2. Packing group** | II |
| **14.3. UN proper shipping name** | PAINT (including paint, lacquer, enamel, stain, shellac, varnish, polish, liquid filler and liquid lacquer base) or PAINT RELATED MATERIAL (including paint thinning or reducing compound) |
| **14.4. Environmental hazard** | Not Applicable |
| **14.5. Transport hazard class(es)** | IMDG Class: 3<br>IMDG Subrisk: Not Applicable |
| **14.6. Special precautions for user** | EMS Number: F-E , S-E<br>Special provisions: 163<br>Limited Quantities: 5 L |

### Inland waterways transport (ADN)

| | |
|---|---|
| **14.1. UN number** | 1263 |
| **14.2. Packing group** | II |
| **14.3. UN proper shipping name** | PAINT or PAINT RELATED MATERIAL |
| **14.4. Environmental hazard** | No relevant data |
| **14.5. Transport hazard class(es)** | 3 \| Not Applicable |
| **14.6. Special precautions for user** | Classification code: F1<br>Limited quantity: 5 L<br>Equipment required: PP, EX, A<br>Fire cones number: 1 |

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

**Continued...**

| Source | Ingredient | Pollution Category |
|---|---|---|
| IMO MARPOL 73/78 (Annex II) - List of Noxious Liquid Substances Carried in Bulk | propylene glycol monomethyl ether - alpha isomer | Z |
| IMO MARPOL 73/78 (Annex II) - List of Noxious Liquid Substances Carried in Bulk | di(2-ethylhexyl) acid phosphate | Y |

## SECTION 15 REGULATORY INFORMATION

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

| | |
|---|---|
| **ethanol(64-17-5) is found on the following regulatory lists** | "European Customs Inventory of Chemical Substances ECICS (English)","European Union - European Inventory of Existing Commercial Chemical Substances (EINECS) (English)","UK Workplace Exposure Limits (WELs)","EU REACH Regulation (EC) No 1907/2006 - Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles","European Union (EU) Regulation (EC) No 1272/2008 on Classification, Labelling and Packaging of Substances and Mixtures - Annex VI","European Union (EU) Annex I to Directive 67/548/EEC on Classification and Labelling of Dangerous Substances - updated by ATP: 31" |
| **propylene glycol monomethyl ether - alpha isomer(107-98-2) is found on the following regulatory lists** | "EU Consolidated List of Indicative Occupational Exposure Limit Values (IOELVs)","European Union (EU) First List of Indicative Occupational Exposure Limit Values (IOELVs) (Slovak)","European Union (EU) First List of Indicative Occupational Exposure Limit Values (IOELVs) (Lithuanian)","European Customs Inventory of Chemical Substances ECICS (English)","European Union (EU) First List of Indicative Occupational Exposure Limit Values (IOELVs) (Polish)","European Union (EU) First List of Indicative Occupational Exposure Limit Values (IOELVs) (French)","European Union (EU) First List of Indicative Occupational Exposure Limit Values (IOELVs) (Slovenian)","EU REACH Regulation (EC) No 1907/2006 - Annex XVII (Appendix 6) Toxic to reproduction: category 1B (Table 3.1)/category 2 (Table 3.2)","European Union (EU) First List of Indicative Occupational Exposure Limit Values (IOELVs) (Swedish)","European Union (EU) First List of Indicative Occupational Exposure Limit Values (IOELVs) (Italian)","European Trade Union Confederation (ETUC) Priority List for REACH Authorisation","European Union (EU) First List of Indicative Occupational Exposure Limit Values (IOELVs) (Danish)","European Union (EU) First List of Indicative Occupational Exposure Limit Values (IOELVs) (Maltese)","European Union - European Inventory of Existing Commercial Chemical Substances (EINECS) (English)","European Union (EU) First List of Indicative Occupational Exposure Limit Values (IOELVs) (English)","European Union (EU) Annex I to Directive 67/548/EEC on Classification and Labelling of Dangerous Substances (updated by ATP: 31) - Reprotoxic Substances","European Union (EU) First List of Indicative Occupational Exposure Limit Values (IOELVs) (Latvian)","UK Workplace Exposure Limits (WELs)","EU REACH Regulation (EC) No 1907/2006 - Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles","European Union (EU) First List of Indicative Occupational Exposure Limit Values (IOELVs) (German)","European Union (EU) First List of Indicative Occupational Exposure Limit Values (IOELVs) (Spanish)","European Union (EU) First List of Indicative Occupational Exposure Limit Values (IOELVs) (Finnish)","European Union (EU) Regulation (EC) No 1272/2008 on Classification, Labelling and Packaging of Substances and Mixtures - Annex VI","European Union (EU) First List of Indicative Occupational Exposure Limit Values (IOELVs) (Greek)","European Union (EU) Annex I to Directive 67/548/EEC on Classification and Labelling of Dangerous Substances - updated by ATP: 31","European Union (EU) First List of Indicative Occupational Exposure Limit Values (IOELVs) (Portuguese)","European Union (EU) First List of Indicative Occupational Exposure Limit Values (IOELVs) (Hungarian)","European Union (EU) First List of Indicative Occupational Exposure Limit Values (IOELVs) (Romanian)","European Union (EU) First List of Indicative Occupational Exposure Limit Values (IOELVs) (Czech)","European Union (EU) First List of Indicative Occupational Exposure Limit Values (IOELVs) (Bulgarian)","European Union (EU) First List of Indicative Occupational Exposure Limit Values (IOELVs) (Dutch)","Europe AeroSpace and Defence Industries Association of Europe (ASD) REACH Implementation Working Group Priority Declarable Substances List (PDSL)","European Union (EU) First List of Indicative Occupational Exposure Limit Values (IOELVs) (Estonian)" |
| **di(2-ethylhexyl) acid phosphate(298-07-7) is found on the following regulatory lists** | "European Customs Inventory of Chemical Substances ECICS (English)","European Union - European Inventory of Existing Commercial Chemical Substances (EINECS) (English)" |

This safety data sheet is in compliance with the following EU legislation and its adaptations - as far as applicable - : 67/548/EEC, 1999/45/EC, 98/24/EC, 92/85/EC, 94/33/EC, 91/689/EEC, 1999/13/EC, Regulation (EU) No 453/2010, Regulation (EC) No 1907/2006, Regulation (EC) No 1272/2008 and their amendments as well as the following British legislation: - The Control of Substances Hazardous to Health Regulations (COSHH) 2002 - COSHH Essentials - The Management of Health and Safety at Work Regulations 1999

### 15.2. Chemical safety assessment

For further information please look at the Chemical Safety Assessment and Exposure Scenarios prepared by your Supply Chain if available.

**ECHA SUMMARY**

| Ingredient | CAS number | Index No | ECHA Dossier |
|---|---|---|---|
| ethanol | 64-17-5 | 603-002-00-5 | 01-2119457610-43-XXXX |

| Harmonisation (C&L Inventory) | Hazard Class and Category Code(s) | Pictograms Signal Word Code(s) | Hazard Statement Code(s) |
|---|---|---|---|
| 1 | Flam. Liq. 2 | GHS02, Dgr | H225 |
| 2 | Flam. Liq. 2, Eye Irrit. 2, STOT RE 1, Muta. 1B, Repr. 1A, Acute Tox. 3, STOT SE 1, Met. Corr. 1, Skin Corr. 1B, Aquatic Acute 1, Aquatic Chronic 1 | Dgr, GHS01, GHS08, Wng, GHS06, GHS05 | H225, H319, H340, H304, H372, H315, H220, H360, H301, H311, H331, H370 |
| 1 | Carc. 2 | GHS08, Wng | H351 |
| 2 | Carc. 2 | GHS08, Wng | H351 |

*Harmonisation Code 1 = The most prevalent classification. Harmonisation Code 2 = The most severe classification.*

| Ingredient | CAS number | Index No | ECHA Dossier |
|---|---|---|---|
| propylene glycol monomethyl ether - alpha isomer | 107-98-2 | 603-064-00-3, 603-106-00-0 | 01-2119457435-35-XXXX |

| Harmonisation (C&L Inventory) | Hazard Class and Category Code(s) | Pictograms Signal Word Code(s) | Hazard Statement Code(s) |
|---|---|---|---|
| 1 | Flam. Liq. 3, STOT SE 3, Skin Irrit. 2, Eye Dam. 1, Repr. 1B | GHS07, GHS02, Wng, GHS05, GHS08, Dgr | H226, H336, H315, H318, H335, H360 |
| 2 | Flam. Liq. 3, STOT SE 3, STOT RE 2, Repr. 1B, Acute Tox. 4, Eye Irrit. 2, Flam. Liq. 2, Skin Irrit. 2, Eye Dam. 1 | GHS02, Wng, GHS08, Dgr, GHS03, GHS05 | H371, H360, H225, H226, H315, H318, H370 |

**Continued...**

*Harmonisation Code 1 = The most prevalent classification. Harmonisation Code 2 = The most severe classification.*

| Ingredient | CAS number | Index No | ECHA Dossier |
|---|---|---|---|
| di(2-ethylhexyl) acid phosphate | 298-07-7 | Not Available | Not Available |

| Harmonisation (C&L Inventory) | Hazard Class and Category Code(s) | Pictograms Signal Word Code(s) | Hazard Statement Code(s) |
|---|---|---|---|
| 1 | Acute Tox. 4, Skin Corr. 1C, Eye Dam. 1 | GHS05, Dgr | H302, H312, H314, H318 |
| 2 | Acute Tox. 4, Skin Corr. 1C, Eye Dam. 1, Skin Corr. 1B, Aquatic Chronic 3, STOT SE 3, Skin Corr. 1A, Met. Corr. 1 | GHS05, Dgr, Wng | H302, H312, H314, H318, H332, H412, H335, H290 |

*Harmonisation Code 1 = The most prevalent classification. Harmonisation Code 2 = The most severe classification.*

## SECTION 16 OTHER INFORMATION

### Full text Risk and Hazard codes

| | |
|---|---|
| **H220** | Extremely flammable gas |
| **H226** | Flammable liquid and vapour |
| **H290** | May be corrosive to metals |
| **H301** | Toxic if swallowed |
| **H302** | Harmful if swallowed |
| **H304** | May be fatal if swallowed and enters airways |
| **H311** | Toxic in contact with skin |
| **H312** | Harmful in contact with skin |
| **H314** | Causes severe skin burns and eye damage |
| **H318** | Causes serious eye damage |
| **H331** | Toxic if inhaled |
| **H332** | Harmful if inhaled |
| **H335** | May cause respiratory irritation |
| **H340** | May cause genetic defects |
| **H351** | Suspected of causing cancer |
| **H360** | May damage fertility or the unborn child |
| **H360D ***** | May damage the unborn child. |
| **H370** | Causes damage to organs |
| **H371** | May cause damage to organs |
| **H372** | Causes damage to organs through prolonged or repeated exposure |
| **H413** | May cause long lasting harmful effects to aquatic life |

| | |
|---|---|
| **R10** | Flammable. |
| **R21** | Harmful in contact with skin. |
| **R34** | Causes burns. |
| **R37/38** | Irritating to respiratory system and skin. |
| **R41** | Risk of serious damage to eyes. |
| **R61** | May cause harm to the unborn child. |

### Other information

### DSD / DPD label elements

Relevant risk statements are found in section 2.1

| | |
|---|---|
| **Indication(s) of danger** | F, Xn |

**SAFETY ADVICE**

| | |
|---|---|
| **S02** | Keep out of reach of children. |
| **S09** | Keep container in a well ventilated place. |
| **S13** | Keep away from food, drink and animal feeding stuffs. |
| **S16** | Keep away from sources of ignition. No smoking. |
| **S23** | Do not breathe gas/fumes/vapour/spray. |
| **S25** | Avoid contact with eyes. |
| **S26** | In case of contact with eyes, rinse with plenty of water and contact Doctor or Poisons Information Centre. |

**Continued...**

| | |
|---|---|
| **S29** | Do not empty into drains. |
| **S33** | Take precautionary measures against static discharges. |
| **S35** | This material and its container must be disposed of in a safe way. |
| **S36** | Wear suitable protective clothing. |
| **S37** | Wear suitable gloves. |
| **S39** | Wear eye/face protection. |
| **S40** | To clean the floor and all objects contaminated by this material, use water and detergent. |
| **S41** | In case of fire and/or explosion, DO NOT BREATHE FUMES. |
| **S43** | In case of fire use... |
| **S46** | If swallowed, seek medical advice immediately and show this container or label. |
| **S51** | Use only in well ventilated areas. |
| **S53** | Avoid exposure - obtain special instructions before use. |
| **S56** | Dispose of this material and its container at hazardous or special waste collection point. |
| **S57** | Use appropriate container to avoid environmental contamination. |
| **S64** | If swallowed, rinse mouth with water (only if the person is conscious). |

Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the Chemwatch Classification committee using available literature references.
A list of reference resources used to assist the committee may be found at:
www.chemwatch.net/references

The (M)SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings. Risks may be determined by reference to Exposures Scenarios. Scale of use, frequency of use and current or available engineering controls must be considered.

For detailed advice on Personal Protective Equipment, refer to the following EU CEN Standards:
EN 166 Personal eye-protection
EN 340 Protective clothing
EN 374 Protective gloves against chemicals and micro-organisms
EN 13832 Footwear protecting against chemicals
EN 133 Respiratory protective devices

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# 151114 Lyreco Permanent Marker C/Tip Blue

**Lyreco Group (Lyreco France)**

Chemwatch Hazard Alert Code: **3**

Chemwatch: **4854-65**
Version No: **2.1.1.1**
Safety Data Sheet (Conforms to Regulations (EC) No 453/2010)

Issue Date: **06/04/2013**
Print Date: **02/19/2015**
Initial Date: **Not Available**
S.REACH.GBR.EN

## SECTION 1 IDENTIFICATION OF THE SUBSTANCE / MIXTURE AND OF THE COMPANY / UNDERTAKING

### 1.1.Product Identifier

| | |
|---|---|
| **Product name** | 151114 Lyreco Permanent Marker C/Tip Blue |
| **Synonyms** | 151147 PK4 Lyreco Perm Marker C/Tip Asstd Col |
| **Proper shipping name** | PAINT or PAINT RELATED MATERIAL |
| **Other means of identification** | Not Available |
| **Index number** | Not Applicable |

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

| | |
|---|---|
| **Relevant identified uses** | Permanent Marker. NOTE: Information on this SDS refers to ink used in pens and markers, however, it applies to these inks in bulk. |
| **Uses advised against** | Not Applicable |

### 1.3.Details of the manufacturer/importer

| | |
|---|---|
| **Registered company name** | Lyreco Group (Lyreco France) |
| **Address** | Rue du 19 Mars 1962 Marly 59770 France |
| **Telephone** | +33 3 27 23 64 00 (9a.m-5p.m. CET.) |
| **Fax** | Not Available |
| **Website** | Not Available |
| **Email** | Not Available |

### 1.4.Emergency telephone number

| | |
|---|---|
| **Association / Organisation** | Not Available |
| **Emergency telephone numbers** | +33 3 27 23 64 00 (9a.m-5p.m. CET.) |
| **Other emergency telephone numbers** | Not Available |

## SECTION 2 HAZARDS IDENTIFICATION

### 2.1.Classification of the substance or mixture

**Considered a dangerous mixture according to Directive 1999/45/EC, Reg. (EC) No 1272/2008 (if applicable) and their amendments. Classified as Dangerous Goods for transport purposes.**

**CHEMWATCH HAZARD RATINGS**

| | | Min | Max |
|---|---|---|---|
| Flammability | 2 | | |
| Toxicity | 2 | | |
| Body Contact | 3 | | |
| Reactivity | 1 | | |
| Chronic | 2 | | |

