

Diese Datei enthält die Sicherheitsdatenblätter zu allen Farbtönen, Sets und Displays der KREUL Lack Marker. Sie enthält Bestandteile mit unterschiedlicher Kennzeichnung. Die Erstellung eines gemeinsamen Sicherheitsdatenblattes ist daher nicht möglich. Deshalb finden sich im Anhang die Sicherheitsdatenblätter zu den einzelnen Bestandteilen.

This file contains the safety data sheets for all colors, sets and displays of the KREUL Gloss Paint Marker. It contains components with different labels. It is therefore not possible to create a unique safety data sheet. The safety data sheets for the individual components can be found in the appendix.

Folgende Sets und Displays sind enthalten / Following sets and displays are included:

Artikelnummer / Article number **47001**
Handelsname / Trade name **KREUL Lack Marker medium 2er Set /**
 KREUL Gloss Paint Marker medium Set of 2

Bestandteile / Components:

KREUL Lack Marker medium Weiß / KREUL Gloss Paint Marker medium White
KREUL Lack Marker medium Schwarz / KREUL Gloss Paint Marker medium Black

Artikelnummer / Article number **47002**
Handelsname / Trade name **KREUL Lack Marker medium 4er Set /**
 KREUL Gloss Paint Marker medium Set of 4

KREUL Lack Marker medium Gold / KREUL Gloss Paint Marker medium Gold
KREUL Lack Marker medium Silber / KREUL Gloss Paint Marker medium Silver
KREUL Lack Marker medium Weiß / KREUL Gloss Paint Marker medium White
KREUL Lack Marker medium Schwarz / KREUL Gloss Paint Marker medium Black

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 29.03.2021

Version number 3.0

Revision: 29.03.2021

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

· **1.1 Product identifier**

· **Trade name:**

KREUL Gloss Paint Marker medium White, Yellow, Orange, Red, Pink, Violet, Light Blue, Green, Brown
KREUL Gloss Paint Marker fine White, Yellow, Orange, Red, Pink, Violet, Light Blue, Green, Brown
KREUL Gloss Paint Marker extrafine White, Red
KREUL Gloss Paint Marker extrafine White
(Safety data sheet for the included ink.)

· **Article number:**

47009, 47010, 47012, 47013, 47014, 47015, 47016, 47017, 47018, 47019, 47209, 47210, 47212, 47213, 47214, 47215, 47216, 47217, 47218, 47219, 47410, 47412, 47510

· **1.2 Relevant identified uses of the substance or mixture and uses advised against**

No further relevant information available.

· **Application of the substance / the mixture**

Paint

For artists and hobby user.

· **1.3 Details of the supplier of the safety data sheet**

· **Manufacturer/Supplier:**

C. KREUL GmbH & Co. KG
 Carl-Kreul-Straße 2
 D-91352 HALLERNDORF
 DEUTSCHLAND
 Tel. + 49 (0)9545 / 925 - 0
 Fax + 49 (0)9545 / 925 - 511
 E-Mail: info@c-kreul.de

· **Further information obtainable from:**

Product Safety Department:
 Treiber, b.treiber@c-kreul.de

· **1.4 Emergency telephone number:** +44 (0)171 635 91 91

2 Hazards identification

· **2.1 Classification of the substance or mixture**

· **Classification according to Regulation (EC) No 1272/2008**



GHS02 flame

Flam. Liq. 3 H226 Flammable liquid and vapour.



GHS07

STOT SE 3 H336 May cause drowsiness or dizziness.

· **2.2 Label elements**

EC Regulation 1907/2006 (REACH) differentiates between substances, mixtures and articles. In accordance with the definition of articles in REACH, the European Writing Instrument Manufacturer's Association (EWIMA) considers writing instruments, marker pens etc. to be articles. However, no safety data sheets are provided for articles. In contrast, safety data sheets are mandatory for substances and mixtures. For this reason, the information in the safety data sheet provided always refers to the basic ink and not to the product as a whole.

· **Labelling according to Regulation (EC) No 1272/2008**

The product is classified and labelled according to the CLP regulation.

