

# Safety data sheet

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

### 1.1. Product identifier

Product name UVÜÈËÌ €UUVÜÈËÌ €ÁÚæä ÖT æ\^!Šæ& Á ^æ|ãÁ^áÊ!^^} Êã|~ ^

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

Intended use Odor-free paint marker Inks for valve marker pens.

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

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1.4. Emergency telephone number •^^ÁÏ æ~ æ&c !^!D~ ]] |ã!Ä

## SECTION 2. Hazards identification.

### 2.1. Classification of the substance or mixture.

The product is classified as hazardous pursuant to the provisions set forth in Directives 67/548/EEC and 1999/45/EC and/or EC Regulation 1272/2008 (CLP) (and subsequent amendments and supplements). The product thus requires a safety datasheet that complies with the provisions of EC Regulation 1907/2006 and subsequent amendments.

Any additional information concerning the risks for health and/or the environment are given in sections 11 and 12 of this sheet.

#### 2.1.1. Regulation 1272/2008 (CLP) and following amendments and adjustments.

Hazard classification and indication:

Flam. Liq. 3 H226  
STOT SE 3 H336

#### 2.1.2. 67/548/EEC and 1999/45/EC Directives and following amendments and adjustments.

Danger Symbols: --

R phrases: 10-67

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

### 2.2. Label elements.

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



Signal words: Warning

Hazard statements:

H226 Flammable liquid and vapour.  
H336 May cause drowsiness or dizziness.

Precautionary statements:

P210 Keep away from heat / sparks / open flames / hot surfaces. No smoking.  
P233 Keep container tightly closed.

**SECTION 2. Hazards identification.** ... / >>

**P280** Wear protective gloves / protective clothing / eye protection / face protection.  
**P304+P340** IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.  
**P312** Call a POISON CENTER or doctor / physician if you feel unwell.  
**P370+P378** In case of fire: Use . . . for extinction.

**Contains:** 1-METHOXY-2-PROPANOL

**2.3. Other hazards.**

Information not available.

**SECTION 3. Composition/information on ingredients.****3.1. Substances.**

Information not relevant.

**3.2. Mixtures.**

**Contains:**

Identification.	Conc. %.	Classification 67/548/EEC.	Classification 1272/2008 (CLP).
<b>1-METHOXY-2-PROPANOL</b>			
CAS. 107-98-2	30 - 40	R10, R67	Flam. Liq. 3 H226, STOT SE 3 H336
EC. 203-539-1			
INDEX. 603-064-00-3			
Reg. no. 01-2119457435-35			
<b>2-METHOXY-1-METHYLETHYL ACETATE</b>			
CAS. 108-65-6	5 - 8	R10	Flam. Liq. 3 H226
EC. 203-603-9			
INDEX. 607-195-00-7			
<b>PROPAN-2-OL</b>			
CAS. 67-63-0	5 - 8	R67, F R11, Xi R36	Flam. Liq. 2 H225, Eye Irrit. 2 H319, STOT SE 3 H336
EC. 200-661-7			
INDEX. 603-117-00-0			

Note: Upper limit is not included into the range.

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

T+ = Very Toxic(T+), T = Toxic(T), Xn = Harmful(Xn), C = Corrosive(C), Xi = Irritant(Xi), O = Oxidizing(O), E = Explosive(E), F+ = Extremely Flammable(F+), F = Highly Flammable(F), N = Dangerous for the Environment(N)

**SECTION 4. First aid measures.****4.1. Description of first aid measures.**

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

**SKIN:** Remove contaminated clothing. Wash immediately with plenty of water. If irritation persists, get medical advice/attention. Wash contaminated clothing before using it again.

**INHALATION:** Remove to open air. In the event of breathing difficulties, get medical advice/attention immediately.

**INGESTION:** Get medical advice/attention. Induce vomiting only if indicated by the doctor. Never give anything by mouth to an unconscious person, unless authorised by a doctor.