0 = Minimum
1 = Low
2 = Moderate
3 = High
4 = Extreme

| | |
|---|---|
| **DSD classification** | In case of mixtures, classification has been prepared by following DPD (Directive 1999/45/EC) and CLP Regulation (EC) No 1272/2008 regulations |
| **DPD classification [1]** | R41 Risk of serious damage to eyes.<br>R67 Vapours may cause drowsiness and dizziness.<br>R68(3) Possible risk of irreversible effects.<br>R10 Flammable. |
| ***Legend:*** | *1. Classified by Chemwatch; 2. Classification drawn from EC Directive 67/548/EEC - Annex I ; 3. Classification drawn from EC Directive 1272/2008 - Annex VI* |
| **Classification according to regulation (EC) No 1272/2008 [CLP] [1]** | Flammable Liquid Category 2, Serious Eye Damage Category 1, Germ Cell Mutagen Category 2, STOT - SE (Narcosis) Category 3 |
| ***Legend:*** | *1. Classified by Chemwatch; 2. Classification drawn from EC Directive 67/548/EEC - Annex I ; 3. Classification drawn from EC Directive 1272/2008 - Annex VI* |

**Continued...**

### 2.2. Label elements

| | |
|---|---|
| **CLP label elements** |  |
| **SIGNAL WORD** | **DANGER** |

### Hazard statement(s)

| | |
|---|---|
| **H225** | Highly flammable liquid and vapour |
| **H318** | Causes serious eye damage |
| **H341** | Suspected of causing genetic defects |
| **H336** | May cause drowsiness or dizziness |

### Supplementary statement(s)

Not Applicable

### Precautionary statement(s) Prevention

| | |
|---|---|
| **P101** | If medical advice is needed, have product container or label at hand. |
| **P201** | Obtain special instructions before use. |

### Precautionary statement(s) Response

| | |
|---|---|
| **P305+P351+P338** | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. |

### Precautionary statement(s) Storage

| | |
|---|---|
| **P403+P235** | Store in a well-ventilated place. Keep cool. |

### Precautionary statement(s) Disposal

| | |
|---|---|
| **P501** | Dispose of contents/container to authorised chemical landfill or if organic to high temperature incineration |

### 2.3. Other hazards

| | |
|---|---|
| | Inhalation, skin contact and/or ingestion may produce health damage*. |
| | May produce discomfort of the respiratory system and skin*. |
| | Limited evidence of a carcinogenic effect*. |
| | Cumulative effects may result following exposure*. |
| | Repeated exposure potentially causes skin dryness and cracking*. |

| | |
|---|---|
| **C.I. Solvent Blue 4** | Listed in the European Chemicals Agency (ECHA) Candidate List of Substances of Very High Concern for Authorisation |

## SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

### 3.1.Substances

See 'Composition on ingredients' in Section 3.2

### 3.2.Mixtures

| 1.CAS No<br>2.EC No<br>3.Index No<br>4.REACH No | %[weight] | Name | Classification according to directive 67/548/EEC [DSD] | Classification according to regulation (EC) No 1272/2008 [CLP] |
|---|---|---|---|---|
| 1.71-23-8<br>2.200-746-9<br>3.603-003-00-0<br>4.01-2119486761-29-XXXX | >50 | n-propanol | R11, R41, R67 [2] | Flam. Liq. 2, Eye Dam. 1, STOT SE 3; H225, H318, H336 [3] |
| 1.298-07-7<br>2.206-056-4<br>3.Not Available<br>4.Not Available | <2.5 | di(2-ethylhexyl) acid phosphate | R68(3), R63(3), R34, R21, R53, R41 [1] | Metal Corrosion Category 1, Acute Toxicity (Dermal) Category 4, Skin Corrosion/Irritation Category 1B, Serious Eye Damage Category 1, Germ Cell Mutagen Category 2, Reproductive Toxicity Category 2, Chronic Aquatic Hazard Category 4; H290, H312, H314, H318, H341, H361, H413 [1] |
| 1.6786-83-0<br>2.229-851-8<br>3.Not Available<br>4.01-2119950688-22-XXXX | <2.5 | C.I. Solvent Blue 4 | Not Applicable | Not Applicable |

| | |
|---|---|
| ***Legend:*** | *1. Classified by Chemwatch; 2. Classification drawn from EC Directive 67/548/EEC - Annex I; 3. Classification drawn from EC Directive 1272/2008 - Annex VI 4. Classification drawn from C&L* |

## SECTION 4 FIRST AID MEASURES

### 4.1. Description of first aid measures

**Continued...**

| | |
|---|---|
| **General** | ▸ If swallowed do **NOT** induce vomiting.<br>▸ If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration.<br>▸ Observe the patient carefully.<br>▸ Never give liquid to a person showing signs of being sleepy or with reduced awareness; i.e. becoming unconscious.<br>▸ Give water to rinse out mouth, then provide liquid slowly and as much as casualty can comfortably drink.<br>▸ Seek medical advice.<br>▸ If fumes or combustion products are inhaled remove from contaminated area.<br>▸ Lay patient down. Keep warm and rested.<br>▸ Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures.<br>▸ Apply artificial respiration if not breathing, preferably with a demand valve resuscitator, bag-valve mask device, or pocket mask as trained. Perform CPR if necessary.<br>▸ Transport to hospital, or doctor.<br><br>If this product comes in contact with the eyes:<br>▸ Immediately hold eyelids apart and flush the eye continuously with running water.<br>▸ Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids.<br>▸ Continue flushing until advised to stop by the Poisons Information Centre or a doctor, or for at least 15 minutes.<br>▸ Transport to hospital or doctor without delay.<br>▸ Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.<br>If skin contact occurs:<br>▸ Immediately remove all contaminated clothing, including footwear.<br>▸ Flush skin and hair with running water (and soap if available).<br>▸ Seek medical attention in event of irritation. |
| **Eye Contact** | If this product comes in contact with the eyes:<br>▸ Immediately hold eyelids apart and flush the eye continuously with running water.<br>▸ Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids.<br>▸ Continue flushing until advised to stop by the Poisons Information Centre or a doctor, or for at least 15 minutes.<br>▸ Transport to hospital or doctor without delay.<br>▸ Removal of contact lenses after an eye injury should only be undertaken by skilled personnel. |
| **Skin Contact** | If skin contact occurs:<br>▸ Immediately remove all contaminated clothing, including footwear.<br>▸ Flush skin and hair with running water (and soap if available).<br>▸ Seek medical attention in event of irritation. |
| **Inhalation** | ▸ If fumes or combustion products are inhaled remove from contaminated area.<br>▸ Lay patient down. Keep warm and rested.<br>▸ Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures.<br>▸ Apply artificial respiration if not breathing, preferably with a demand valve resuscitator, bag-valve mask device, or pocket mask as trained. Perform CPR if necessary.<br>▸ Transport to hospital, or doctor. |
| **Ingestion** | ▸ If swallowed do **NOT** induce vomiting.<br>▸ If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration.<br>▸ Observe the patient carefully.<br>▸ Never give liquid to a person showing signs of being sleepy or with reduced awareness; i.e. becoming unconscious.<br>▸ Give water to rinse out mouth, then provide liquid slowly and as much as casualty can comfortably drink.<br>▸ Seek medical advice. |

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

| | |
|---|---|
| | See Section 11 |

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

To treat poisoning by the higher aliphatic alcohols (up to C7):

- Gastric lavage with copious amounts of water.
- It may be beneficial to instill 60 ml of mineral oil into the stomach.
- Oxygen and artificial respiration as needed.
- Electrolyte balance: it may be useful to start 500 ml. M/6 sodium bicarbonate intravenously but maintain a cautious and conservative attitude toward electrolyte replacement unless shock or severe acidosis threatens.
- To protect the liver, maintain carbohydrate intake by intravenous infusions of glucose.
- Haemodialysis if coma is deep and persistent. [GOSSELIN, SMITH HODGE: Clinical Toxicology of Commercial Products, Ed 5)

---

BASIC TREATMENT

---

- Establish a patent airway with suction where necessary.
- Watch for signs of respiratory insufficiency and assist ventilation as necessary.
- Administer oxygen by non-rebreather mask at 10 to 15 l/min.
- Monitor and treat, where necessary, for shock.
- Monitor and treat, where necessary, for pulmonary oedema.
- Anticipate and treat, where necessary, for seizures.
- **DO NOT** use emetics. Where ingestion is suspected rinse mouth and give up to 200 ml water (5 ml/kg recommended) for dilution where patient is able to swallow, has a strong gag reflex and does not drool.
- Give activated charcoal.

---

ADVANCED TREATMENT

---

- Consider orotracheal or nasotracheal intubation for airway control in unconscious patient or where respiratory arrest has occurred.
- Positive-pressure ventilation using a bag-valve mask might be of use.
- Monitor and treat, where necessary, for arrhythmias.
- Start an IV D5W TKO. If signs of hypovolaemia are present use lactated Ringers solution. Fluid overload might create complications.
- If the patient is hypoglycaemic (decreased or loss of consciousness, tachycardia, pallor, dilated pupils, diaphoresis and/or dextrose strip or glucometer readings below 50 mg), give 50% dextrose.
- Hypotension with signs of hypovolaemia requires the cautious administration of fluids. Fluid overload might create complications.
- Drug therapy should be considered for pulmonary oedema.
- Treat seizures with diazepam.
- Proparacaine hydrochloride should be used to assist eye irrigation.

**Continued...**

---
EMERGENCY DEPARTMENT
---

- Laboratory analysis of complete blood count, serum electrolytes, BUN, creatinine, glucose, urinalysis, baseline for serum aminotransferases (ALT and AST), calcium, phosphorus and magnesium, may assist in establishing a treatment regime. Other useful analyses include anion and osmolar gaps, arterial blood gases (ABGs), chest radiographs and electrocardiograph.
- Positive end-expiratory pressure (PEEP)-assisted ventilation may be required for acute parenchymal injury or adult respiratory distress syndrome.
- Acidosis may respond to hyperventilation and bicarbonate therapy.
- Haemodialysis might be considered in patients with severe intoxication.
- Consult a toxicologist as necessary. BRONSTEIN, A.C. and CURRANCE, P.L. EMERGENCY CARE FOR HAZARDOUS MATERIALS EXPOSURE: 2nd Ed. 1994

For C8 alcohols and above.
Symptomatic and supportive therapy is advised in managing patients.

## SECTION 5 FIREFIGHTING MEASURES

### 5.1. Extinguishing media

| | |
|---|---|
| | ▸ Alcohol stable foam. |

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

| | |
|---|---|
| **Fire Incompatibility** | ▸ Avoid contamination with oxidising agents i.e. nitrates, oxidising acids, chlorine bleaches, pool chlorine etc. as ignition may result |

### 5.3. Advice for firefighters

| | |
|---|---|
| **Fire Fighting** | ▸ Alert Fire Brigade and tell them location and nature of hazard. |
| **Fire/Explosion Hazard** | ▸ Liquid and vapour are flammable. |

## SECTION 6 ACCIDENTAL RELEASE MEASURES

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

| | |
|---|---|
| | See section 8 |

### 6.2. Environmental precautions

| | |
|---|---|
| | See section 12 |

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

| | |
|---|---|
| **Minor Spills** | ▸ Remove all ignition sources. |
| **Major Spills** | ▸ Clear area of personnel and move upwind. |

### 6.4. Reference to other sections

| | |
|---|---|
| | Personal Protective Equipment advice is contained in Section 8 of the MSDS. |

## SECTION 7 HANDLING AND STORAGE

### 7.1. Precautions for safe handling

| | |
|---|---|
| **Safe handling** | ▸ **DO NOT** allow clothing wet with material to stay in contact with skin<br>▸ Avoid all personal contact, including inhalation. |
| **Fire and explosion protection** | See section 5 |
| **Other information** | ▸ Store in original containers in approved flammable liquid storage area. |

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

| | |
|---|---|
| **Suitable container** | ▸ Packing as supplied by manufacturer. |
| **Storage incompatibility** | Alcohols<br>▸ are incompatible with strong acids, acid chlorides, acid anhydrides, oxidising and reducing agents. |

**PACKAGE MATERIAL INCOMPATIBILITIES**

Not Available

### 7.3. Specific end use(s)

See section 1.2

## SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

### 8.1. Control parameters

**DERIVED NO EFFECT LEVEL (DNEL)**

Not Available

**PREDICTED NO EFFECT LEVEL (PNEC)**

Not Available

**OCCUPATIONAL EXPOSURE LIMITS (OEL)**

**Continued...**

**INGREDIENT DATA**

| Source | Ingredient | Material name | TWA | STEL | Peak | Notes |
|---|---|---|---|---|---|---|
| UK Workplace Exposure Limits (WELs) | n-propanol | Propan-1-ol | 500 mg/m3 / 200 ppm | 625 mg/m3 / 250 ppm | Not Available | Sk |

**EMERGENCY LIMITS**

| Ingredient | Material name | TEEL-1 | TEEL-2 | TEEL-3 |
|---|---|---|---|---|
| n-propanol | Propyl alcohol, n-; (n-Propanol) | 250 ppm | 250 ppm | 4000 ppm |
| di(2-ethylhexyl) acid phosphate | Bis(2-ethylhexyl) hydrogen phosphate | 15 mg/m3 | 160 mg/m3 | 960 mg/m3 |
| di(2-ethylhexyl) acid phosphate | Butyl bis(2-ethylhexyl)phosphate | 0.6 ppm | 0.75 ppm | 0.75 ppm |

| Ingredient | Original IDLH | Revised IDLH |
|---|---|---|
| n-propanol | 4,000 ppm | 800 ppm |
| di(2-ethylhexyl) acid phosphate | Not Available | Not Available |
| C.I. Solvent Blue 4 | Not Available | Not Available |

### 8.2. Exposure controls

| | |
|---|---|
| **8.2.1. Appropriate engineering controls** | Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard. |
| **8.2.2. Personal protection** |  |
| **Eye and face protection** | ▸ Safety glasses with side shields. |
| **Skin protection** | See Hand protection below |
| **Hands/feet protection** | ▸ Wear chemical protective gloves, e.g. PVC. |
| **Body protection** | See Other protection below |
| **Other protection** | ▸ Overalls. |
| **Thermal hazards** | Not Available |

#### Recommended material(s)

**GLOVE SELECTION INDEX**

Glove selection is based on a modified presentation of the:
***"Forsberg Clothing Performance Index".***
The effect(s) of the following substance(s) are taken into account in the ***computer-generated*** selection:
151114 Lyreco Permanent Marker C/Tip Blue

| Material | CPI |
|---|---|
| NEOPRENE | A |
| NEOPRENE/NATURAL | A |
| NITRILE | A |
| NITRILE+PVC | A |
| TEFLON | A |
| VITON | B |
| NATURAL RUBBER | C |
| NATURAL+NEOPRENE | C |
| PVC | C |

* CPI - Chemwatch Performance Index
A: Best Selection
B: Satisfactory; may degrade after 4 hours continuous immersion
C: Poor to Dangerous Choice for other than short term immersion
**NOTE**: As a series of factors will influence the actual performance of the glove, a final selection must be based on detailed observation. -
* Where the glove is to be used on a short term, casual or infrequent basis, factors such as "feel" or convenience (e.g. disposability), may dictate a choice of gloves which might otherwise be unsuitable following long-term or frequent use. A qualified practitioner should be consulted.

#### Respiratory protection

Type AB-P Filter of sufficient capacity.