· **Hazard pictograms**



GHS02



GHS07

· **Signal word** Warning

· **Hazard-determining components of labelling:**

1-methoxy-2-propanol

(Contd. on page 2)

GB

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 29.03.2021

Version number 3.0

Revision: 29.03.2021

(Contd. of page 1)

· Hazard statements

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

· Precautionary statements

P101 If medical advice is needed, have product container or label at hand.
P102 Keep out of reach of children.
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P271 Use only outdoors or in a well-ventilated area.
P370+P378 In case of fire: Use for extinction: CO₂, powder or water spray.
P403+P233 Store in a well-ventilated place. Keep container tightly closed.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· Additional information:

EUH211 Warning! Hazardous respirable droplets may be formed when sprayed. Do not breathe spray or mist.

· 2.3 Other hazards

· Results of PBT and vPvB assessment

· **PBT:** Not applicable.
· **vPvB:** Not applicable.

3 Composition/information on ingredients

· 3.2 Chemical characterisation: Mixtures

· **Description:** Mixture of substances listed below with nonhazardous additions.

· Dangerous components:

CAS: 107-98-2 EINECS: 203-539-1 Index number: 603-064-00-3	1-methoxy-2-propanol ⚠ Flam. Liq. 3, H226; ⚠ STOT SE 3, H336	25-<85%
	2,2'-[(3,3'-Dichlor[1,1'-biphenyl]-4,4'-diyl)bis(azo)]bis[N-(4-chlor-2,5-dimethoxyphenyl)-3-oxobutyramid] Aquatic Chronic 3, H412	<2.5%
CAS: 13463-67-7 EINECS: 236-675-5 Index number: 022-006-00-2 Reg.nr.: 01-2119489379-17-XXXX	titanium dioxide ⚠ Carc. 2, H351	>1%

· **Additional information:** For the wording of the listed hazard phrases refer to section 16.

4 First aid measures

· 4.1 Description of first aid measures

· **After inhalation:** Supply fresh air; consult doctor in case of complaints.

· After skin contact:

Wash with water and acidic soap.
If skin irritation continues, consult a doctor.

· After eye contact:

Rinse opened eye for several minutes under running water.
Remove contact lenses.

· After swallowing:

If symptoms persist consult doctor.
Rinse out mouth and then drink plenty of water.

· **4.2 Most important symptoms and effects, both acute and delayed** No further relevant information available.

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

No further relevant information available.

5 Firefighting measures

· 5.1 Extinguishing media

· **Suitable extinguishing agents:** CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

· **For safety reasons unsuitable extinguishing agents:** Water with full jet

· 5.2 Special hazards arising from the substance or mixture

Formation of toxic gases is possible during heating or in case of fire.

· 5.3 Advice for firefighters

· **Protective equipment:** Mouth respiratory protective device.

· **Additional information** Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

6 Accidental release measures

· 6.1 Personal precautions, protective equipment and emergency procedures

Wear protective equipment. Keep unprotected persons away.

· **6.2 Environmental precautions:** Do not allow to enter sewers/ surface or ground water.

· 6.3 Methods and material for containment and cleaning up:

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to item 13.

(Contd. on page 3)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 29.03.2021

Version number 3.0

Revision: 29.03.2021

(Contd. of page 2)

Ensure adequate ventilation.
Dispose of the material collected according to regulations.

6.4 Reference to other sections

See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage

· **7.1 Precautions for safe handling** No special precautions are necessary if used correctly.

· Information about fire - and explosion protection:

Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.

· 7.2 Conditions for safe storage, including any incompatibilities

· Storage:

· **Requirements to be met by storerooms and receptacles:** No special requirements.

· Information about storage in one common storage facility:

Do not store together with reducing agents, heavy-metal compounds, acids and alkalis.

· **Further information about storage conditions:** Keep container tightly sealed.

· **Storage class:** 3

· **7.3 Specific end use(s)** See chapter 1.2.

8 Exposure controls/personal protection

· 8.1 Control parameters

· **Additional information about design of technical facilities:** No further data; see item 7.

· Ingredients with limit values that require monitoring at the workplace:

107-98-2 1-methoxy-2-propanol

WEL	Short-term value: 560 mg/m ³ , 150 ppm
	Long-term value: 375 mg/m ³ , 100 ppm
Sk	

13463-67-7 titanium dioxide

WEL	Long-term value: 10* 4** mg/m ³
	*total inhalable **respirable

· DNELs

107-98-2 1-methoxy-2-propanol

Oral	long-term exposure-systemic effects	33 mg/kg (general population)
Dermal	long-term exposure-systemic effects	183 mg/kg bw/d (general population)
		78 mg/kg bw/d (worker)
Inhalative	long-term exposure-systemic effects	43.9 mg/m ³ (general population)
		369 mg/m ³ (worker)

· PNECs

107-98-2 1-methoxy-2-propanol

water	100 mg/l
freshwater	10 mg/l
marine water	1 mg/l
sewage treatment plant (STP)	100 mg/l
freshwater sediment	52.3 mg/kg
marine sediment	5.2 mg/kg

· **Additional information:** The lists valid during the making were used as basis.