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

For symptoms and effects caused by the contained substances, see chap. 11.

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

Information not available.

**SECTION 5. Firefighting measures.****5.1. Extinguishing media.****SUITABLE EXTINGUISHING EQUIPMENT**

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

**UNSUITABLE EXTINGUISHING EQUIPMENT**

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

**5.2. Special hazards arising from the substance or mixture.****HAZARDS CAUSED BY EXPOSURE IN THE EVENT OF FIRE**

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

**5.3. Advice for firefighters.****GENERAL INFORMATION**

Use jets of water to cool the containers to prevent product decomposition and the development of substances potentially hazardous for health.

Always wear full fire prevention gear. Collect extinguishing water to prevent it from draining into the sewer system. Dispose of contaminated water used for extinction and the remains of the fire according to applicable regulations.

**SPECIAL PROTECTIVE EQUIPMENT FOR FIRE-FIGHTERS**

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

## SECTION 6. Accidental release measures.

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

FOR LIQUID PRODUCTS:

Block the leakage if there is no hazard.

FOR SOLID PRODUCTS:

If there are no contraindications, spray powder with water to prevent the formation of dust. Avoid breathing vapours/mists/gases.

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

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

### 6.2. Environmental precautions.

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

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

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

FOR SOLID PRODUCTS: Use spark-proof mechanical equipment to collect the leaked product and place it in containers for recovery or disposal. If there are no contraindications, use jets of water to eliminate product residues.

Make sure the leakage site is well aired. Check incompatibility for container material in section 7. Contaminated material should be disposed of in compliance with the provisions set forth in point 13.

### 6.4. Reference to other sections.

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

## SECTION 7. Handling and storage.

### 7.1. Precautions for safe handling.

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

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

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

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

Information not available.

## SECTION 8. Exposure controls/personal protection.

### 8.1. Control parameters.

Regulatory References:

United Kingdom

EH40/2005 Workplace exposure limits. Containing the list of workplace exposure limits for use with the Control of Substances Hazardous to Health Regulations (as amended).

Éire

OEL EU

TLV-ACGIH

Code of Practice Chemical Agent Regulations 2011.

Directive 2009/161/EU; Directive 2006/15/EC; Directive 2004/37/EC; Directive 2000/39/EC.

ACGIH 2012

### 1-METHOXY-2-PROPANOL

#### Threshold Limit Value.

Type	Country	TWA/8h		STEL/15min		
		mg/m <sup>3</sup>	ppm	mg/m <sup>3</sup>	ppm	
TLV-ACGIH		369	100	553	150	
OEL	EU	375	100	568	150	SKIN
OEL	IRL	375	100	568	150	
WEL	UK	375	100	560	150	SKIN

**SECTION 8. Exposure controls/personal protection. ... / >>**

**PROPAN-2-OL**

**Threshold Limit Value.**

Type	Country	TWA/8h		STEL/15min		
		mg/m3	ppm	mg/m3	ppm	
WEL	UK	999	400	1250	500	
OEL	IRL		200		400	SKIN
TLV-ACGIH		492	200	983	400	

**2-METHOXY-1-METHYLETHYL ACETATE**

**Threshold Limit Value.**

Type	Country	TWA/8h		STEL/15min		
		mg/m3	ppm	mg/m3	ppm	
OEL	EU	275	50	550	100	SKIN
OEL	IRL	275	50	550	100	SKIN
WEL	UK	274	50	548	100	

**Legend:**

(C) = CEILING ; INHAL = Inhalable Fraction ; RESP = Respirable Fraction ; THORA = Thoracic Fraction.  
VND = hazard identified but no DNEL/PNEC available ; NEA = no exposure expected ; NPI = no hazard identified.

**8.2. Exposure controls.**

As the use of adequate technical equipment must always take priority over personal protection equipment, make sure that the workplace is well aired through effective local aspiration. Personal protection equipment must comply with the rules in force indicated below.