Where the concentration of gas/particulates in the breathing zone, approaches or exceeds the "Exposure Standard" (or ES), respiratory protection is required.
Degree of protection varies with both face-piece and Class of filter; the nature of protection varies with Type of filter.

| Required Minimum Protection Factor | Half-Face Respirator | Full-Face Respirator | Powered Air Respirator |
|---|---|---|---|
| up to 10 x ES | Air-line* | AB-2 P2 | AB-PAPR-2 P2 ^ |
| up to 20 x ES | - | AB-3 P2 | - |
| 20+ x ES | - | Air-line** | - |

* - Continuous-flow; ** - Continuous-flow or positive pressure demand
^ - Full-face
A(All classes) = Organic vapours, B AUS or B1 = Acid gasses, B2 = Acid gas or hydrogen cyanide(HCN), B3 = Acid gas or hydrogen cyanide(HCN), E = Sulfur dioxide(SO2), G = Agricultural chemicals, K = Ammonia(NH3), Hg = Mercury, NO = Oxides of nitrogen, MB = Methyl bromide, AX = Low boiling point organic compounds(below 65 degC)

### 8.2.3. Environmental exposure controls

See section 12

## SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

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

| | |
|---|---|
| **Appearance** | Blue flammable liquid with a characteristic odour; does not mix with water. |

**Continued...**

| | | | |
|---|---|---|---|
| **Physical state** | Liquid | **Relative density (Water = 1)** | 0.84 |
| **Odour** | Not Available | **Partition coefficient n-octanol / water** | Not Available |
| **Odour threshold** | Not Available | **Auto-ignition temperature (°C)** | 360 |
| **pH (as supplied)** | Not Available | **Decomposition temperature** | Not Available |
| **Melting point / freezing point (°C)** | Not Available | **Viscosity (cSt)** | 4 |
| **Initial boiling point and boiling range (°C)** | 96 | **Molecular weight (g/mol)** | Not Applicable |
| **Flash point (°C)** | 21 | **Taste** | Not Available |
| **Evaporation rate** | Not Available | **Explosive properties** | Not Available |
| **Flammability** | HIGHLY FLAMMABLE. | **Oxidising properties** | Not Available |
| **Upper Explosive Limit (%)** | 13.5 | **Surface Tension (dyn/cm or mN/m)** | Not Available |
| **Lower Explosive Limit (%)** | 2.1 | **Volatile Component (%vol)** | Not Available |
| **Vapour pressure (kPa)** | 1.9 @ 20C | **Gas group** | Not Available |
| **Solubility in water (g/L)** | Immiscible | **pH as a solution(1%)** | Not Available |
| **Vapour density (Air = 1)** | Not Available | **VOC g/L** | Not Available |

### 9.2. Other information

| | |
|---|---|
| | Not Available |

## SECTION 10 STABILITY AND REACTIVITY

| | |
|---|---|
| **10.1.Reactivity** | See section 7.2 |
| **10.2.Chemical stability** | ▸ Unstable in the presence of incompatible materials. |
| **10.3. Possibility of hazardous reactions** | See section 7.2 |
| **10.4. Conditions to avoid** | See section 7.2 |
| **10.5. Incompatible materials** | See section 7.2 |
| **10.6. Hazardous decomposition products** | See section 5.3 |

## SECTION 11 TOXICOLOGICAL INFORMATION

### 11.1. Information on toxicological effects

| | |
|---|---|
| **Inhaled** | Inhalation of vapours may cause drowsiness and dizziness. |
| **Ingestion** | Overexposure to non-ring alcohols causes nervous system symptoms. |
| **Skin Contact** | Repeated exposure may cause skin cracking, flaking or drying following normal handling and use. |
| **Eye** | If applied to the eyes, this material causes severe eye damage. |
| **Chronic** | Strong evidence exists that this substance may cause irreversible mutations (though not lethal) even following a single exposure. |

| | | |
|---|---|---|
| **151114 Lyreco Permanent Marker C/Tip Blue** | **TOXICITY** | **IRRITATION** |
| | Not Available | Not Available |
| **n-propanol** | **TOXICITY** | **IRRITATION** |
| | Dermal (rabbit) LD50: 4032 mg/kg[1] | Eye (rabbit): 20 mg/24h moderate |
| | Oral (rat) LD50: 1870 mg/kge[2] | Eye (rabbit): 4 mg open SEVERE |
| | | Skin (rabbit): 20 mg/24h moderate |
| | | Skin (rabbit): 500 mg open mild |
| **di(2-ethylhexyl) acid phosphate** | **TOXICITY** | **IRRITATION** |
| | Dermal (rabbit) LD50: 1250 mg/kgE[2] | Eye (rabbit): 0.25 mg/24h-SEVERE |
| | Oral (rat) LD50: 4940 mg/kgd[2] | Eye (rabbit): 5 mg - moderate |
| | | Skin (rabbit): 5 mg/24h - SEVERE |
| | | Skin (rabbit):500 mg(open)-mod |
| **C.I. Solvent Blue 4** | **TOXICITY** | **IRRITATION** |
| | Not Available | Not Available |
| ***Legend:*** | *1. Value obtained from Europe ECHA Registered Substances - Acute toxicity 2. Value obtained from manufacturer's msds unless otherwise specified data extracted from RTECS - Register of Toxic Effect of chemical Substances* | |

**Continued...**

| | |
|---|---|
| **N-PROPANOL** | The material may produce severe irritation to the eye causing pronounced inflammation. |
| **151114 Lyreco Permanent Marker C/Tip Blue, DI(2-ETHYLHEXYL) ACID PHOSPHATE, C.I. SOLVENT BLUE 4** | No significant acute toxicological data identified in literature search. |

| | | | |
|---|---|---|---|
| **Acute Toxicity** | ⊘ | **Carcinogenicity** | ⊘ |
| **Skin Irritation/Corrosion** | ⊘ | **Reproductivity** | ⊘ |
| **Serious Eye Damage/Irritation** | ✔ | **STOT - Single Exposure** | ✔ |
| **Respiratory or Skin sensitisation** | ⊘ | **STOT - Repeated Exposure** | ⊘ |
| **Mutagenicity** | ✔ | **Aspiration Hazard** | ⊘ |

***Legend:*** ✔ *– Data required to make classification available*
✘ *– Data available but does not fill the criteria for classification*
⊘ *– Data Not Available to make classification*

### CMR STATUS

Not Applicable

## SECTION 12 ECOLOGICAL INFORMATION

### 12.1. Toxicity

**DO NOT** discharge into sewer or waterways.

### 12.2. Persistence and degradability

| Ingredient | Persistence: Water/Soil | Persistence: Air |
|---|---|---|
| n-propanol | LOW | LOW |
| di(2-ethylhexyl) acid phosphate | HIGH | HIGH |

### 12.3. Bioaccumulative potential

| Ingredient | Bioaccumulation |
|---|---|
| n-propanol | LOW (LogKOW = 0.25) |
| di(2-ethylhexyl) acid phosphate | LOW (BCF = 6) |

### 12.4. Mobility in soil

| Ingredient | Mobility |
|---|---|
| n-propanol | HIGH (KOC = 1.325) |
| di(2-ethylhexyl) acid phosphate | LOW (KOC = 17160) |

### 12.5.Results of PBT and vPvB assessment

| | P | B | T |
|---|---|---|---|
| Relevant available data | Not Available | Not Available | Not Available |
| PBT and vPvB Criteria fulfilled? | Not Available | Not Available | Not Available |

### 12.6. Other adverse effects

No data available

## SECTION 13 DISPOSAL CONSIDERATIONS

### 13.1. Waste treatment methods

| | |
|---|---|
| **Product / Packaging disposal** | ▸ Recycle wherever possible or consult manufacturer for recycling options. |
| **Waste treatment options** | Not Available |
| **Sewage disposal options** | Not Available |

## SECTION 14 TRANSPORT INFORMATION

### Labels Required

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



**Continued...**

| | |
|---|---|
| **Marine Pollutant** | NO |
| **HAZCHEM** | •3Y |

### Land transport (ADR)

| | |
|---|---|
| **14.1. UN number** | 1263 |
| **14.2. Packing group** | III |
| **14.3. UN proper shipping name** | PAINT or PAINT RELATED MATERIAL |
| **14.4. Environmental hazard** | No relevant data |
| **14.5. Transport hazard class(es)** | Class: 3<br>Subrisk: Not Applicable |
| **14.6. Special precautions for user** | Special provisions: 163 640E 650<br>Limited quantity: 5 L |

### Air transport (ICAO-IATA / DGR)

| | |
|---|---|
| **14.1. UN number** | 1263 |
| **14.2. Packing group** | III |
| **14.3. UN proper shipping name** | Paint (including paint, lacquer, enamel, stain, shellac, varnish, polish, liquid filler and liquid lacquer base); Paint related material (including paint thinning or reducing compounds) |
| **14.4. Environmental hazard** | No relevant data |
| **14.5. Transport hazard class(es)** | ICAO/IATA Class: 3<br>ICAO / IATA Subrisk: Not Applicable<br>ERG Code: 3L |
| **14.6. Special precautions for user** | Special provisions: A3 A72 A192<br>Cargo Only Packing Instructions: 366<br>Cargo Only Maximum Qty / Pack: 220 L<br>Passenger and Cargo Packing Instructions: 355<br>Passenger and Cargo Maximum Qty / Pack: 60 L<br>Passenger and Cargo Limited Quantity Packing Instructions: Y344<br>Passenger and Cargo Limited Maximum Qty / Pack: 10 L |

### Sea transport (IMDG-Code / GGVSee)

| | |
|---|---|
| **14.1. UN number** | 1263 |
| **14.2. Packing group** | III |
| **14.3. UN proper shipping name** | PAINT (including paint, lacquer, enamel, stain, shellac, varnish, polish, liquid filler and liquid lacquer base) or PAINT RELATED MATERIAL (including paint thinning or reducing compound) |
| **14.4. Environmental hazard** | Not Applicable |
| **14.5. Transport hazard class(es)** | IMDG Class: 3<br>IMDG Subrisk: Not Applicable |
| **14.6. Special precautions for user** | EMS Number: F-E , S-E<br>Special provisions: 163 223 955<br>Limited Quantities: 5 L |

### Inland waterways transport (ADN)

| | |
|---|---|
| **14.1. UN number** | 1263 |
| **14.2. Packing group** | III |
| **14.3. UN proper shipping name** | PAINT or PAINT RELATED MATERIAL |
| **14.4. Environmental hazard** | No relevant data |
| **14.5. Transport hazard class(es)** | 3 \| Not Applicable |
| **14.6. Special precautions for user** | Classification code: F1<br>Limited quantity: 5 L<br>Equipment required: PP, EX, A<br>Fire cones number: 0 |

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

**Continued...**

| Source | Ingredient | Pollution Category |
|---|---|---|
| IMO MARPOL 73/78 (Annex II) - List of Noxious Liquid Substances Carried in Bulk | n-propanol | Y |
| IMO MARPOL 73/78 (Annex II) - List of Noxious Liquid Substances Carried in Bulk | di(2-ethylhexyl) acid phosphate | Y |

## SECTION 15 REGULATORY INFORMATION

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

| | |
|---|---|
| **n-propanol(71-23-8) is found on the following regulatory lists** | "European Customs Inventory of Chemical Substances ECICS (English)","European Union - European Inventory of Existing Commercial Chemical Substances (EINECS) (English)","UK Workplace Exposure Limits (WELs)","EU REACH Regulation (EC) No 1907/2006 - Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles","European Union (EU) Regulation (EC) No 1272/2008 on Classification, Labelling and Packaging of Substances and Mixtures - Annex VI","European Union (EU) Annex I to Directive 67/548/EEC on Classification and Labelling of Dangerous Substances - updated by ATP: 31" |
| **di(2-ethylhexyl) acid phosphate(298-07-7) is found on the following regulatory lists** | "European Customs Inventory of Chemical Substances ECICS (English)","European Union - European Inventory of Existing Commercial Chemical Substances (EINECS) (English)" |
| **C.I. Solvent Blue 4(6786-83-0) is found on the following regulatory lists** | "EU REACH Regulation (EC) No 1907/2006 - Proposals to identify Substances of Very High Concern: Annex XV reports for commenting by Interested Parties","European Union - European Inventory of Existing Commercial Chemical Substances (EINECS) (English)","Europe European Chemicals Agency (ECHA) Candidate List of Substances of Very High Concern for Authorisation" |

This safety data sheet is in compliance with the following EU legislation and its adaptations - as far as applicable - : 67/548/EEC, 1999/45/EC, 98/24/EC, 92/85/EC, 94/33/EC, 91/689/EEC, 1999/13/EC, Regulation (EU) No 453/2010, Regulation (EC) No 1907/2006, Regulation (EC) No 1272/2008 and their amendments as well as the following British legislation: - The Control of Substances Hazardous to Health Regulations (COSHH) 2002 - COSHH Essentials - The Management of Health and Safety at Work Regulations 1999

### 15.2. Chemical safety assessment

For further information please look at the Chemical Safety Assessment and Exposure Scenarios prepared by your Supply Chain if available.

### ECHA SUMMARY

| Ingredient | CAS number | Index No | ECHA Dossier |
|---|---|---|---|
| n-propanol | 71-23-8 | 603-003-00-0 | 01-2119486761-29-XXXX |

| Harmonisation (C&L Inventory) | Hazard Class and Category Code(s) | Pictograms Signal Word Code(s) | Hazard Statement Code(s) |
|---|---|---|---|
| 1 | Flam. Liq. 2, Eye Dam. 1, STOT SE 3 | GHS02, GHS05, Dgr | H225, H318, H336 |
| 2 | Flam. Liq. 2, Eye Dam. 1, STOT SE 3, Acute Tox. 4 | GHS02, GHS05, Dgr, GHS08 | H225, H318, H336, H302 |

*Harmonisation Code 1 = The most prevalent classification. Harmonisation Code 2 = The most severe classification.*

| Ingredient | CAS number | Index No | ECHA Dossier |
|---|---|---|---|
| di(2-ethylhexyl) acid phosphate | 298-07-7 | Not Available | Not Available |

| Harmonisation (C&L Inventory) | Hazard Class and Category Code(s) | Pictograms Signal Word Code(s) | Hazard Statement Code(s) |
|---|---|---|---|
| 1 | Acute Tox. 4, Skin Corr. 1C, Eye Dam. 1 | GHS05, Dgr | H302, H312, H314, H318 |
| 2 | Acute Tox. 4, Skin Corr. 1C, Eye Dam. 1, Skin Corr. 1B, Aquatic Chronic 3, STOT SE 3, Skin Corr. 1A, Met. Corr. 1 | GHS05, Dgr, Wng | H302, H312, H314, H318, H332, H412, H335, H290 |

*Harmonisation Code 1 = The most prevalent classification. Harmonisation Code 2 = The most severe classification.*

| Ingredient | CAS number | Index No | ECHA Dossier |
|---|---|---|---|
| C.I. Solvent Blue 4 | 6786-83-0 | Not Available | 01-2119950688-22-XXXX |

| Harmonisation (C&L Inventory) | Hazard Class and Category Code(s) | Pictograms Signal Word Code(s) | Hazard Statement Code(s) |
|---|---|---|---|
| 1 | Acute Tox. 4 | GHS07, Wng | H302, H332 |
| 2 | Acute Tox. 4, Muta. 2, Carc. 1B, Aquatic Chronic 1, Flam. Liq. 2, Skin Sens. 1, Aquatic Acute 1, Acute Tox. 3, Skin Irrit. 2, Eye Irrit. 2, STOT SE 3, Carc. 1A, Skin Sens. 1B | Wng, GHS08, Dgr, GHS09, GHS02, GHS06 | H332, H341, H350, H410, H225, H317, H301, H315, H319, H335 |

*Harmonisation Code 1 = The most prevalent classification. Harmonisation Code 2 = The most severe classification.*

## SECTION 16 OTHER INFORMATION

### Full text Risk and Hazard codes

| | |
|---|---|
| **H290** | May be corrosive to metals |
| **H301** | Toxic if swallowed |
| **H302** | Harmful if swallowed |
| **H312** | Harmful in contact with skin |

**Continued...**

| | |
|---|---|
| **H314** | Causes severe skin burns and eye damage |
| **H315** | Causes skin irritation |
| **H317** | May cause an allergic skin reaction |
| **H319** | Causes serious eye irritation |
| **H332** | Harmful if inhaled |
| **H335** | May cause respiratory irritation |
| **H350** | May cause cancer |
| **H361** | Suspected of damaging fertility or the unborn child |
| **H410** | Very toxic to aquatic life with long lasting effects |
| **H412** | Harmful to aquatic life with long lasting effects |
| **H413** | May cause long lasting harmful effects to aquatic life |

| | |
|---|---|
| **R11** | Highly flammable. |
| **R21** | Harmful in contact with skin. |
| **R34** | Causes burns. |
| **R53** | May cause long-term adverse effects in the aquatic environment. |
| **R63(3)** | Possible risk of harm to the unborn child. |

### Other information

### DSD / DPD label elements

Relevant risk statements are found in section 2.1

| | |
|---|---|
| **Indication(s) of danger** | Xn |

**SAFETY ADVICE**

| | |
|---|---|
| **S02** | Keep out of reach of children. |
| **S13** | Keep away from food, drink and animal feeding stuffs. |
| **S23** | Do not breathe gas/fumes/vapour/spray. |
| **S25** | Avoid contact with eyes. |
| **S26** | In case of contact with eyes, rinse with plenty of water and contact Doctor or Poisons Information Centre. |
| **S36** | Wear suitable protective clothing. |
| **S37** | Wear suitable gloves. |
| **S39** | Wear eye/face protection. |
| **S40** | To clean the floor and all objects contaminated by this material, use water and detergent. |
| **S46** | If swallowed, seek medical advice immediately and show this container or label. |
| **S56** | Dispose of this material and its container at hazardous or special waste collection point. |
| **S64** | If swallowed, rinse mouth with water (only if the person is conscious). |

Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the Chemwatch Classification committee using available literature references.
A list of reference resources used to assist the committee may be found at:
www.chemwatch.net/references

The (M)SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings. Risks may be determined by reference to Exposures Scenarios. Scale of use, frequency of use and current or available engineering controls must be considered.