· 8.2 Exposure controls

· Personal protective equipment:

· **General protective and hygienic measures:** Wash hands before breaks and at the end of work.

· **Respiratory protection:** Not required.

· Protection of hands:

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· For the permanent contact gloves made of the following materials are suitable:

Butyl rubber, BR

Recommended thickness of the material: ≥ 0.4 mm

Value for the permeation: Level ≤ 8 h

(Contd. on page 4)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 29.03.2021

Version number 3.0

Revision: 29.03.2021

(Contd. of page 3)

· **As protection from splashes gloves made of the following materials are suitable:**

Nitrile rubber, NBR
 Recommended thickness of the material: ≥ 0.38 mm
 Value for the permeation: Level ≤ 2 -4h

· **Eye protection:**



Tightly sealed goggles

9 Physical and chemical properties

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

· **General Information**

· **Appearance:**

· Form:	Fluid
· Colour:	According to product specification
· Odour:	Alcohol-like
· Odour threshold:	Not determined.

· **pH-value:** Not determined.

· **Change in condition**

· Melting point/freezing point:	Undetermined.
· Initial boiling point and boiling range:	120 °C

· **Flash point:** 31 °C

· **Flammability (solid, gas):** Not applicable.

· **Ignition temperature:** 250 °C

· **Decomposition temperature:** Not determined.

· **Auto-ignition temperature:** Product is not selfigniting.

· **Explosive properties:** Product is not explosive. However, formation of explosive air/vapour mixtures are possible.

· **Explosion limits:**

· Lower:	1.7 Vol %
· Upper:	11.5 Vol %

· **Vapour pressure at 20 °C:** 12 hPa

· **Density:** Not determined.

· **Relative density** Not determined.

· **Vapour density** Not determined.

· **Evaporation rate** Not determined.

· **Solubility in / Miscibility with water:** Fully miscible.

· **Partition coefficient: n-octanol/water:** Not determined.

· **Viscosity:**

· **Dynamic:** Not determined.

· **Kinematic:** Not determined.

· **Solvent content:**

· **Organic solvents:** 25–<85 %

· **VOC (EC)** 25–<85 %

· **9.2 Other information** No further relevant information available.

10 Stability and reactivity

· **10.1 Reactivity** No further relevant information available.

· **10.2 Chemical stability**

· **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.

· **10.3 Possibility of hazardous reactions** No dangerous reactions known.

· **10.4 Conditions to avoid** No further relevant information available.

· **10.5 Incompatible materials:** No further relevant information available.

· **10.6 Hazardous decomposition products:** No dangerous decomposition products known.

GB
(Contd. on page 5)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 29.03.2021

Version number 3.0

Revision: 29.03.2021

(Contd. of page 4)

11 Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity** Based on available data, the classification criteria are not met.

- **LD/LC50 values relevant for classification:**

107-98-2 1-methoxy-2-propanol

Oral	LD50	5,660 mg/kg (rat)
Dermal	LD50	13,000 mg/kg (rabbit)

13463-67-7 titanium dioxide

Oral	LD50	>20,000 mg/kg (rat)
Dermal	LD50	>10,000 mg/kg (rabbit)
Inhalative	LC50/4h	>6.82 mg/m ³ (rat)

- **Primary irritant effect:**
- **Skin corrosion/irritation** Based on available data, the classification criteria are not met.
- **Serious eye damage/irritation** Based on available data, the classification criteria are not met.
- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
- **Additional toxicological information:**
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- **Carcinogenicity** Based on available data, the classification criteria are not met.
- **Reproductive toxicity** Based on available data, the classification criteria are not met.
- **STOT-single exposure**
May cause drowsiness or dizziness.
- **STOT-repeated exposure** Based on available data, the classification criteria are not met.
- **Aspiration hazard** Based on available data, the classification criteria are not met.

12 Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **12.2 Persistence and degradability** No further relevant information available.
- **12.3 Bioaccumulative potential** No further relevant information available.
- **12.4 Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Other adverse effects** No further relevant information available.