**HAND PROTECTION**

Protect hands with category I (ref. Directive 89/686/EEC and standard EN 374) work gloves, such as those in latex, PVC or equivalent. The following should be considered when choosing work glove material: degradation, breakage times and permeation. Work glove resistance to preparations should be checked before use, as it can be unpredictable. Gloves' limit depends on the duration of exposure.

**EYE PROTECTION**

Use of protective airtight goggles (ref. standard EN 166) recommended.

**SKIN PROTECTION**

Wear category I professional long-sleeved overalls and safety footwear (ref. Directive 89/686/CEE and standard EN ISO 20344). Wash body with soap and water after removing overalls.

**RESPIRATORY PROTECTION**

If the threshold value (if available) for one or more of the substances present in the preparation for daily exposure in the workplace or to a fraction established by the company's prevention and protection service is exceeded, wear a mask with an A or universal filter, the class (1, 2 or 3) of which must be chosen according to the limit concentration of use (ref. standard EN 14387).

The use of respiratory tract protection equipment, such as masks like that indicated above, is necessary to reduce worker exposure in the absence of technical measures. The protection provided by masks is in any case limited.

If the substance in question is odourless or its olfactory threshold is higher than the relative exposure limit and in the event of an emergency, or when exposure levels are unknown or the concentration of oxygen in the workplace is less than 17% volume, wear self-contained, open-circuit compressed air breathing apparatus (ref. standard EN 137) or fresh air hose breathing apparatus for use with full face mask, half mask or mouthpiece (ref. standard EN 138).

**ENVIRONMENTAL EXPOSURE CONTROLS.**

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

**SECTION 9. Physical and chemical properties.**

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

Appearance	liquid	
Colour	Not available.	
Odour	characteristic of solvent	
Odour threshold.	Not available.	
pH.	Not available.	
Melting point / freezing point.	Not available.	
Initial boiling point.	> 100 °C.	
Boiling range.	Not available.	
Flash point.	> 23 °C.	
Evaporation Rate	Not available.	
Flammability of solids and gases	flammable gas	
Lower inflammability limit.	Not available.	
Upper inflammability limit.	Not available.	
Lower explosive limit.	Not available.	
Upper explosive limit.	Not available.	
Vapour pressure.	Not available.	
Vapour density	Not available.	
Relative density.	0,9 - 1,1	Kg/l
Solubility	immiscible with water	
Partition coefficient: n-octanol/water	Not available.	
Auto-ignition temperature.	Not available.	
Decomposition temperature.	Not available.	
Viscosity	8-15 mPa	
Explosive properties	Not available.	
Oxidising properties	Not available.	

**SECTION 9. Physical and chemical properties.** ... / >>**9.2. Other information.**

VOC (Directive 1999/13/EC) :	45,00 % - 495,00	g/litre.
VOC (volatile carbon) :	24,36 % - 267,97	g/litre.

**SECTION 10. Stability and reactivity.****10.1. Reactivity.**

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

1-METHOXY-2-PROPANOL ACETATE: stable but with the air it may slowly develop peroxides that explode with an increase in temperature.

1-METHOXY-2-PROPANOL: absorbs and dissolves in water and in organic solvents, dissolves various plastic materials; it is stable but with air it may slowly form explosive peroxides.

**10.2. Chemical stability.**

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

**10.3. Possibility of hazardous reactions.**

The vapours may also form explosive mixtures with the air.

1-METHOXY-2-PROPANOL ACETATE: may react violently with oxidising agents and strong acids and alkaline metals.

1-METHOXY-2-PROPANOL: can react dangerously with strong oxidising agents and strong acids.

**10.4. Conditions to avoid.**

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

1-METHOXY-2-PROPANOL ACETATE: store in an inert atmosphere, sheltered from moisture because it hydrolyses easily.

1-METHOXY-2-PROPANOL: avoid exposure to the air.

**10.5. Incompatible materials.**

1-METHOXY-2-PROPANOL ACETATE: oxidising agents, strong acids and alkaline metals.