For detailed advice on Personal Protective Equipment, refer to the following EU CEN Standards:
EN 166 Personal eye-protection
EN 340 Protective clothing
EN 374 Protective gloves against chemicals and micro-organisms
EN 13832 Footwear protecting against chemicals
EN 133 Respiratory protective devices

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# 151125 Lyreco Permanent Marker C/Tip Red

**Lyreco Group (Lyreco France)**

Chemwatch Hazard Alert Code: **3**

Chemwatch: **4854-66**
Version No: **2.1.1.1**
Safety Data Sheet (Conforms to Regulations (EC) No 453/2010)

Issue Date: **06/04/2013**
Print Date: **02/19/2015**
Initial Date: **Not Available**
S.REACH.GBR.EN

## SECTION 1 IDENTIFICATION OF THE SUBSTANCE / MIXTURE AND OF THE COMPANY / UNDERTAKING

### 1.1.Product Identifier

| | |
|---|---|
| **Product name** | 151125 Lyreco Permanent Marker C/Tip Red |
| **Synonyms** | 151147 PK4 Lyreco Perm Marker C/Tip Asstd Col |
| **Proper shipping name** | PAINT or PAINT RELATED MATERIAL |
| **Other means of identification** | Not Available |
| **Index number** | Not Applicable |

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

| | |
|---|---|
| **Relevant identified uses** | Permanent Marker. NOTE: Information on this SDS refers to ink used in pens and markers, however, it applies to these inks in bulk. |
| **Uses advised against** | Not Applicable |

### 1.3.Details of the manufacturer/importer

| | |
|---|---|
| **Registered company name** | Lyreco Group (Lyreco France) |
| **Address** | Rue du 19 Mars 1962 Marly 59770 France |
| **Telephone** | +33 3 27 23 64 00 (9a.m-5p.m. CET.) |
| **Fax** | Not Available |
| **Website** | Not Available |
| **Email** | Not Available |

### 1.4.Emergency telephone number

| | |
|---|---|
| **Association / Organisation** | Not Available |
| **Emergency telephone numbers** | +33 3 27 23 64 00 (9a.m-5p.m. CET.) |
| **Other emergency telephone numbers** | Not Available |

## SECTION 2 HAZARDS IDENTIFICATION

### 2.1.Classification of the substance or mixture

**Considered a dangerous mixture according to Directive 1999/45/EC, Reg. (EC) No 1272/2008 (if applicable) and their amendments. Classified as Dangerous Goods for transport purposes.**

**CHEMWATCH HAZARD RATINGS**

| | | Min | Max |
|---|---|---|---|
| Flammability | 2 | | |
| Toxicity | 2 | | |
| Body Contact | 3 | | |
| Reactivity | 1 | | |
| Chronic | 2 | | |

0 = Minimum
1 = Low
2 = Moderate
3 = High
4 = Extreme

| | |
|---|---|
| **DSD classification** | In case of mixtures, classification has been prepared by following DPD (Directive 1999/45/EC) and CLP Regulation (EC) No 1272/2008 regulations |
| **DPD classification [1]** | R67 Vapours may cause drowsiness and dizziness.<br>R41 Risk of serious damage to eyes.<br>R10 Flammable. |
| ***Legend:*** | *1. Classified by Chemwatch; 2. Classification drawn from EC Directive 67/548/EEC - Annex I ; 3. Classification drawn from EC Directive 1272/2008 - Annex VI* |
| **Classification according to regulation (EC) No 1272/2008 [CLP] [1]** | Flammable Liquid Category 2, Serious Eye Damage Category 1, STOT - SE (Narcosis) Category 3 |
| ***Legend:*** | *1. Classified by Chemwatch; 2. Classification drawn from EC Directive 67/548/EEC - Annex I ; 3. Classification drawn from EC Directive 1272/2008 - Annex VI* |

### 2.2. Label elements

Continued...

| | |
|---|---|
| **CLP label elements** |  |
| **SIGNAL WORD** | **DANGER** |

### Hazard statement(s)

| | |
|---|---|
| **H225** | Highly flammable liquid and vapour |
| **H318** | Causes serious eye damage |
| **H336** | May cause drowsiness or dizziness |

### Supplementary statement(s)

Not Applicable

### Precautionary statement(s) Prevention

| | |
|---|---|
| **P101** | If medical advice is needed, have product container or label at hand. |
| **P210** | Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. |

### Precautionary statement(s) Response

| | |
|---|---|
| **P305+P351+P338** | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. |

### Precautionary statement(s) Storage

| | |
|---|---|
| **P403+P235** | Store in a well-ventilated place. Keep cool. |

### Precautionary statement(s) Disposal

| | |
|---|---|
| **P501** | Dispose of contents/container to authorised chemical landfill or if organic to high temperature incineration |

### 2.3. Other hazards

| | |
|---|---|
| | Inhalation, skin contact and/or ingestion may produce health damage*. |
| | May produce discomfort of the respiratory system and skin*. |
| | Cumulative effects may result following exposure*. |
| | Limited evidence of a carcinogenic effect*. |
| | Repeated exposure potentially causes skin dryness and cracking*. |

REACh - Art.57-59: The mixture does not contain Substances of Very High Concern (SVHC) at the SDS print date.

## SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

### 3.1.Substances

See 'Composition on ingredients' in Section 3.2

### 3.2.Mixtures

| 1.CAS No<br>2.EC No<br>3.Index No<br>4.REACH No | %[weight] | Name | Classification according to directive 67/548/EEC [DSD] | Classification according to regulation (EC) No 1272/2008 [CLP] |
|---|---|---|---|---|
| 1.107-98-2<br>2.203-539-1, 215-306-1, 216-455-5<br>3.603-064-00-3, 603-106-00-0<br>4.01-2119457435-35-XXXX | 25-50 | propylene glycol monomethyl ether - alpha isomer | R10, R67, R61, R37/38, R41 [2] | Flam. Liq. 3, STOT SE 3, Flam. Liq. 3, Repr. 1B, STOT SE 3, Skin Irrit. 2, Eye Dam. 1; H226, H336, H360D ***, H335, H315, H318 [3] |
| 1.71-23-8<br>2.200-746-9<br>3.603-003-00-0<br>4.01-2119486761-29-XXXX | 25-50 | n-propanol | R11, R41, R67 [2] | Flam. Liq. 2, Eye Dam. 1, STOT SE 3; H225, H318, H336 [3] |
| | balance | ingredients, non-hazardous | | |

| | |
|---|---|
| ***Legend:*** | *1. Classified by Chemwatch; 2. Classification drawn from EC Directive 67/548/EEC - Annex I; 3. Classification drawn from EC Directive 1272/2008 - Annex VI 4. Classification drawn from C&L* |

## SECTION 4 FIRST AID MEASURES

### 4.1. Description of first aid measures

| | |
|---|---|
| **General** | ▸ If swallowed do **NOT** induce vomiting.<br>▸ If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration.<br>▸ Observe the patient carefully.<br>▸ Never give liquid to a person showing signs of being sleepy or with reduced awareness; i.e. becoming unconscious. |

**Continued...**

| | |
|---|---|
| | ▸ Give water to rinse out mouth, then provide liquid slowly and as much as casualty can comfortably drink.<br>▸ Seek medical advice.<br>▸ If fumes or combustion products are inhaled remove from contaminated area.<br>▸ Lay patient down. Keep warm and rested.<br>▸ Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures.<br>▸ Apply artificial respiration if not breathing, preferably with a demand valve resuscitator, bag-valve mask device, or pocket mask as trained. Perform CPR if necessary.<br>▸ Transport to hospital, or doctor.<br><br>If this product comes in contact with the eyes:<br>▸ Immediately hold eyelids apart and flush the eye continuously with running water.<br>▸ Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids.<br>▸ Continue flushing until advised to stop by the Poisons Information Centre or a doctor, or for at least 15 minutes.<br>▸ Transport to hospital or doctor without delay.<br>▸ Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.<br>If skin contact occurs:<br>▸ Immediately remove all contaminated clothing, including footwear.<br>▸ Flush skin and hair with running water (and soap if available).<br>▸ Seek medical attention in event of irritation. |
| **Eye Contact** | If this product comes in contact with the eyes:<br>▸ Immediately hold eyelids apart and flush the eye continuously with running water.<br>▸ Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids.<br>▸ Continue flushing until advised to stop by the Poisons Information Centre or a doctor, or for at least 15 minutes.<br>▸ Transport to hospital or doctor without delay.<br>▸ Removal of contact lenses after an eye injury should only be undertaken by skilled personnel. |
| **Skin Contact** | If skin contact occurs:<br>▸ Immediately remove all contaminated clothing, including footwear.<br>▸ Flush skin and hair with running water (and soap if available).<br>▸ Seek medical attention in event of irritation. |
| **Inhalation** | ▸ If fumes or combustion products are inhaled remove from contaminated area.<br>▸ Lay patient down. Keep warm and rested.<br>▸ Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures.<br>▸ Apply artificial respiration if not breathing, preferably with a demand valve resuscitator, bag-valve mask device, or pocket mask as trained. Perform CPR if necessary.<br>▸ Transport to hospital, or doctor. |
| **Ingestion** | ▸ If swallowed do **NOT** induce vomiting.<br>▸ If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration.<br>▸ Observe the patient carefully.<br>▸ Never give liquid to a person showing signs of being sleepy or with reduced awareness; i.e. becoming unconscious.<br>▸ Give water to rinse out mouth, then provide liquid slowly and as much as casualty can comfortably drink.<br>▸ Seek medical advice. |

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

| | |
|---|---|
| | See Section 11 |

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

Treat symptomatically.
To treat poisoning by the higher aliphatic alcohols (up to C7):

- Gastric lavage with copious amounts of water.
- It may be beneficial to instill 60 ml of mineral oil into the stomach.
- Oxygen and artificial respiration as needed.
- Electrolyte balance: it may be useful to start 500 ml. M/6 sodium bicarbonate intravenously but maintain a cautious and conservative attitude toward electrolyte replacement unless shock or severe acidosis threatens.
- To protect the liver, maintain carbohydrate intake by intravenous infusions of glucose.
- Haemodialysis if coma is deep and persistent. [GOSSELIN, SMITH HODGE: Clinical Toxicology of Commercial Products, Ed 5)

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BASIC TREATMENT
---

- Establish a patent airway with suction where necessary.
- Watch for signs of respiratory insufficiency and assist ventilation as necessary.
- Administer oxygen by non-rebreather mask at 10 to 15 l/min.
- Monitor and treat, where necessary, for shock.
- Monitor and treat, where necessary, for pulmonary oedema.
- Anticipate and treat, where necessary, for seizures.
- **DO NOT** use emetics. Where ingestion is suspected rinse mouth and give up to 200 ml water (5 ml/kg recommended) for dilution where patient is able to swallow, has a strong gag reflex and does not drool.
- Give activated charcoal.

---
ADVANCED TREATMENT
---

- Consider orotracheal or nasotracheal intubation for airway control in unconscious patient or where respiratory arrest has occurred.
- Positive-pressure ventilation using a bag-valve mask might be of use.
- Monitor and treat, where necessary, for arrhythmias.
- Start an IV D5W TKO. If signs of hypovolaemia are present use lactated Ringers solution. Fluid overload might create complications.
- If the patient is hypoglycaemic (decreased or loss of consciousness, tachycardia, pallor, dilated pupils, diaphoresis and/or dextrose strip or glucometer readings below 50 mg), give 50% dextrose.
- Hypotension with signs of hypovolaemia requires the cautious administration of fluids. Fluid overload might create complications.
- Drug therapy should be considered for pulmonary oedema.
- Treat seizures with diazepam.
- Proparacaine hydrochloride should be used to assist eye irrigation.

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EMERGENCY DEPARTMENT
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**Continued...**

- Laboratory analysis of complete blood count, serum electrolytes, BUN, creatinine, glucose, urinalysis, baseline for serum aminotransferases (ALT and AST), calcium, phosphorus and magnesium, may assist in establishing a treatment regime. Other useful analyses include anion and osmolar gaps, arterial blood gases (ABGs), chest radiographs and electrocardiograph.
- Positive end-expiratory pressure (PEEP)-assisted ventilation may be required for acute parenchymal injury or adult respiratory distress syndrome.
- Acidosis may respond to hyperventilation and bicarbonate therapy.
- Haemodialysis might be considered in patients with severe intoxication.
- Consult a toxicologist as necessary. BRONSTEIN, A.C. and CURRANCE, P.L. EMERGENCY CARE FOR HAZARDOUS MATERIALS EXPOSURE: 2nd Ed. 1994

For C8 alcohols and above.
Symptomatic and supportive therapy is advised in managing patients.