13 Disposal considerations

- **13.1 Waste treatment methods**
- **Recommendation** Must not be disposed together with household garbage. Do not allow product to reach sewage system.

- **European waste catalogue**

08 01 11*	waste paint and varnish containing organic solvents or other hazardous substances
08 03 12*	waste ink containing hazardous substances
15 01 02	plastic packaging
HP 3	Flammable
HP 5	Specific Target Organ Toxicity (STOT)/Aspiration Toxicity

- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agents:** Water, if necessary together with cleansing agents.

14 Transport information

- **14.1 UN-Number**
- **ADR, IMDG, IATA** UN1263
- **14.2 UN proper shipping name**
- **ADR** 1263 PAINT
- **IMDG, IATA** PAINT

(Contd. on page 6)

GB

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 29.03.2021

Version number 3.0

Revision: 29.03.2021

(Contd. of page 5)

14.3 Transport hazard class(es)

· ADR, IMDG, IATA



· Class 3 Flammable liquids.
· Label 3

14.4 Packing group

· ADR, IMDG, IATA III

· 14.5 Environmental hazards: Not applicable.

· 14.6 Special precautions for user Warning: Flammable liquids.

· Hazard identification number (Kemler code): 30

· EMS Number: F-E,S-E

· Stowage Category A

· 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code Not applicable.

Transport/Additional information:

· ADR

· Limited quantities (LQ) 5L
· Excepted quantities (EQ) Code: E1
Maximum net quantity per inner packaging: 30 ml
Maximum net quantity per outer packaging: 1000 ml

· Transport category 3
· Tunnel restriction code D/E

· IMDG

· Limited quantities (LQ) 5L
· Excepted quantities (EQ) Code: E1
Maximum net quantity per inner packaging: 30 ml
Maximum net quantity per outer packaging: 1000 ml

· UN "Model Regulation": UN 1263 PAINT, 3, III

15 Regulatory information

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

· Directive 2012/18/EU

· Named dangerous substances - ANNEX I None of the ingredients is listed.

· Seveso category P5c FLAMMABLE LIQUIDS

· Qualifying quantity (tonnes) for the application of lower-tier requirements 5.000 t

· Qualifying quantity (tonnes) for the application of upper-tier requirements 50.000 t

· REGULATION (EC) No 1907/2006 ANNEX XVII Conditions of restriction: 3

· 15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· Relevant phrases

H226 Flammable liquid and vapour.
H336 May cause drowsiness or dizziness.
H351 Suspected of causing cancer.
H412 Harmful to aquatic life with long lasting effects.

· Department issuing SDS: Product Safety Department

· Contact: B. Treiber, b.treiber@c-kreul.de

· Abbreviations and acronyms:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
VOC: Volatile Organic Compounds (USA, EU)
DNEL: Derived No-Effect Level (REACH)
PNEC: Predicted No-Effect Concentration (REACH)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative

(Contd. on page 7)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 29.03.2021

Version number 3.0

Revision: 29.03.2021

Flam. Liq. 3: Flammable liquids – Category 3
Carc. 2: Carcinogenicity – Category 2
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3
Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3
- * **Data compared to the previous version altered.**

(Contd. of page 6)

GB

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 10.12.2020

Version number 1.1

Revision: 10.12.2020

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

- **1.1 Product identifier**
- **Trade name:**
KREUL Gloss Paint Marker medium Black
KREUL Gloss Paint Marker fine Black
KREUL Gloss Paint Marker extrafine Black
KREUL Gloss Paint Marker extrafine Black
 (Safety data sheet for the included ink.)
- **Article number:** 47011, 47211, 47411, 47511
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**
 No further relevant information available.
- **Application of the substance / the mixture**
 Paint
 For artists and hobby user.
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
 C. KREUL GmbH & Co. KG
 Carl-Kreul-Straße 2
 D-91352 HALLERNDORF
 DEUTSCHLAND
 Tel. + 49 (0)9545 / 925 - 0
 Fax + 49 (0)9545 / 925 - 511
 E-Mail: info@c-kreul.de
- **Further information obtainable from:**
 Product Safety Department:
 Treiber, b.treiber@c-kreul.de
- **1.4 Emergency telephone number:** +44 (0)171 635 91 91

2 Hazards identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**



Flam. Liq. 3 H226 Flammable liquid and vapour.



STOT SE 3 H336 May cause drowsiness or dizziness.