1-METHOXY-2-PROPANOL: oxidising agents, strong acids and alkaline metals.

**10.6. Hazardous decomposition products.**

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

**SECTION 11. Toxicological information.****11.1. Information on toxicological effects.**

This product contains highly volatile substances, which may cause serious depression of the central nervous system (CNS) and have negative effects, such as drowsiness, dizziness, slow reflexes, narcosis.

1-METHOXY-2-PROPANOL ACETATE: the main way of entry is the skin, whereas the respiratory way is less important owing to the low vapour tension of the product. Concentrations above 100 ppm cause eye irritation, nose and oropharynx. At 1000 ppm disturbance in the equilibrium and severe eye irritation is observed. Clinical and biological examinations carried out on exposed volunteers revealed no anomalies. Acetate produces greater skin and ocular irritation on direct contact. No chronic effects have been reported in man.

1-METHOXY-2-PROPANOL: the main way of entry is the skin, whereas the respiratory way is less important owing to the low vapour tension of the product. Concentrations above 100 ppm cause eye irritation, nose and oropharynx. At 1000 ppm disturbance in the equilibrium and severe eye irritation is observed. Clinical and biological examinations carried out on exposed volunteers revealed no anomalies. Acetate produces greater skin and ocular irritation on direct contact. No chronic effects have been reported in man.

**2-METHOXY-1-METHYLETHYL ACETATE**

LD50 (Oral).	8530 mg/kg Rat
LD50 (Dermal).	> 5000 mg/kg Rat

**1-METHOXY-2-PROPANOL**

LD50 (Oral).	5300 mg/kg Rat
LD50 (Dermal).	13000 mg/kg Rabbit
LC50 (Inhalation).	54,6 mg/l/4h Rat

**PROPAN-2-OL**

LD50 (Oral).	4710 mg/kg Rat
LD50 (Dermal).	12800 mg/kg Rat
LC50 (Inhalation).	72,6 mg/l/4h Rat

**SECTION 12. Ecological information.**

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

**12.1. Toxicity.**

Information not available.

**12.2. Persistence and degradability.**

Information not available.

**12.3. Bioaccumulative potential.**

Information not available.

**12.4. Mobility in soil.**

Information not available.

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

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

**12.6. Other adverse effects.**

Information not available.

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

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

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

Avoid littering. Do not contaminate soil, sewers and waterways.

CONTAMINATED PACKAGING

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

**SECTION 14. Transport information.**

These goods must be transported by vehicles authorized to the carriage of dangerous goods according to the provisions set out in the current edition of the Code of International Carriage of Dangerous Goods by Road (ADR) and in all the applicable national regulations.

These goods must be packed in their original packagings or in packagings made of materials resistant to their content and not reacting dangerously with it. People loading and unloading dangerous goods must be trained on all the risks deriving from these substances and on all actions that must be taken in case of emergency situations.

**Road and rail transport:**

ADR/RID Class:	3	UN:	1210
Packing Group:	III		
Label:	3		
Nr. Kemler:	30		
Limited Quantity:	5 L		
Tunnel restriction code:	(D/E)		
Proper Shipping Name:	PRINTING INK or PRINTING INK RELATED MATERIAL		
Special Provision:	640E		

**Carriage by sea (shipping):**

IMO Class:	3	UN:	1210
Packing Group:	III		
Label:	3		
EMS:	F-E, S-D		
Marine Pollutant:	NO		
Proper Shipping Name:	PRINTING INK or PRINTING INK RELATED MATERIAL		

**Transport by air:**

IATA:	3	UN:	1210
Packing Group:	III		
Label:	3		
Cargo:			
Packaging instructions:	366	Maximum quantity:	220 L
Pass.:			
Packaging instructions:	355	Maximum quantity:	60 L
Special Instructions:	A3, A72		
Proper Shipping Name:	PRINTING INK or PRINTING INK RELATED MATERIAL		



**SECTION 15. Regulatory information.****15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture.**

Seveso category. 6

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

Product Point. 3 - 40

Substances in Candidate List (Art. 59 REACH).