## SECTION 5 FIREFIGHTING MEASURES

### 5.1. Extinguishing media

| | |
|---|---|
| | ▸ Alcohol stable foam. |

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

| | |
|---|---|
| **Fire Incompatibility** | ▸ Avoid contamination with oxidising agents i.e. nitrates, oxidising acids, chlorine bleaches, pool chlorine etc. as ignition may result |

### 5.3. Advice for firefighters

| | |
|---|---|
| **Fire Fighting** | ▸ Alert Fire Brigade and tell them location and nature of hazard. |
| **Fire/Explosion Hazard** | ▸ Liquid and vapour are flammable. |

## SECTION 6 ACCIDENTAL RELEASE MEASURES

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

| | |
|---|---|
| | See section 8 |

### 6.2. Environmental precautions

| | |
|---|---|
| | See section 12 |

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

| | |
|---|---|
| **Minor Spills** | ▸ Remove all ignition sources. |
| **Major Spills** | ▸ Clear area of personnel and move upwind. |

### 6.4. Reference to other sections

| | |
|---|---|
| | Personal Protective Equipment advice is contained in Section 8 of the MSDS. |

## SECTION 7 HANDLING AND STORAGE

### 7.1. Precautions for safe handling

| | |
|---|---|
| **Safe handling** | ▸ **DO NOT** allow clothing wet with material to stay in contact with skin<br>▸ Avoid all personal contact, including inhalation. |
| **Fire and explosion protection** | See section 5 |
| **Other information** | ▸ Store in original containers in approved flammable liquid storage area. |

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

| | |
|---|---|
| **Suitable container** | ▸ Packing as supplied by manufacturer. |
| **Storage incompatibility** | Alcohols<br>▸ are incompatible with strong acids, acid chlorides, acid anhydrides, oxidising and reducing agents. |

**PACKAGE MATERIAL INCOMPATIBILITIES**

Not Available

### 7.3. Specific end use(s)

See section 1.2

## SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

### 8.1. Control parameters

**DERIVED NO EFFECT LEVEL (DNEL)**

Not Available

**PREDICTED NO EFFECT LEVEL (PNEC)**

Not Available

**OCCUPATIONAL EXPOSURE LIMITS (OEL)**

**INGREDIENT DATA**

| Source | Ingredient | Material name | TWA | STEL | Peak | Notes |
|---|---|---|---|---|---|---|

**Continued...**

| | | | | | | |
|---|---|---|---|---|---|---|
| UK Workplace Exposure Limits (WELs) | propylene glycol monomethyl ether - alpha isomer | 1-Methoxypropan-2-ol | 375 mg/m3 / 100 ppm | 560 mg/m3 / 150 ppm | Not Available | Sk |
| European Union (EU) First List of Indicative Occupational Exposure Limit Values (IOELVs) (English) | propylene glycol monomethyl ether - alpha isomer | 1-Methoxypropanol-2 | 375 mg/m3 / 100 ppm | 568 mg/m3 / 150 ppm | Not Available | Skin |
| EU Consolidated List of Indicative Occupational Exposure Limit Values (IOELVs) | propylene glycol monomethyl ether - alpha isomer | 1-Methoxypropan-2-ol | 375 mg/m3 / 100 ppm | 568 mg/m3 / 150 ppm | Not Available | Skin |
| UK Workplace Exposure Limits (WELs) | n-propanol | Propan-1-ol | 500 mg/m3 / 200 ppm | 625 mg/m3 / 250 ppm | Not Available | Sk |

**EMERGENCY LIMITS**

| Ingredient | Material name | TEEL-1 | TEEL-2 | TEEL-3 |
|---|---|---|---|---|
| propylene glycol monomethyl ether - alpha isomer | Propylene glycol monomethyl ether; (Ucar Triol HG-170) | 150 ppm | 150 ppm | 470 ppm |
| n-propanol | Propyl alcohol, n-; (n-Propanol) | 250 ppm | 250 ppm | 4000 ppm |

| Ingredient | Original IDLH | Revised IDLH |
|---|---|---|
| propylene glycol monomethyl ether - alpha isomer | Not Available | Not Available |
| n-propanol | 4,000 ppm | 800 ppm |

### 8.2. Exposure controls

| | |
|---|---|
| **8.2.1. Appropriate engineering controls** | Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard. |
| **8.2.2. Personal protection** |  |
| **Eye and face protection** | ▸ Safety glasses with side shields. |
| **Skin protection** | See Hand protection below |
| **Hands/feet protection** | ▸ Wear chemical protective gloves, e.g. PVC. |
| **Body protection** | See Other protection below |
| **Other protection** | ▸ Overalls. |
| **Thermal hazards** | Not Available |

#### Recommended material(s)

**GLOVE SELECTION INDEX**

Glove selection is based on a modified presentation of the:
**"Forsberg Clothing Performance Index".**
The effect(s) of the following substance(s) are taken into account in the ***computer-generated*** selection:
151125 Lyreco Permanent Marker C/Tip Red

| Material | CPI |
|---|---|
| NEOPRENE | A |
| NITRILE | B |
| PVC | B |

* CPI - Chemwatch Performance Index
A: Best Selection
B: Satisfactory; may degrade after 4 hours continuous immersion
C: Poor to Dangerous Choice for other than short term immersion
**NOTE**: As a series of factors will influence the actual performance of the glove, a final selection must be based on detailed observation. -
* Where the glove is to be used on a short term, casual or infrequent basis, factors such as "feel" or convenience (e.g. disposability), may dictate a choice of gloves which might otherwise be unsuitable following long-term or frequent use. A qualified practitioner should be consulted.

#### Respiratory protection

Type A Filter of sufficient capacity.

Where the concentration of gas/particulates in the breathing zone, approaches or exceeds the "Exposure Standard" (or ES), respiratory protection is required.
Degree of protection varies with both face-piece and Class of filter; the nature of protection varies with Type of filter.

| Required Minimum Protection Factor | Half-Face Respirator | Full-Face Respirator | Powered Air Respirator |
|---|---|---|---|
| up to 5 x ES | A-AUS / Class 1 | - | A-PAPR-AUS / Class 1 |
| up to 25 x ES | Air-line* | A-2 | A-PAPR-2 |
| up to 50 x ES | - | A-3 | - |
| 50+ x ES | - | Air-line** | - |

* - Continuous-flow; ** - Continuous-flow or positive pressure demand
^ - Full-face
A(All classes) = Organic vapours, B AUS or B1 = Acid gasses, B2 = Acid gas or hydrogen cyanide(HCN), B3 = Acid gas or hydrogen cyanide(HCN), E = Sulfur dioxide(SO2), G = Agricultural chemicals, K = Ammonia(NH3), Hg = Mercury, NO = Oxides of nitrogen, MB = Methyl bromide, AX = Low boiling point organic compounds(below 65 degC)

#### 8.2.3. Environmental exposure controls

See section 12

## SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

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

| | |
|---|---|
| **Appearance** | Red flammable liquid with a characteristic odour; does not mix with water. |

| | | | |
|---|---|---|---|
| **Physical state** | Liquid | **Relative density (Water = 1)** | 0.83 |

**Continued...**

| | | | |
|---|---|---|---|
| **Odour** | Not Available | **Partition coefficient n-octanol / water** | Not Available |
| **Odour threshold** | Not Available | **Auto-ignition temperature (°C)** | 270 |
| **pH (as supplied)** | Not Available | **Decomposition temperature** | Not Available |
| **Melting point / freezing point (°C)** | Not Available | **Viscosity (cSt)** | 4 |
| **Initial boiling point and boiling range (°C)** | 96 | **Molecular weight (g/mol)** | Not Applicable |
| **Flash point (°C)** | 21 | **Taste** | Not Available |
| **Evaporation rate** | Not Available | **Explosive properties** | Not Available |
| **Flammability** | HIGHLY FLAMMABLE. | **Oxidising properties** | Not Available |
| **Upper Explosive Limit (%)** | 13.5 | **Surface Tension (dyn/cm or mN/m)** | Not Available |
| **Lower Explosive Limit (%)** | 2.1 | **Volatile Component (%vol)** | Not Available |
| **Vapour pressure (kPa)** | 1.9 @ 20C | **Gas group** | Not Available |
| **Solubility in water (g/L)** | Immiscible | **pH as a solution(1%)** | Not Available |
| **Vapour density (Air = 1)** | Not Available | **VOC g/L** | Not Available |

### 9.2. Other information

| | |
|---|---|
| | Not Available |

## SECTION 10 STABILITY AND REACTIVITY

| | |
|---|---|
| **10.1.Reactivity** | See section 7.2 |
| **10.2.Chemical stability** | ▸ Presence of elevated temperatures. |
| **10.3. Possibility of hazardous reactions** | See section 7.2 |
| **10.4. Conditions to avoid** | See section 7.2 |
| **10.5. Incompatible materials** | See section 7.2 |
| **10.6. Hazardous decomposition products** | See section 5.3 |

## SECTION 11 TOXICOLOGICAL INFORMATION

### 11.1. Information on toxicological effects

| | |
|---|---|
| **Inhaled** | Inhalation of vapours may cause drowsiness and dizziness. |
| **Ingestion** | Overexposure to non-ring alcohols causes nervous system symptoms. |
| **Skin Contact** | Repeated exposure may cause skin cracking, flaking or drying following normal handling and use. |
| **Eye** | If applied to the eyes, this material causes severe eye damage. |
| **Chronic** | There has been some concern that this material can cause cancer or mutations but there is not enough data to make an assessment. |

| | | |
|---|---|---|
| **151125 Lyreco Permanent Marker C/Tip Red** | **TOXICITY** | **IRRITATION** |
| | Not Available | Not Available |
| **propylene glycol monomethyl ether - alpha isomer** | **TOXICITY** | **IRRITATION** |
| | dermal (rat) LD50: >2000 mg/kg[1] | Eye (rabbit) 230 mg mild |
| | Inhalation (rat) LC50: 10000 ppm/5 h.d[2] | Eye (rabbit) 500 mg/24 h. |
| | Oral (rat) LD50: 5207.2 mg/kg[1] | Eye (rabbit): 100 mg SEVERE |
| | | Skin (rabbit) 500 mg open - mild |
| **n-propanol** | **TOXICITY** | **IRRITATION** |
| | Dermal (rabbit) LD50: 4032 mg/kg[1] | Eye (rabbit): 20 mg/24h moderate |
| | Oral (rat) LD50: 1870 mg/kge[2] | Eye (rabbit): 4 mg open SEVERE |
| | | Skin (rabbit): 20 mg/24h moderate |
| | | Skin (rabbit): 500 mg open mild |
| ***Legend:*** | *1. Value obtained from Europe ECHA Registered Substances - Acute toxicity 2. Value obtained from manufacturer's msds unless otherwise specified data extracted from RTECS - Register of Toxic Effect of chemical Substances* | |

| | |
|---|---|
| **151125 Lyreco Permanent Marker C/Tip Red** | No significant acute toxicological data identified in literature search. |

**Continued...**

| | |
|---|---|
| **PROPYLENE GLYCOL MONOMETHYL ETHER - ALPHA ISOMER** | for propylene glycol ethers (PGEs):<br>Typical propylene glycol ethers include propylene glycol n-butyl ether (PnB); dipropylene glycol n-butyl ether (DPnB); dipropylene glycol methyl ether acetate (DPMA); tripropylene glycol methyl ether (TPM).<br>NOTE: For PGE - mixed isomers: Exposure of pregnant rats and rabbits to the substance did not give rise to teratogenic effects at concentrations up to 3000 ppm. |
| **N-PROPANOL** | The material may produce severe irritation to the eye causing pronounced inflammation. |

| | | | |
|---|---|---|---|
| **Acute Toxicity** | ⊘ | **Carcinogenicity** | ⊘ |
| **Skin Irritation/Corrosion** | ⊘ | **Reproductivity** | ⊘ |
| **Serious Eye Damage/Irritation** | ✔ | **STOT - Single Exposure** | ✔ |
| **Respiratory or Skin sensitisation** | ⊘ | **STOT - Repeated Exposure** | ⊘ |
| **Mutagenicity** | ⊘ | **Aspiration Hazard** | ⊘ |

***Legend:*** ✔ *– Data required to make classification available*
✘ *– Data available but does not fill the criteria for classification*
⊘ *– Data Not Available to make classification*

### CMR STATUS

| | | | |
|---|---|---|---|
| **SKIN** | propylene glycol monomethyl ether - alpha isomer | European Union (EU) First List of Indicative Occupational Exposure Limit Values (IOELVs) - Skin | Skin |

## SECTION 12 ECOLOGICAL INFORMATION

### 12.1. Toxicity

**DO NOT** discharge into sewer or waterways.

### 12.2. Persistence and degradability

| Ingredient | Persistence: Water/Soil | Persistence: Air |
|---|---|---|
| propylene glycol monomethyl ether - alpha isomer | LOW (Half-life = 56 days) | LOW (Half-life = 1.7 days) |
| n-propanol | LOW | LOW |

### 12.3. Bioaccumulative potential

| Ingredient | Bioaccumulation |
|---|---|
| propylene glycol monomethyl ether - alpha isomer | LOW (BCF = 2) |
| n-propanol | LOW (LogKOW = 0.25) |

### 12.4. Mobility in soil

| Ingredient | Mobility |
|---|---|
| propylene glycol monomethyl ether - alpha isomer | HIGH (KOC = 1) |
| n-propanol | HIGH (KOC = 1.325) |

### 12.5.Results of PBT and vPvB assessment

| | P | B | T |
|---|---|---|---|
| Relevant available data | Not Available | Not Available | Not Available |
| PBT and vPvB Criteria fulfilled? | Not Available | Not Available | Not Available |

### 12.6. Other adverse effects

No data available

## SECTION 13 DISPOSAL CONSIDERATIONS

### 13.1. Waste treatment methods

| | |
|---|---|
| **Product / Packaging disposal** | ▸ Recycle wherever possible or consult manufacturer for recycling options. |
| **Waste treatment options** | Not Available |
| **Sewage disposal options** | Not Available |

## SECTION 14 TRANSPORT INFORMATION

### Labels Required

**Continued...**

| | |
|---|---|
| |   |
| **Marine Pollutant** | NO |
| **HAZCHEM** | •3Y |

### Land transport (ADR)

| | |
|---|---|
| **14.1. UN number** | 1263 |
| **14.2. Packing group** | III |
| **14.3. UN proper shipping name** | PAINT or PAINT RELATED MATERIAL |
| **14.4. Environmental hazard** | No relevant data |
| **14.5. Transport hazard class(es)** | Class: 3<br>Subrisk: Not Applicable |
| **14.6. Special precautions for user** | Special provisions: 163 640E 650<br>Limited quantity: 5 L |

### Air transport (ICAO-IATA / DGR)

| | |
|---|---|
| **14.1. UN number** | 1263 |
| **14.2. Packing group** | III |
| **14.3. UN proper shipping name** | Paint (including paint, lacquer, enamel, stain, shellac, varnish, polish, liquid filler and liquid lacquer base); Paint related material (including paint thinning or reducing compounds) |
| **14.4. Environmental hazard** | No relevant data |
| **14.5. Transport hazard class(es)** | ICAO/IATA Class: 3<br>ICAO / IATA Subrisk: Not Applicable<br>ERG Code: 3L |
| **14.6. Special precautions for user** | Special provisions: A3 A72 A192<br>Cargo Only Packing Instructions: 366<br>Cargo Only Maximum Qty / Pack: 220 L<br>Passenger and Cargo Packing Instructions: 355<br>Passenger and Cargo Maximum Qty / Pack: 60 L<br>Passenger and Cargo Limited Quantity Packing Instructions: Y344<br>Passenger and Cargo Limited Maximum Qty / Pack: 10 L |

### Sea transport (IMDG-Code / GGVSee)

| | |
|---|---|
| **14.1. UN number** | 1263 |
| **14.2. Packing group** | III |
| **14.3. UN proper shipping name** | PAINT (including paint, lacquer, enamel, stain, shellac, varnish, polish, liquid filler and liquid lacquer base) or PAINT RELATED MATERIAL (including paint thinning or reducing compound) |
| **14.4. Environmental hazard** | Not Applicable |
| **14.5. Transport hazard class(es)** | IMDG Class: 3<br>IMDG Subrisk: Not Applicable |
| **14.6. Special precautions for user** | EMS Number: F-E , S-E<br>Special provisions: 163 223 955<br>Limited Quantities: 5 L |

### Inland waterways transport (ADN)

| | |
|---|---|
| **14.1. UN number** | 1263 |
| **14.2. Packing group** | III |
| **14.3. UN proper shipping name** | PAINT or PAINT RELATED MATERIAL |
| **14.4. Environmental hazard** | No relevant data |
| **14.5. Transport hazard class(es)** | 3 \| Not Applicable |

**Continued...**

| | | |
|---|---|---|
| **14.6. Special precautions for user** | Classification code | F1 |
| | Limited quantity | 5 L |
| | Equipment required | PP, EX, A |
| | Fire cones number | 0 |