- **2.2 Label elements**
 EC Regulation 1907/2006 (REACH) differentiates between substances, mixtures and articles. In accordance with the definition of articles in REACH, the European Writing Instrument Manufacturer's Association (EWIMA) considers writing instruments, marker pens etc. to be articles. However, no safety data sheets are provided for articles. In contrast, safety data sheets are mandatory for substances and mixtures. For this reason, the information in the safety data sheet provided always refers to the basic ink and not to the product as a whole.
- **Labelling according to Regulation (EC) No 1272/2008**
 The product is classified and labelled according to the CLP regulation.
- **Hazard pictograms**



- **Signal word** Warning
- **Hazard-determining components of labelling:**
 1-methoxy-2-propanol
- **Hazard statements**
 H226 Flammable liquid and vapour.

(Contd. on page 2)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 10.12.2020

Version number 1.1

Revision: 10.12.2020

(Contd. of page 1)

H336 May cause drowsiness or dizziness.

Precautionary statements

- P101 If medical advice is needed, have product container or label at hand.
- P102 Keep out of reach of children.
- P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- P271 Use only outdoors or in a well-ventilated area.
- P370+P378 In case of fire: Use for extinction: CO₂, powder or water spray.
- P403+P233 Store in a well-ventilated place. Keep container tightly closed.
- P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

2.3 Other hazards

Results of PBT and vPvB assessment

- **PBT:** Not applicable.
- **vPvB:** Not applicable.

3 Composition/information on ingredients

3.2 Chemical characterisation: Mixtures

- **Description:** Mixture of substances listed below with nonhazardous additions.

Dangerous components:

CAS: 107-98-2 EINECS: 203-539-1 Index number: 603-064-00-3	1-methoxy-2-propanol Flam. Liq. 3, H226; STOT SE 3, H336	25-<85%
	2,2'-[(3,3'-Dichlor[1,1'-biphenyl]-4,4'-diyl)bis(azo)]bis[N-(4-chlor-2,5-dimethoxyphenyl)-3-oxobutyramid] Aquatic Chronic 3, H412	<2.5%

- **Additional information:** For the wording of the listed hazard phrases refer to section 16.

4 First aid measures

4.1 Description of first aid measures

- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:**
Wash with water and acidic soap.
If skin irritation continues, consult a doctor.
- **After eye contact:**
Rinse opened eye for several minutes under running water.
Remove contact lenses.
- **After swallowing:**
If symptoms persist consult doctor.
Rinse out mouth and then drink plenty of water.
- **4.2 Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **4.3 Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Firefighting measures

- **5.1 Extinguishing media**
- **Suitable extinguishing agents:** CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **For safety reasons unsuitable extinguishing agents:** Water with full jet
- **5.2 Special hazards arising from the substance or mixture**
Formation of toxic gases is possible during heating or in case of fire.
- **5.3 Advice for firefighters**
- **Protective equipment:** Mouth respiratory protective device.
- **Additional information** Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

6 Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
- **6.2 Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **6.3 Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
Dispose of the material collected according to regulations.
- **6.4 Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 10.12.2020

Version number 1.1

Revision: 10.12.2020

(Contd. of page 2)

7 Handling and storage

- **7.1 Precautions for safe handling** No special precautions are necessary if used correctly.
- **Information about fire - and explosion protection:**
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:**
Do not store together with reducing agents, heavy-metal compounds, acids and alkalis.
- **Further information about storage conditions:** Keep container tightly sealed.
- **Storage class:** 3
- **7.3 Specific end use(s)** See chapter 1.2.

8 Exposure controls/personal protection

- **8.1 Control parameters**
- **Additional information about design of technical facilities:** No further data; see item 7.

Ingredients with limit values that require monitoring at the workplace:

107-98-2 1-methoxy-2-propanol

WEL	Short-term value: 560 mg/m ³ , 150 ppm
	Long-term value: 375 mg/m ³ , 100 ppm
Sk	

DNELs

107-98-2 1-methoxy-2-propanol

Oral	long-term exposure-systemic effects	33 mg/kg (general population)
Dermal	long-term exposure-systemic effects	183 mg/kg bw/d (general population) 78 mg/kg bw/d (worker)
Inhalative	long-term exposure-systemic effects	43.9 mg/m ³ (general population) 369 mg/m ³ (worker)

PNECs

107-98-2 1-methoxy-2-propanol

water	100 mg/l
freshwater	10 mg/l
marine water	1 mg/l
sewage treatment plant (STP)	100 mg/l
freshwater sediment	52.3 mg/kg
marine sediment	5.2 mg/kg

- **Additional information:** The lists valid during the making were used as basis.