None.

Substances subject to authorisation (Annex XIV REACH).

None.

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

None.

Substances subject to the Rotterdam Convention:

None.

Substances subject to the Stockholm Convention:

None.

Healthcare controls.

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

**15.2. Chemical safety assessment.**

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

**SECTION 16. Other information.**

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

<b>Flam. Liq. 2</b>	Flammable liquid, category 2
<b>Flam. Liq. 3</b>	Flammable liquid, category 3
<b>Eye Irrit. 2</b>	Eye irritation, category 2
<b>STOT SE 3</b>	Specific target organ toxicity - single exposure, category 3
<b>H225</b>	Highly flammable liquid and vapour.
<b>H226</b>	Flammable liquid and vapour.
<b>H319</b>	Causes serious eye irritation.
<b>H336</b>	May cause drowsiness or dizziness.

Text of risk (R) phrases mentioned in section 2-3 of the sheet:

<b>R10</b>	FLAMMABLE.
<b>R11</b>	HIGHLY FLAMMABLE.
<b>R36</b>	IRRITATING TO EYES.
<b>R67</b>	VAPOURS MAY CAUSE DROWSINESS AND DIZZINESS.

**LEGEND:**

- ADR: European Agreement concerning the carriage of Dangerous goods by Road
- CAS NUMBER: Chemical Abstract Service Number
- CE50: Effective concentration (required to induce a 50% effect)
- CE NUMBER: Identifier in ESIS (European archive of existing substances)
- CLP: EC Regulation 1272/2008
- DNEL: Derived No Effect Level
- EmS: Emergency Schedule
- GHS: Globally Harmonized System of classification and labeling of chemicals
- IATA DGR: International Air Transport Association Dangerous Goods Regulation
- IC50: Immobilization Concentration 50%
- IMDG: International Maritime Code for dangerous goods
- IMO: International Maritime Organization
- INDEX NUMBER: Identifier in Annex VI of CLP
- LC50: Lethal Concentration 50%
- LD50: Lethal dose 50%
- OEL: Occupational Exposure Level
- PBT: Persistent bioaccumulative and toxic as REACH Regulation
- PEC: Predicted environmental Concentration

**SECTION 16. Other information.** ... / >>

- PEL: Predicted exposure level
- PNEC: Predicted no effect concentration
- REACH: EC Regulation 1907/2006
- RID: Regulation concerning the international transport of dangerous goods by train
- TLV: Threshold Limit Value
- TLV CEILING: Concentration that should not be exceeded during any time of occupational exposure.
- TWA STEL: Short-term exposure limit
- TWA: Time-weighted average exposure limit
- VOC: Volatile organic Compounds
- vPvB: Very Persistent and very Bioaccumulative as for REACH Regulation
- WGK: Water hazard classes (German).

**GENERAL BIBLIOGRAPHY**

1. Directive 1999/45/EC and following amendments
2. Directive 67/548/EEC and following amendments and adjustments
3. Regulation (EC) 1907/2006 (REACH) of the European Parliament
4. Regulation (EC) 1272/2008 (CLP) of the European Parliament
5. Regulation (EC) 790/2009 (I Atp. CLP) of the European Parliament
6. Regulation (EC) 453/2010 of the European Parliament
7. Regulation (EC) 286/2011 (II Atp. CLP) of the European Parliament
8. Regulation (EC) 618/2012 (III Atp. CLP) of the European Parliament
9. The Merck Index. - 10th Edition
10. Handling Chemical Safety
11. Niosh - Registry of Toxic Effects of Chemical Substances
12. INRS - Fiche Toxicologique (toxicological sheet)
13. Patty - Industrial Hygiene and Toxicology
14. N.I. Sax - Dangerous properties of Industrial Materials-7, 1989 Edition
15. ECHA website

**Note for users:**

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

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

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

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