**Transport in bulk according to Annex II of MARPOL 73 / 78 and the IBC code**

| Source | Ingredient | Pollution Category |
|---|---|---|
| IMO MARPOL 73/78 (Annex II) - List of Noxious Liquid Substances Carried in Bulk | propylene glycol monomethyl ether - alpha isomer | Z |
| IMO MARPOL 73/78 (Annex II) - List of Noxious Liquid Substances Carried in Bulk | n-propanol | Y |

## SECTION 15 REGULATORY INFORMATION

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

| | |
|---|---|
| **propylene glycol monomethyl ether - alpha isomer(107-98-2) is found on the following regulatory lists** | "EU Consolidated List of Indicative Occupational Exposure Limit Values (IOELVs)","European Union (EU) First List of Indicative Occupational Exposure Limit Values (IOELVs) (Slovak)","European Union (EU) First List of Indicative Occupational Exposure Limit Values (IOELVs) (Lithuanian)","European Customs Inventory of Chemical Substances ECICS (English)","European Union (EU) First List of Indicative Occupational Exposure Limit Values (IOELVs) (Polish)","European Union (EU) First List of Indicative Occupational Exposure Limit Values (IOELVs) (French)","European Union (EU) First List of Indicative Occupational Exposure Limit Values (IOELVs) (Slovenian)","EU REACH Regulation (EC) No 1907/2006 - Annex XVII (Appendix 6) Toxic to reproduction: category 1B (Table 3.1)/category 2 (Table 3.2)","European Union (EU) First List of Indicative Occupational Exposure Limit Values (IOELVs) (Swedish)","European Union (EU) First List of Indicative Occupational Exposure Limit Values (IOELVs) (Italian)","European Trade Union Confederation (ETUC) Priority List for REACH Authorisation","European Union (EU) First List of Indicative Occupational Exposure Limit Values (IOELVs) (Danish)","European Union (EU) First List of Indicative Occupational Exposure Limit Values (IOELVs) (Maltese)","European Union - European Inventory of Existing Commercial Chemical Substances (EINECS) (English)","European Union (EU) First List of Indicative Occupational Exposure Limit Values (IOELVs) (English)","European Union (EU) Annex I to Directive 67/548/EEC on Classification and Labelling of Dangerous Substances (updated by ATP: 31) - Reprotoxic Substances","European Union (EU) First List of Indicative Occupational Exposure Limit Values (IOELVs) (Latvian)","UK Workplace Exposure Limits (WELs)","EU REACH Regulation (EC) No 1907/2006 - Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles","European Union (EU) First List of Indicative Occupational Exposure Limit Values (IOELVs) (German)","European Union (EU) First List of Indicative Occupational Exposure Limit Values (IOELVs) (Spanish)","European Union (EU) First List of Indicative Occupational Exposure Limit Values (IOELVs) (Finnish)","European Union (EU) Regulation (EC) No 1272/2008 on Classification, Labelling and Packaging of Substances and Mixtures - Annex VI","European Union (EU) First List of Indicative Occupational Exposure Limit Values (IOELVs) (Greek)","European Union (EU) Annex I to Directive 67/548/EEC on Classification and Labelling of Dangerous Substances - updated by ATP: 31","European Union (EU) First List of Indicative Occupational Exposure Limit Values (IOELVs) (Portuguese)","European Union (EU) First List of Indicative Occupational Exposure Limit Values (IOELVs) (Hungarian)","European Union (EU) First List of Indicative Occupational Exposure Limit Values (IOELVs) (Romanian)","European Union (EU) First List of Indicative Occupational Exposure Limit Values (IOELVs) (Czech)","European Union (EU) First List of Indicative Occupational Exposure Limit Values (IOELVs) (Bulgarian)","European Union (EU) First List of Indicative Occupational Exposure Limit Values (IOELVs) (Dutch)","Europe AeroSpace and Defence Industries Association of Europe (ASD) REACH Implementation Working Group Priority Declarable Substances List (PDSL)","European Union (EU) First List of Indicative Occupational Exposure Limit Values (IOELVs) (Estonian)" |
| **n-propanol(71-23-8) is found on the following regulatory lists** | "European Customs Inventory of Chemical Substances ECICS (English)","European Union - European Inventory of Existing Commercial Chemical Substances (EINECS) (English)","UK Workplace Exposure Limits (WELs)","EU REACH Regulation (EC) No 1907/2006 - Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles","European Union (EU) Regulation (EC) No 1272/2008 on Classification and Labelling of Dangerous Substances - updated by ATP: 31" |

This safety data sheet is in compliance with the following EU legislation and its adaptations - as far as applicable - : 67/548/EEC, 1999/45/EC, 98/24/EC, 92/85/EC, 94/33/EC, 91/689/EEC, 1999/13/EC, Regulation (EU) No 453/2010, Regulation (EC) No 1907/2006, Regulation (EC) No 1272/2008 and their amendments as well as the following British legislation: - The Control of Substances Hazardous to Health Regulations (COSHH) 2002 - COSHH Essentials - The Management of Health and Safety at Work Regulations 1999

### 15.2. Chemical safety assessment

For further information please look at the Chemical Safety Assessment and Exposure Scenarios prepared by your Supply Chain if available.

**ECHA SUMMARY**

| Ingredient | CAS number | Index No | ECHA Dossier |
|---|---|---|---|
| propylene glycol monomethyl ether - alpha isomer | 107-98-2 | 603-064-00-3, 603-106-00-0 | 01-2119457435-35-XXXX |

| Harmonisation (C&L Inventory) | Hazard Class and Category Code(s) | Pictograms Signal Word Code(s) | Hazard Statement Code(s) |
|---|---|---|---|
| 1 | Flam. Liq. 3, STOT SE 3, Skin Irrit. 2, Eye Dam. 1, Repr. 1B | GHS07, GHS02, Wng, GHS05, GHS08, Dgr | H226, H336, H315, H318, H335, H360 |
| 2 | Flam. Liq. 3, STOT SE 3, STOT RE 2, Repr. 1B, Acute Tox. 4, Eye Irrit. 2, Flam. Liq. 2, Skin Irrit. 2, Eye Dam. 1 | GHS02, Wng, GHS08, Dgr, GHS03, GHS05 | H371, H360, H225, H226, H315, H318, H370 |

*Harmonisation Code 1 = The most prevalent classification. Harmonisation Code 2 = The most severe classification.*

| Ingredient | CAS number | Index No | ECHA Dossier |
|---|---|---|---|
| n-propanol | 71-23-8 | 603-003-00-0 | 01-2119486761-29-XXXX |

| Harmonisation (C&L Inventory) | Hazard Class and Category Code(s) | Pictograms Signal Word Code(s) | Hazard Statement Code(s) |
|---|---|---|---|
| 1 | Flam. Liq. 2, Eye Dam. 1, STOT SE 3 | GHS02, GHS05, Dgr | H225, H318, H336 |

**Continued...**

| | | | |
|---|---|---|---|
| 2 | Flam. Liq. 2, Eye Dam. 1, STOT SE 3, Acute Tox. 4 | GHS02, GHS05, Dgr, GHS08 | H225, H318, H336, H302 |

*Harmonisation Code 1 = The most prevalent classification. Harmonisation Code 2 = The most severe classification.*

## SECTION 16 OTHER INFORMATION

### Full text Risk and Hazard codes

| | |
|---|---|
| **H226** | Flammable liquid and vapour |
| **H302** | Harmful if swallowed |
| **H315** | Causes skin irritation |
| **H335** | May cause respiratory irritation |
| **H360** | May damage fertility or the unborn child |
| **H360D ***** | May damage the unborn child. |
| **H370** | Causes damage to organs |
| **H371** | May cause damage to organs |

| | |
|---|---|
| **R11** | Highly flammable. |
| **R37/38** | Irritating to respiratory system and skin. |
| **R61** | May cause harm to the unborn child. |

### Other information

### DSD / DPD label elements

Relevant risk statements are found in section 2.1

| | |
|---|---|
| **Indication(s) of danger** | Xi |

**SAFETY ADVICE**

| | |
|---|---|
| **S02** | Keep out of reach of children. |
| **S23** | Do not breathe gas/fumes/vapour/spray. |
| **S25** | Avoid contact with eyes. |
| **S26** | In case of contact with eyes, rinse with plenty of water and contact Doctor or Poisons Information Centre. |
| **S39** | Wear eye/face protection. |
| **S40** | To clean the floor and all objects contaminated by this material, use water and detergent. |
| **S46** | If swallowed, seek medical advice immediately and show this container or label. |
| **S56** | Dispose of this material and its container at hazardous or special waste collection point. |
| **S64** | If swallowed, rinse mouth with water (only if the person is conscious). |

Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the Chemwatch Classification committee using available literature references.
A list of reference resources used to assist the committee may be found at:
www.chemwatch.net/references

The (M)SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings. Risks may be determined by reference to Exposures Scenarios. Scale of use, frequency of use and current or available engineering controls must be considered.

For detailed advice on Personal Protective Equipment, refer to the following EU CEN Standards:
EN 166 Personal eye-protection
EN 340 Protective clothing
EN 374 Protective gloves against chemicals and micro-organisms
EN 13832 Footwear protecting against chemicals
EN 133 Respiratory protective devices

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**end of SDS**

# 151136 Lyreco Permanent Marker C/Tip Green

**Lyreco Group (Lyreco France)**

Chemwatch Hazard Alert Code: **3**

Chemwatch: **4854-67**
Version No: **2.1.1.1**
Safety Data Sheet (Conforms to Regulations (EC) No 453/2010)

Issue Date: **06/04/2013**
Print Date: **02/19/2015**
Initial Date: **Not Available**
S.REACH.GBR.EN

## SECTION 1 IDENTIFICATION OF THE SUBSTANCE / MIXTURE AND OF THE COMPANY / UNDERTAKING

### 1.1.Product Identifier

| | |
|---|---|
| **Product name** | 151136 Lyreco Permanent Marker C/Tip Green |
| **Synonyms** | 151205 PK4 Lyreco Perm Marker B/Tip Asstd Col |
| **Proper shipping name** | PAINT or PAINT RELATED MATERIAL |
| **Other means of identification** | Not Available |
| **Index number** | Not Applicable |

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

| | |
|---|---|
| **Relevant identified uses** | Permanent Marker. NOTE: Information on this SDS refers to ink used in pens and markers, however, it applies to these inks in bulk. |
| **Uses advised against** | Not Applicable |

### 1.3.Details of the manufacturer/importer

| | |
|---|---|
| **Registered company name** | Lyreco Group (Lyreco France) |
| **Address** | Rue du 19 Mars 1962 Marly 59770 France |
| **Telephone** | +33 3 27 23 64 00 (9a.m-5p.m. CET.) |
| **Fax** | Not Available |
| **Website** | Not Available |
| **Email** | Not Available |

### 1.4.Emergency telephone number

| | |
|---|---|
| **Association / Organisation** | Not Available |
| **Emergency telephone numbers** | +33 3 27 23 64 00 (9a.m-5p.m. CET.) |
| **Other emergency telephone numbers** | Not Available |

## SECTION 2 HAZARDS IDENTIFICATION

### 2.1.Classification of the substance or mixture

**Considered a dangerous mixture according to Directive 1999/45/EC, Reg. (EC) No 1272/2008 (if applicable) and their amendments. Classified as Dangerous Goods for transport purposes.**

**CHEMWATCH HAZARD RATINGS**

| | | Min | Max |
|---|---|---|---|
| Flammability | 2 | | |
| Toxicity | 2 | | |
| Body Contact | 3 | | |
| Reactivity | 1 | | |
| Chronic | 2 | | |

0 = Minimum
1 = Low
2 = Moderate
3 = High
4 = Extreme

| | |
|---|---|
| **DSD classification** | In case of mixtures, classification has been prepared by following DPD (Directive 1999/45/EC) and CLP Regulation (EC) No 1272/2008 regulations |
| **DPD classification [1]** | R67 Vapours may cause drowsiness and dizziness.<br>R41 Risk of serious damage to eyes.<br>R10 Flammable. |
| ***Legend:*** | *1. Classified by Chemwatch; 2. Classification drawn from EC Directive 67/548/EEC - Annex I ; 3. Classification drawn from EC Directive 1272/2008 - Annex VI* |
| **Classification according to regulation (EC) No 1272/2008 [CLP] [1]** | Flammable Liquid Category 3, Serious Eye Damage Category 1, STOT - SE (Narcosis) Category 3 |
| ***Legend:*** | *1. Classified by Chemwatch; 2. Classification drawn from EC Directive 67/548/EEC - Annex I ; 3. Classification drawn from EC Directive 1272/2008 - Annex VI* |

### 2.2. Label elements

**Continued...**

| | |
|---|---|
| **CLP label elements** |  |
| **SIGNAL WORD** | **DANGER** |

### Hazard statement(s)

| | |
|---|---|
| **H226** | Flammable liquid and vapour |
| **H318** | Causes serious eye damage |
| **H336** | May cause drowsiness or dizziness |

### Supplementary statement(s)

Not Applicable

### Precautionary statement(s) Prevention

| | |
|---|---|
| **P101** | If medical advice is needed, have product container or label at hand. |
| **P210** | Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. |

### Precautionary statement(s) Response

| | |
|---|---|
| **P305+P351+P338** | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. |

### Precautionary statement(s) Storage

| | |
|---|---|
| **P403+P235** | Store in a well-ventilated place. Keep cool. |

### Precautionary statement(s) Disposal

| | |
|---|---|
| **P501** | Dispose of contents/container to authorised chemical landfill or if organic to high temperature incineration |

### 2.3. Other hazards

| | |
|---|---|
| | Inhalation, skin contact and/or ingestion may produce health damage*. |
| | May produce discomfort of the respiratory system and skin*. |
| | Cumulative effects may result following exposure*. |
| | Limited evidence of a carcinogenic effect*. |
| | Repeated exposure potentially causes skin dryness and cracking*. |

REACh - Art.57-59: The mixture does not contain Substances of Very High Concern (SVHC) at the SDS print date.

## SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

### 3.1.Substances

See 'Composition on ingredients' in Section 3.2

### 3.2.Mixtures

| 1.CAS No<br>2.EC No<br>3.Index No<br>4.REACH No | %[weight] | Name | Classification according to directive 67/548/EEC [DSD] | Classification according to regulation (EC) No 1272/2008 [CLP] |
|---|---|---|---|---|
| 1.107-98-2<br>2.203-539-1, 215-306-1, 216-455-5<br>3.603-064-00-3, 603-106-00-0<br>4.01-2119457435-35-XXXX | 25-50 | propylene glycol monomethyl ether - alpha isomer | R10, R67, R61, R37/38, R41 [2] | Flam. Liq. 3, STOT SE 3, Flam. Liq. 3, Repr. 1B, STOT SE 3, Skin Irrit. 2, Eye Dam. 1; H226, H336, H360D ***, H335, H315, H318 [3] |
| 1.71-23-8<br>2.200-746-9<br>3.603-003-00-0<br>4.01-2119486761-29-XXXX | 25-50 | n-propanol | R11, R41, R67 [2] | Flam. Liq. 2, Eye Dam. 1, STOT SE 3; H225, H318, H336 [3] |
| | balance | ingredients, non-hazardous | | |

| | |
|---|---|
| ***Legend:*** | *1. Classified by Chemwatch; 2. Classification drawn from EC Directive 67/548/EEC - Annex I; 3. Classification drawn from EC Directive 1272/2008 - Annex VI 4. Classification drawn from C&L* |

## SECTION 4 FIRST AID MEASURES

### 4.1. Description of first aid measures

| | |
|---|---|
| **General** | ▸ If swallowed do **NOT** induce vomiting.<br>▸ If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration.<br>▸ Observe the patient carefully.<br>▸ Never give liquid to a person showing signs of being sleepy or with reduced awareness; i.e. becoming unconscious. |

**Continued...**

| | |
|---|---|
| | ▸ Give water to rinse out mouth, then provide liquid slowly and as much as casualty can comfortably drink.<br>▸ Seek medical advice.<br>▸ If fumes or combustion products are inhaled remove from contaminated area.<br>▸ Lay patient down. Keep warm and rested.<br>▸ Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures.<br>▸ Apply artificial respiration if not breathing, preferably with a demand valve resuscitator, bag-valve mask device, or pocket mask as trained. Perform CPR if necessary.<br>▸ Transport to hospital, or doctor.<br><br>If this product comes in contact with the eyes:<br>▸ Immediately hold eyelids apart and flush the eye continuously with running water.<br>▸ Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids.<br>▸ Continue flushing until advised to stop by the Poisons Information Centre or a doctor, or for at least 15 minutes.<br>▸ Transport to hospital or doctor without delay.<br>▸ Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.<br>If skin contact occurs:<br>▸ Immediately remove all contaminated clothing, including footwear.<br>▸ Flush skin and hair with running water (and soap if available).<br>▸ Seek medical attention in event of irritation. |
| **Eye Contact** | If this product comes in contact with the eyes:<br>▸ Immediately hold eyelids apart and flush the eye continuously with running water.<br>▸ Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids.<br>▸ Continue flushing until advised to stop by the Poisons Information Centre or a doctor, or for at least 15 minutes.<br>▸ Transport to hospital or doctor without delay.<br>▸ Removal of contact lenses after an eye injury should only be undertaken by skilled personnel. |
| **Skin Contact** | If skin contact occurs:<br>▸ Immediately remove all contaminated clothing, including footwear.<br>▸ Flush skin and hair with running water (and soap if available).<br>▸ Seek medical attention in event of irritation. |
| **Inhalation** | ▸ If fumes or combustion products are inhaled remove from contaminated area.<br>▸ Lay patient down. Keep warm and rested.<br>▸ Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures.<br>▸ Apply artificial respiration if not breathing, preferably with a demand valve resuscitator, bag-valve mask device, or pocket mask as trained. Perform CPR if necessary.<br>▸ Transport to hospital, or doctor. |
| **Ingestion** | ▸ If swallowed do **NOT** induce vomiting.<br>▸ If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration.<br>▸ Observe the patient carefully.<br>▸ Never give liquid to a person showing signs of being sleepy or with reduced awareness; i.e. becoming unconscious.<br>▸ Give water to rinse out mouth, then provide liquid slowly and as much as casualty can comfortably drink.<br>▸ Seek medical advice. |

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

| | |
|---|---|
| | See Section 11 |

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

Treat symptomatically.
To treat poisoning by the higher aliphatic alcohols (up to C7):

- Gastric lavage with copious amounts of water.
- It may be beneficial to instill 60 ml of mineral oil into the stomach.
- Oxygen and artificial respiration as needed.
- Electrolyte balance: it may be useful to start 500 ml. M/6 sodium bicarbonate intravenously but maintain a cautious and conservative attitude toward electrolyte replacement unless shock or severe acidosis threatens.
- To protect the liver, maintain carbohydrate intake by intravenous infusions of glucose.
- Haemodialysis if coma is deep and persistent. [GOSSELIN, SMITH HODGE: Clinical Toxicology of Commercial Products, Ed 5)

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BASIC TREATMENT

---

- Establish a patent airway with suction where necessary.
- Watch for signs of respiratory insufficiency and assist ventilation as necessary.
- Administer oxygen by non-rebreather mask at 10 to 15 l/min.
- Monitor and treat, where necessary, for shock.
- Monitor and treat, where necessary, for pulmonary oedema.
- Anticipate and treat, where necessary, for seizures.
- **DO NOT** use emetics. Where ingestion is suspected rinse mouth and give up to 200 ml water (5 ml/kg recommended) for dilution where patient is able to swallow, has a strong gag reflex and does not drool.
- Give activated charcoal.

---

ADVANCED TREATMENT

---

- Consider orotracheal or nasotracheal intubation for airway control in unconscious patient or where respiratory arrest has occurred.
- Positive-pressure ventilation using a bag-valve mask might be of use.
- Monitor and treat, where necessary, for arrhythmias.
- Start an IV D5W TKO. If signs of hypovolaemia are present use lactated Ringers solution. Fluid overload might create complications.
- If the patient is hypoglycaemic (decreased or loss of consciousness, tachycardia, pallor, dilated pupils, diaphoresis and/or dextrose strip or glucometer readings below 50 mg), give 50% dextrose.
- Hypotension with signs of hypovolaemia requires the cautious administration of fluids. Fluid overload might create complications.
- Drug therapy should be considered for pulmonary oedema.
- Treat seizures with diazepam.
- Proparacaine hydrochloride should be used to assist eye irrigation.

---

EMERGENCY DEPARTMENT

---

**Continued...**

- Laboratory analysis of complete blood count, serum electrolytes, BUN, creatinine, glucose, urinalysis, baseline for serum aminotransferases (ALT and AST), calcium, phosphorus and magnesium, may assist in establishing a treatment regime. Other useful analyses include anion and osmolar gaps, arterial blood gases (ABGs), chest radiographs and electrocardiograph.
- Positive end-expiratory pressure (PEEP)-assisted ventilation may be required for acute parenchymal injury or adult respiratory distress syndrome.
- Acidosis may respond to hyperventilation and bicarbonate therapy.
- Haemodialysis might be considered in patients with severe intoxication.
- Consult a toxicologist as necessary. BRONSTEIN, A.C. and CURRANCE, P.L. EMERGENCY CARE FOR HAZARDOUS MATERIALS EXPOSURE: 2nd Ed. 1994

For C8 alcohols and above.
Symptomatic and supportive therapy is advised in managing patients.

## SECTION 5 FIREFIGHTING MEASURES

### 5.1. Extinguishing media

| | |
|---|---|
| | ▸ Alcohol stable foam. |

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

| | |
|---|---|
| **Fire Incompatibility** | ▸ Avoid contamination with oxidising agents i.e. nitrates, oxidising acids, chlorine bleaches, pool chlorine etc. as ignition may result |

### 5.3. Advice for firefighters

| | |
|---|---|
| **Fire Fighting** | ▸ Alert Fire Brigade and tell them location and nature of hazard. |
| **Fire/Explosion Hazard** | ▸ Liquid and vapour are flammable. |

## SECTION 6 ACCIDENTAL RELEASE MEASURES

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

| | |
|---|---|
| | See section 8 |

### 6.2. Environmental precautions

| | |
|---|---|
| | See section 12 |

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

| | |
|---|---|
| **Minor Spills** | ▸ Remove all ignition sources. |
| **Major Spills** | ▸ Clear area of personnel and move upwind. |

### 6.4. Reference to other sections

| | |
|---|---|
| | Personal Protective Equipment advice is contained in Section 8 of the MSDS. |

## SECTION 7 HANDLING AND STORAGE

### 7.1. Precautions for safe handling

| | |
|---|---|
| **Safe handling** | ▸ **DO NOT** allow clothing wet with material to stay in contact with skin<br>▸ Avoid all personal contact, including inhalation. |
| **Fire and explosion protection** | See section 5 |
| **Other information** | ▸ Store in original containers in approved flammable liquid storage area. |

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

| | |
|---|---|
| **Suitable container** | ▸ Packing as supplied by manufacturer. |
| **Storage incompatibility** | Alcohols<br>▸ are incompatible with strong acids, acid chlorides, acid anhydrides, oxidising and reducing agents. |

**PACKAGE MATERIAL INCOMPATIBILITIES**

Not Available

### 7.3. Specific end use(s)

See section 1.2

## SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

### 8.1. Control parameters

**DERIVED NO EFFECT LEVEL (DNEL)**

Not Available

**PREDICTED NO EFFECT LEVEL (PNEC)**

Not Available

**OCCUPATIONAL EXPOSURE LIMITS (OEL)**

**INGREDIENT DATA**

| Source | Ingredient | Material name | TWA | STEL | Peak | Notes |
|---|---|---|---|---|---|---|

**Continued...**

| | | | | | | |
|---|---|---|---|---|---|---|
| UK Workplace Exposure Limits (WELs) | propylene glycol monomethyl ether - alpha isomer | 1-Methoxypropan-2-ol | 375 mg/m3 / 100 ppm | 560 mg/m3 / 150 ppm | Not Available | Sk |
| European Union (EU) First List of Indicative Occupational Exposure Limit Values (IOELVs) (English) | propylene glycol monomethyl ether - alpha isomer | 1-Methoxypropanol-2 | 375 mg/m3 / 100 ppm | 568 mg/m3 / 150 ppm | Not Available | Skin |
| EU Consolidated List of Indicative Occupational Exposure Limit Values (IOELVs) | propylene glycol monomethyl ether - alpha isomer | 1-Methoxypropan-2-ol | 375 mg/m3 / 100 ppm | 568 mg/m3 / 150 ppm | Not Available | Skin |
| UK Workplace Exposure Limits (WELs) | n-propanol | Propan-1-ol | 500 mg/m3 / 200 ppm | 625 mg/m3 / 250 ppm | Not Available | Sk |

**EMERGENCY LIMITS**

| Ingredient | Material name | TEEL-1 | TEEL-2 | TEEL-3 |
|---|---|---|---|---|
| propylene glycol monomethyl ether - alpha isomer | Propylene glycol monomethyl ether; (Ucar Triol HG-170) | 150 ppm | 150 ppm | 470 ppm |
| n-propanol | Propyl alcohol, n-; (n-Propanol) | 250 ppm | 250 ppm | 4000 ppm |

| Ingredient | Original IDLH | Revised IDLH |
|---|---|---|
| propylene glycol monomethyl ether - alpha isomer | Not Available | Not Available |
| n-propanol | 4,000 ppm | 800 ppm |

### 8.2. Exposure controls

| | |
|---|---|
| **8.2.1. Appropriate engineering controls** | Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard. |
| **8.2.2. Personal protection** |  |
| **Eye and face protection** | ▸ Safety glasses with side shields. |
| **Skin protection** | See Hand protection below |
| **Hands/feet protection** | ▸ Wear chemical protective gloves, e.g. PVC. |
| **Body protection** | See Other protection below |
| **Other protection** | ▸ Overalls. |
| **Thermal hazards** | Not Available |

#### Recommended material(s)

**GLOVE SELECTION INDEX**

Glove selection is based on a modified presentation of the:
**"Forsberg Clothing Performance Index".**
The effect(s) of the following substance(s) are taken into account in the ***computer-generated*** selection:
151136 Lyreco Permanent Marker C/Tip Green

| Material | CPI |
|---|---|
| NEOPRENE | A |
| NITRILE | B |
| PVC | B |

* CPI - Chemwatch Performance Index
A: Best Selection
B: Satisfactory; may degrade after 4 hours continuous immersion
C: Poor to Dangerous Choice for other than short term immersion
**NOTE**: As a series of factors will influence the actual performance of the glove, a final selection must be based on detailed observation. -
* Where the glove is to be used on a short term, casual or infrequent basis, factors such as "feel" or convenience (e.g. disposability), may dictate a choice of gloves which might otherwise be unsuitable following long-term or frequent use. A qualified practitioner should be consulted.

#### Respiratory protection

Type A Filter of sufficient capacity.

Where the concentration of gas/particulates in the breathing zone, approaches or exceeds the "Exposure Standard" (or ES), respiratory protection is required.
Degree of protection varies with both face-piece and Class of filter; the nature of protection varies with Type of filter.

| Required Minimum Protection Factor | Half-Face Respirator | Full-Face Respirator | Powered Air Respirator |
|---|---|---|---|
| up to 5 x ES | A-AUS / Class 1 | - | A-PAPR-AUS / Class 1 |
| up to 25 x ES | Air-line* | A-2 | A-PAPR-2 |
| up to 50 x ES | - | A-3 | - |
| 50+ x ES | - | Air-line** | - |

* - Continuous-flow; ** - Continuous-flow or positive pressure demand
^ - Full-face
A(All classes) = Organic vapours, B AUS or B1 = Acid gasses, B2 = Acid gas or hydrogen cyanide(HCN), B3 = Acid gas or hydrogen cyanide(HCN), E = Sulfur dioxide(SO2), G = Agricultural chemicals, K = Ammonia(NH3), Hg = Mercury, NO = Oxides of nitrogen, MB = Methyl bromide, AX = Low boiling point organic compounds(below 65 degC)

### 8.2.3. Environmental exposure controls

See section 12

## SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

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

| | |
|---|---|
| **Appearance** | Green flammable liquid with a characteristic odour; does not mix with water. |

| | | | |
|---|---|---|---|
| **Physical state** | Liquid | **Relative density (Water = 1)** | 0.83 |

**Continued...**

| | | | |
|---|---|---|---|
| **Odour** | Not Available | **Partition coefficient n-octanol / water** | Not Available |
| **Odour threshold** | Not Available | **Auto-ignition temperature (°C)** | 287 |
| **pH (as supplied)** | Not Available | **Decomposition temperature** | Not Available |
| **Melting point / freezing point (°C)** | Not Available | **Viscosity (cSt)** | 4 |
| **Initial boiling point and boiling range (°C)** | 96 | **Molecular weight (g/mol)** | Not Applicable |
| **Flash point (°C)** | 23 | **Taste** | Not Available |
| **Evaporation rate** | Not Available | **Explosive properties** | Not Available |
| **Flammability** | Flammable. | **Oxidising properties** | Not Available |
| **Upper Explosive Limit (%)** | 13.5 | **Surface Tension (dyn/cm or mN/m)** | Not Available |
| **Lower Explosive Limit (%)** | 2.1 | **Volatile Component (%vol)** | Not Available |
| **Vapour pressure (kPa)** | 1.9 @ 20C | **Gas group** | Not Available |
| **Solubility in water (g/L)** | Immiscible | **pH as a solution(1%)** | Not Available |
| **Vapour density (Air = 1)** | Not Available | **VOC g/L** | Not Available |

### 9.2. Other information

| | |
|---|---|
| | Not Available |

## SECTION 10 STABILITY AND REACTIVITY

| | |
|---|---|
| **10.1.Reactivity** | See section 7.2 |
| **10.2.Chemical stability** | ▸ Presence of elevated temperatures. |
| **10.3. Possibility of hazardous reactions** | See section 7.2 |
| **10.4. Conditions to avoid** | See section 7.2 |
| **10.5. Incompatible materials** | See section 7.2 |
| **10.6. Hazardous decomposition products** | See section 5.3 |

## SECTION 11 TOXICOLOGICAL INFORMATION

### 11.1. Information on toxicological effects

| | |
|---|---|
| **Inhaled** | Inhalation of vapours may cause drowsiness and dizziness. |
| **Ingestion** | Overexposure to non-ring alcohols causes nervous system symptoms. |
| **Skin Contact** | Repeated exposure may cause skin cracking, flaking or drying following normal handling and use. |
| **Eye** | If applied to the eyes, this material causes severe eye damage. |
| **Chronic** | There has been some concern that this material can cause cancer or mutations but there is not enough data to make an assessment. |

| | | |
|---|---|---|
| **151136 Lyreco Permanent Marker C/Tip Green** | **TOXICITY** | **IRRITATION** |
| | Not Available | Not Available |
| **propylene glycol monomethyl ether - alpha isomer** | **TOXICITY** | **IRRITATION** |
| | dermal (rat) LD50: >2000 mg/kg[1] | Eye (rabbit) 230 mg mild |
| | Inhalation (rat) LC50: 10000 ppm/5 h.d[2] | Eye (rabbit) 500 mg/24 h. |
| | Oral (rat) LD50: 5207.2 mg/kg[1] | Eye (rabbit): 100 mg SEVERE |
| | | Skin (rabbit) 500 mg open - mild |
| **n-propanol** | **TOXICITY** | **IRRITATION** |
| | Dermal (rabbit) LD50: 4032 mg/kg[1] | Eye (rabbit): 20 mg/24h moderate |
| | Oral (rat) LD50: 1870 mg/kge[2] | Eye (rabbit): 4 mg open SEVERE |
| | | Skin (rabbit): 20 mg/24h moderate |
| | | Skin (rabbit): 500 mg open mild |
| ***Legend:*** | *1. Value obtained from Europe ECHA Registered Substances - Acute toxicity 2. Value obtained from manufacturer's msds unless otherwise specified data extracted from RTECS - Register of Toxic Effect of chemical Substances* | |

| | |
|---|---|
| **151136 Lyreco Permanent Marker C/Tip Green** | No significant acute toxicological data identified in literature search. |