8.2 Exposure controls

Personal protective equipment:

- **General protective and hygienic measures:** Wash hands before breaks and at the end of work.

- **Respiratory protection:** Not required.

Protection of hands:

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

For the permanent contact gloves made of the following materials are suitable:

Butyl rubber, BR

Recommended thickness of the material: ≥ 0.4 mm

Value for the permeation: Level ≤ 8 h

As protection from splashes gloves made of the following materials are suitable:

Nitrile rubber, NBR

Recommended thickness of the material: ≥ 0.38 mm

Value for the permeation: Level $\leq 2-4$ h

(Contd. on page 4)

GB

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 10.12.2020

Version number 1.1

Revision: 10.12.2020

· Eye protection:

(Contd. of page 3)



Tightly sealed goggles

9 Physical and chemical properties

· 9.1 Information on basic physical and chemical properties

· General Information

· Appearance:

· Form:	Fluid
· Colour:	According to product specification
· Odour:	Alcohol-like
· Odour threshold:	Not determined.

· pH-value: Not determined.

· Change in condition

· Melting point/freezing point:	Undetermined.
· Initial boiling point and boiling range:	120 °C

· Flash point: 31 °C

· Flammability (solid, gas): Not applicable.

· Ignition temperature: 250 °C

· Decomposition temperature: Not determined.

· Auto-ignition temperature: Product is not selfigniting.

· Explosive properties: Product is not explosive. However, formation of explosive air/vapour mixtures are possible.

· Explosion limits:

· Lower:	1.7 Vol %
· Upper:	11.5 Vol %

· Vapour pressure at 20 °C: 12 hPa

· Density: Not determined.

· Relative density: Not determined.

· Vapour density: Not determined.

· Evaporation rate: Not determined.

· Solubility in / Miscibility with water:

Fully miscible.

· Partition coefficient: n-octanol/water: Not determined.

· Viscosity:

· Dynamic:	Not determined.
· Kinematic:	Not determined.

· Solvent content:

· Organic solvents:	25–<85 %
· VOC (EC)	25–<85 %

· 9.2 Other information: No further relevant information available.

10 Stability and reactivity

· 10.1 Reactivity: No further relevant information available.

· 10.2 Chemical stability

· Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.

· 10.3 Possibility of hazardous reactions: No dangerous reactions known.

· 10.4 Conditions to avoid: No further relevant information available.

· 10.5 Incompatible materials: No further relevant information available.

· 10.6 Hazardous decomposition products: No dangerous decomposition products known.

11 Toxicological information

· 11.1 Information on toxicological effects

· Acute toxicity: Based on available data, the classification criteria are not met.

(Contd. on page 5)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 10.12.2020

Version number 1.1

Revision: 10.12.2020

(Contd. of page 4)

· LD/LC50 values relevant for classification:

107-98-2 1-methoxy-2-propanol

Oral	LD50	5,660 mg/kg (rat)
Dermal	LD50	13,000 mg/kg (rabbit)

· Primary irritant effect:

- **Skin corrosion/irritation** Based on available data, the classification criteria are not met.
- **Serious eye damage/irritation** Based on available data, the classification criteria are not met.
- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.

· Additional toxicological information:

- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- **Carcinogenicity** Based on available data, the classification criteria are not met.
- **Reproductive toxicity** Based on available data, the classification criteria are not met.
- **STOT-single exposure**
May cause drowsiness or dizziness.
- **STOT-repeated exposure** Based on available data, the classification criteria are not met.
- **Aspiration hazard** Based on available data, the classification criteria are not met.

12 Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **12.2 Persistence and degradability** No further relevant information available.
- **12.3 Bioaccumulative potential** No further relevant information available.
- **12.4 Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Other adverse effects** No further relevant information available.

13 Disposal considerations


- **13.1 Waste treatment methods**
- **Recommendation** Must not be disposed together with household garbage. Do not allow product to reach sewage system.

· European waste catalogue

08 01 11*	waste paint and varnish containing organic solvents or other hazardous substances
08 03 12*	waste ink containing hazardous substances
15 01 02	plastic packaging
HP 3	Flammable
HP 5	Specific Target Organ Toxicity (STOT)/Aspiration Toxicity

- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agents:** Water, if necessary together with cleansing agents.

14 Transport information

- | | |
|---|---------------------------|
| · 14.1 UN-Number
· ADR, IMDG, IATA | UN1263 |
| · 14.2 UN proper shipping name
· ADR
· IMDG, IATA | 1263 PAINT
PAINT |
| · 14.3 Transport hazard class(es)
· ADR, IMDG, IATA | |
|  | |
| · Class
· Label | 3 Flammable liquids.
3 |
| · 14.4 Packing group
· ADR, IMDG, IATA | III |

(Contd. on page 6)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 10.12.2020

Version number 1.1

Revision: 10.12.2020

(Contd. of page 5)

· 14.5 Environmental hazards:	Not applicable.
· 14.6 Special precautions for user	Warning: Flammable liquids.
· Hazard identification number (Kemler code):	30
· EMS Number:	F-E,S-E
· Stowage Category	A
· 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code	Not applicable.
· Transport/Additional information:	
· ADR	
· Limited quantities (LQ)	5L
· Excepted quantities (EQ)	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· Transport category	3
· Tunnel restriction code	D/E
· IMDG	
· Limited quantities (LQ)	5L
· Excepted quantities (EQ)	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· UN "Model Regulation":	UN 1263 PAINT, 3, III

15 Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Directive 2012/18/EU**
- **Named dangerous substances - ANNEX I** None of the ingredients is listed.
- **Seveso category** P5c FLAMMABLE LIQUIDS
- **Qualifying quantity (tonnes) for the application of lower-tier requirements** 5.000 t
- **Qualifying quantity (tonnes) for the application of upper-tier requirements** 50.000 t
- **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 3
- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· Relevant phrases

H226 Flammable liquid and vapour.
H336 May cause drowsiness or dizziness.
H412 Harmful to aquatic life with long lasting effects.

· **Department issuing SDS:** Product Safety Department

· **Contact:** B. Treiber, b.treiber@c-kreul.de

· Abbreviations and acronyms:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

VOC: Volatile Organic Compounds (USA, EU)

DNEL: Derived No-Effect Level (REACH)

PNEC: Predicted No-Effect Concentration (REACH)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Flam. Liq. 3: Flammable liquids – Category 3

STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3

GB

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 30.04.2020

Version number 1.0

Revision: 30.04.2020

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

- **1.1 Product identifier**
- **Trade name:**
KREUL Gloss Paint Marker medium Gold
KREUL Gloss Paint Marker fine Gold
KREUL Gloss Paint Marker extrafine Gold
KREUL Gloss Paint Marker calligraphy Gold
(Safety data sheet for the included ink.)
- **Article number:** 47020, 47220, 47420, 47520
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**
 No further relevant information available.
- **Application of the substance / the mixture**
 Lacquer
 For artists and hobby user.
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
 C. KREUL GmbH & Co. KG
 Carl-Kreul-Straße 2
 D-91352 HALLERNDORF
 DEUTSCHLAND
 Tel. + 49 (0)9545 / 925 - 0
 Fax + 49 (0)9545 / 925 - 511
 E-Mail: info@c-kreul.de
- **Further information obtainable from:**
 Product Safety Department:
 Treiber, b.treiber@c-kreul.de
- **1.4 Emergency telephone number:** +44 (0)171 635 91 91

2 Hazards identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**



GHS02 flame

Flam. Liq. 3 H226 Flammable liquid and vapour.



GHS09 environment

Aquatic Acute 1 H400 Very toxic to aquatic life.
 Aquatic Chronic 2 H411 Toxic to aquatic life with long lasting effects.



GHS07

STOT SE 3 H336 May cause drowsiness or dizziness.

- **2.2 Label elements**
 EC Regulation 1907/2006 (REACH) differentiates between substances, mixtures and articles. In accordance with the definition of articles in REACH, the European Writing Instrument Manufacturer's Association (EWIMA) considers writing instruments, marker pens etc. to be articles. However, no safety data sheets are provided for articles. In contrast, safety data sheets are mandatory for substances and mixtures. For this reason, the information in the safety data sheet provided always refers to the basic ink and not to the product as a whole.
- **Labelling according to Regulation (EC) No 1272/2008**
 The product is classified and labelled according to the CLP regulation.

(Contd. on page 2)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 30.04.2020

Version number 1.0

Revision: 30.04.2020

(Contd. of page 1)

Hazard pictograms



GHS02

GHS07

GHS09

Signal word Warning

Hazard-determining components of labelling:

1-methoxy-2-propanol

Hazard statements

H226 Flammable liquid and vapour.