**Continued...**

| | |
|---|---|
| **PROPYLENE GLYCOL MONOMETHYL ETHER - ALPHA ISOMER** | for propylene glycol ethers (PGEs):<br>Typical propylene glycol ethers include propylene glycol n-butyl ether (PnB); dipropylene glycol n-butyl ether (DPnB); dipropylene glycol methyl ether acetate (DPMA); tripropylene glycol methyl ether (TPM).<br>NOTE: For PGE - mixed isomers: Exposure of pregnant rats and rabbits to the substance did not give rise to teratogenic effects at concentrations up to 3000 ppm. |
| **N-PROPANOL** | The material may produce severe irritation to the eye causing pronounced inflammation. |

| | | | |
|---|---|---|---|
| **Acute Toxicity** | ⊘ | **Carcinogenicity** | ⊘ |
| **Skin Irritation/Corrosion** | ⊘ | **Reproductivity** | ⊘ |
| **Serious Eye Damage/Irritation** | ✔ | **STOT - Single Exposure** | ✔ |
| **Respiratory or Skin sensitisation** | ⊘ | **STOT - Repeated Exposure** | ⊘ |
| **Mutagenicity** | ⊘ | **Aspiration Hazard** | ⊘ |

***Legend:*** ✔ *– Data required to make classification available*
✘ *– Data available but does not fill the criteria for classification*
⊘ *– Data Not Available to make classification*

**CMR STATUS**

| | | | |
|---|---|---|---|
| **SKIN** | propylene glycol monomethyl ether - alpha isomer | European Union (EU) First List of Indicative Occupational Exposure Limit Values (IOELVs) - Skin | Skin |

## SECTION 12 ECOLOGICAL INFORMATION

### 12.1. Toxicity

**DO NOT** discharge into sewer or waterways.

### 12.2. Persistence and degradability

| Ingredient | Persistence: Water/Soil | Persistence: Air |
|---|---|---|
| propylene glycol monomethyl ether - alpha isomer | LOW (Half-life = 56 days) | LOW (Half-life = 1.7 days) |
| n-propanol | LOW | LOW |

### 12.3. Bioaccumulative potential

| Ingredient | Bioaccumulation |
|---|---|
| propylene glycol monomethyl ether - alpha isomer | LOW (BCF = 2) |
| n-propanol | LOW (LogKOW = 0.25) |

### 12.4. Mobility in soil

| Ingredient | Mobility |
|---|---|
| propylene glycol monomethyl ether - alpha isomer | HIGH (KOC = 1) |
| n-propanol | HIGH (KOC = 1.325) |

### 12.5.Results of PBT and vPvB assessment

| | P | B | T |
|---|---|---|---|
| Relevant available data | Not Available | Not Available | Not Available |
| PBT and vPvB Criteria fulfilled? | Not Available | Not Available | Not Available |

### 12.6. Other adverse effects

No data available

## SECTION 13 DISPOSAL CONSIDERATIONS

### 13.1. Waste treatment methods

| | |
|---|---|
| **Product / Packaging disposal** | ▸ Recycle wherever possible or consult manufacturer for recycling options. |
| **Waste treatment options** | Not Available |
| **Sewage disposal options** | Not Available |

## SECTION 14 TRANSPORT INFORMATION

### Labels Required

**Continued...**

| | |
|---|---|
| |   |
| **Marine Pollutant** | NO |
| **HAZCHEM** | •3Y |

### Land transport (ADR)

| | |
|---|---|
| **14.1. UN number** | 1263 |
| **14.2. Packing group** | III |
| **14.3. UN proper shipping name** | PAINT or PAINT RELATED MATERIAL |
| **14.4. Environmental hazard** | No relevant data |
| **14.5. Transport hazard class(es)** | Class: 3<br>Subrisk: Not Applicable |
| **14.6. Special precautions for user** | Special provisions: 163 640E 650<br>Limited quantity: 5 L |

### Air transport (ICAO-IATA / DGR)

| | |
|---|---|
| **14.1. UN number** | 1263 |
| **14.2. Packing group** | III |
| **14.3. UN proper shipping name** | Paint (including paint, lacquer, enamel, stain, shellac, varnish, polish, liquid filler and liquid lacquer base); Paint related material (including paint thinning or reducing compounds) |
| **14.4. Environmental hazard** | No relevant data |
| **14.5. Transport hazard class(es)** | ICAO/IATA Class: 3<br>ICAO / IATA Subrisk: Not Applicable<br>ERG Code: 3L |
| **14.6. Special precautions for user** | Special provisions: A3 A72 A192<br>Cargo Only Packing Instructions: 366<br>Cargo Only Maximum Qty / Pack: 220 L<br>Passenger and Cargo Packing Instructions: 355<br>Passenger and Cargo Maximum Qty / Pack: 60 L<br>Passenger and Cargo Limited Quantity Packing Instructions: Y344<br>Passenger and Cargo Limited Maximum Qty / Pack: 10 L |

### Sea transport (IMDG-Code / GGVSee)

| | |
|---|---|
| **14.1. UN number** | 1263 |
| **14.2. Packing group** | III |
| **14.3. UN proper shipping name** | PAINT (including paint, lacquer, enamel, stain, shellac, varnish, polish, liquid filler and liquid lacquer base) or PAINT RELATED MATERIAL (including paint thinning or reducing compound) |
| **14.4. Environmental hazard** | Not Applicable |
| **14.5. Transport hazard class(es)** | IMDG Class: 3<br>IMDG Subrisk: Not Applicable |
| **14.6. Special precautions for user** | EMS Number: F-E , S-E<br>Special provisions: 163 223 955<br>Limited Quantities: 5 L |

### Inland waterways transport (ADN)

| | |
|---|---|
| **14.1. UN number** | 1263 |
| **14.2. Packing group** | III |
| **14.3. UN proper shipping name** | PAINT or PAINT RELATED MATERIAL |
| **14.4. Environmental hazard** | No relevant data |
| **14.5. Transport hazard class(es)** | 3 \| Not Applicable |

**Continued...**

| | | |
|---|---|---|
| **14.6. Special precautions for user** | Classification code | F1 |
| | Limited quantity | 5 L |
| | Equipment required | PP, EX, A |
| | Fire cones number | 0 |

**Transport in bulk according to Annex II of MARPOL 73 / 78 and the IBC code**

| Source | Ingredient | Pollution Category |
|---|---|---|
| IMO MARPOL 73/78 (Annex II) - List of Noxious Liquid Substances Carried in Bulk | propylene glycol monomethyl ether - alpha isomer | Z |
| IMO MARPOL 73/78 (Annex II) - List of Noxious Liquid Substances Carried in Bulk | n-propanol | Y |

## SECTION 15 REGULATORY INFORMATION

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

| | |
|---|---|
| **propylene glycol monomethyl ether - alpha isomer(107-98-2) is found on the following regulatory lists** | "EU Consolidated List of Indicative Occupational Exposure Limit Values (IOELVs)","European Union (EU) First List of Indicative Occupational Exposure Limit Values (IOELVs) (Slovak)","European Union (EU) First List of Indicative Occupational Exposure Limit Values (IOELVs) (Lithuanian)","European Customs Inventory of Chemical Substances ECICS (English)","European Union (EU) First List of Indicative Occupational Exposure Limit Values (IOELVs) (Polish)","European Union (EU) First List of Indicative Occupational Exposure Limit Values (IOELVs) (French)","European Union (EU) First List of Indicative Occupational Exposure Limit Values (IOELVs) (Slovenian)","EU REACH Regulation (EC) No 1907/2006 - Annex XVII (Appendix 6) Toxic to reproduction: category 1B (Table 3.1)/category 2 (Table 3.2)","European Union (EU) First List of Indicative Occupational Exposure Limit Values (IOELVs) (Swedish)","European Union (EU) First List of Indicative Occupational Exposure Limit Values (IOELVs) (Italian)","European Trade Union Confederation (ETUC) Priority List for REACH Authorisation","European Union (EU) First List of Indicative Occupational Exposure Limit Values (IOELVs) (Danish)","European Union (EU) First List of Indicative Occupational Exposure Limit Values (IOELVs) (Maltese)","European Union - European Inventory of Existing Commercial Chemical Substances (EINECS) (English)","European Union (EU) First List of Indicative Occupational Exposure Limit Values (IOELVs) (English)","European Union (EU) Annex I to Directive 67/548/EEC on Classification and Labelling of Dangerous Substances (updated by ATP: 31) - Reprotoxic Substances","European Union (EU) First List of Indicative Occupational Exposure Limit Values (IOELVs) (Latvian)","UK Workplace Exposure Limits (WELs)","EU REACH Regulation (EC) No 1907/2006 - Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles","European Union (EU) First List of Indicative Occupational Exposure Limit Values (IOELVs) (German)","European Union (EU) First List of Indicative Occupational Exposure Limit Values (IOELVs) (Spanish)","European Union (EU) First List of Indicative Occupational Exposure Limit Values (IOELVs) (Finnish)","European Union (EU) Regulation (EC) No 1272/2008 on Classification, Labelling and Packaging of Substances and Mixtures - Annex VI","European Union (EU) First List of Indicative Occupational Exposure Limit Values (IOELVs) (Greek)","European Union (EU) Annex I to Directive 67/548/EEC on Classification and Labelling of Dangerous Substances - updated by ATP: 31","European Union (EU) First List of Indicative Occupational Exposure Limit Values (IOELVs) (Portuguese)","European Union (EU) First List of Indicative Occupational Exposure Limit Values (IOELVs) (Hungarian)","European Union (EU) First List of Indicative Occupational Exposure Limit Values (IOELVs) (Romanian)","European Union (EU) First List of Indicative Occupational Exposure Limit Values (IOELVs) (Czech)","European Union (EU) First List of Indicative Occupational Exposure Limit Values (IOELVs) (Bulgarian)","European Union (EU) First List of Indicative Occupational Exposure Limit Values (IOELVs) (Dutch)","Europe AeroSpace and Defence Industries Association of Europe (ASD) REACH Implementation Working Group Priority Declarable Substances List (PDSL)","European Union (EU) First List of Indicative Occupational Exposure Limit Values (IOELVs) (Estonian)" |
| **n-propanol(71-23-8) is found on the following regulatory lists** | "European Customs Inventory of Chemical Substances ECICS (English)","European Union - European Inventory of Existing Commercial Chemical Substances (EINECS) (English)","UK Workplace Exposure Limits (WELs)","EU REACH Regulation (EC) No 1907/2006 - Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles","European Union (EU) Regulation (EC) No 1272/2008 on Classification and Labelling of Dangerous Substances - Annex VI","European Union (EU) Annex I to Directive 67/548/EEC on Classification and Labelling of Dangerous Substances - updated by ATP: 31" |

This safety data sheet is in compliance with the following EU legislation and its adaptations - as far as applicable - : 67/548/EEC, 1999/45/EC, 98/24/EC, 92/85/EC, 94/33/EC, 91/689/EEC, 1999/13/EC, Regulation (EU) No 453/2010, Regulation (EC) No 1907/2006, Regulation (EC) No 1272/2008 and their amendments as well as the following British legislation: - The Control of Substances Hazardous to Health Regulations (COSHH) 2002 - COSHH Essentials - The Management of Health and Safety at Work Regulations 1999

### 15.2. Chemical safety assessment

For further information please look at the Chemical Safety Assessment and Exposure Scenarios prepared by your Supply Chain if available.

**ECHA SUMMARY**

| Ingredient | CAS number | Index No | ECHA Dossier |
|---|---|---|---|
| propylene glycol monomethyl ether - alpha isomer | 107-98-2 | 603-064-00-3, 603-106-00-0 | 01-2119457435-35-XXXX |

| Harmonisation (C&L Inventory) | Hazard Class and Category Code(s) | Pictograms Signal Word Code(s) | Hazard Statement Code(s) |
|---|---|---|---|
| 1 | Flam. Liq. 3, STOT SE 3, Skin Irrit. 2, Eye Dam. 1, Repr. 1B | GHS07, GHS02, Wng, GHS05, GHS08, Dgr | H226, H336, H315, H318, H335, H360 |
| 2 | Flam. Liq. 3, STOT SE 3, STOT RE 2, Repr. 1B, Acute Tox. 4, Eye Irrit. 2, Flam. Liq. 2, Skin Irrit. 2, Eye Dam. 1 | GHS02, Wng, GHS08, Dgr, GHS03, GHS05 | H371, H360, H225, H226, H315, H318, H370 |

*Harmonisation Code 1 = The most prevalent classification. Harmonisation Code 2 = The most severe classification.*

| Ingredient | CAS number | Index No | ECHA Dossier |
|---|---|---|---|
| n-propanol | 71-23-8 | 603-003-00-0 | 01-2119486761-29-XXXX |

| Harmonisation (C&L Inventory) | Hazard Class and Category Code(s) | Pictograms Signal Word Code(s) | Hazard Statement Code(s) |
|---|---|---|---|
| 1 | Flam. Liq. 2, Eye Dam. 1, STOT SE 3 | GHS02, GHS05, Dgr | H225, H318, H336 |

**Continued...**

| | | | |
|---|---|---|---|
| 2 | Flam. Liq. 2, Eye Dam. 1, STOT SE 3, Acute Tox. 4 | GHS02, GHS05, Dgr, GHS08 | H225, H318, H336, H302 |

*Harmonisation Code 1 = The most prevalent classification. Harmonisation Code 2 = The most severe classification.*

## SECTION 16 OTHER INFORMATION

### Full text Risk and Hazard codes

| | |
|---|---|
| **H225** | Highly flammable liquid and vapour |
| **H302** | Harmful if swallowed |
| **H315** | Causes skin irritation |
| **H335** | May cause respiratory irritation |
| **H360** | May damage fertility or the unborn child |
| **H360D ***** | May damage the unborn child. |
| **H370** | Causes damage to organs |
| **H371** | May cause damage to organs |

| | |
|---|---|
| **R11** | Highly flammable. |
| **R37/38** | Irritating to respiratory system and skin. |
| **R61** | May cause harm to the unborn child. |

### Other information

### DSD / DPD label elements

Relevant risk statements are found in section 2.1

| | |
|---|---|
| **Indication(s) of danger** | Xi |

**SAFETY ADVICE**

| | |
|---|---|
| **S02** | Keep out of reach of children. |
| **S23** | Do not breathe gas/fumes/vapour/spray. |
| **S25** | Avoid contact with eyes. |
| **S26** | In case of contact with eyes, rinse with plenty of water and contact Doctor or Poisons Information Centre. |
| **S39** | Wear eye/face protection. |
| **S40** | To clean the floor and all objects contaminated by this material, use water and detergent. |
| **S46** | If swallowed, seek medical advice immediately and show this container or label. |
| **S56** | Dispose of this material and its container at hazardous or special waste collection point. |
| **S64** | If swallowed, rinse mouth with water (only if the person is conscious). |

Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the Chemwatch Classification committee using available literature references.
A list of reference resources used to assist the committee may be found at:
www.chemwatch.net/references

The (M)SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings. Risks may be determined by reference to Exposures Scenarios. Scale of use, frequency of use and current or available engineering controls must be considered.

For detailed advice on Personal Protective Equipment, refer to the following EU CEN Standards:
EN 166 Personal eye-protection
EN 340 Protective clothing
EN 374 Protective gloves against chemicals and micro-organisms
EN 13832 Footwear protecting against chemicals
EN 133 Respiratory protective devices

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**end of SDS**