H336 May cause drowsiness or dizziness.

H400 Very toxic to aquatic life.

H411 Toxic to aquatic life with long lasting effects.

Precautionary statements

P101 If medical advice is needed, have product container or label at hand.

P102 Keep out of reach of children.

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P271 Use only outdoors or in a well-ventilated area.

P370+P378 In case of fire: Use for extinction: CO2, powder or water spray.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

2.3 Other hazards

Results of PBT and vPvB assessment

• **PBT:** Not applicable.

• **vPvB:** Not applicable.

3 Composition/information on ingredients

3.2 Chemical characterisation: Mixtures

• **Description:** Mixture of substances listed below with nonhazardous additions.

Dangerous components:

CAS: 107-98-2 EINECS: 203-539-1 Index number: 603-064-00-3	1-methoxy-2-propanol ⚠ Flam. Liq. 3, H226; ⚠ STOT SE 3, H336	50-<75%
CAS: 7440-50-8 EINECS: 231-159-6 Reg.nr.: 01-2119480154-42-XXXX	copper ⚠ Aquatic Acute 1, H400; Aquatic Chronic 2, H411; ⚠ Acute Tox. 4, H302	10-<25%
CAS: 7440-66-6 EINECS: 231-175-3 Index number: 030-001-01-9 Reg.nr.: 01-2119467174-37-XXXX	zinc powder -zinc dust (stabilized) ⚠ Aquatic Acute 1, H400; Aquatic Chronic 1, H410	5-<10%
CAS: 1589-47-5 EINECS: 216-455-5 Index number: 603-106-00-0	2-methoxypropanol ⚠ Flam. Liq. 3, H226; ⚠ Repr. 1B, H360D; ⚠ Eye Dam. 1, H318; ⚠ Skin Irrit. 2, H315; STOT SE 3, H335	<0.25%

• **Additional information:** For the wording of the listed hazard phrases refer to section 16.

4 First aid measures

4.1 Description of first aid measures

• **After inhalation:** Supply fresh air; consult doctor in case of complaints.

After skin contact:

Wash with water and acidic soap.

If skin irritation continues, consult a doctor.

After eye contact:

Rinse opened eye for several minutes under running water.

Remove contact lenses.

After swallowing:

If symptoms persist consult doctor.

Rinse out mouth and then drink plenty of water.

• **4.2 Most important symptoms and effects, both acute and delayed** No further relevant information available.

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

No further relevant information available.

5 Firefighting measures

5.1 Extinguishing media

• **Suitable extinguishing agents:** CO2, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

• **For safety reasons unsuitable extinguishing agents:** Water with full jet

• **5.2 Special hazards arising from the substance or mixture** No further relevant information available.

(Contd. on page 3)

GB

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 30.04.2020

Version number 1.0

Revision: 30.04.2020

(Contd. of page 2)

- **5.3 Advice for firefighters**
- **Protective equipment:** No special measures required.
- **Additional information** Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

6 Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
- **6.2 Environmental precautions:**
Inform respective authorities in case of seepage into water course or sewage system.
Do not allow to enter sewers/ surface or ground water.
- **6.3 Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
Dispose of the material collected according to regulations.
- **6.4 Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage

- **7.1 Precautions for safe handling**
No special precautions are necessary if used correctly.
Keep away from heat and direct sunlight.
Use only in well ventilated areas.
- **Information about fire - and explosion protection:**
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Store away from oxidising agents.
- **Further information about storage conditions:** Keep container tightly sealed.
- **7.3 Specific end use(s)** See chapter 1.2.

8 Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.
- **8.1 Control parameters**

Ingredients with limit values that require monitoring at the workplace:

107-98-2 1-methoxy-2-propanol

WEL	Short-term value: 560 mg/m ³ , 150 ppm
	Long-term value: 375 mg/m ³ , 100 ppm
Sk	

7440-50-8 copper

WEL	Short-term value: 2** mg/m ³
	Long-term value: 0.2* 1** mg/m ³
	*fume **dusts and mists (as Cu)

· DNELs

107-98-2 1-methoxy-2-propanol

Oral	long-term exposure-systemic effects	33 mg/kg (general population)
Dermal	long-term exposure-systemic effects	183 mg/kg bw/d (general population) 78 mg/kg bw/d (worker)
Inhalative	long-term exposure-systemic effects	43.9 mg/m ³ (general population) 369 mg/m ³ (worker)

7440-50-8 copper

Oral	long-term exposure-systemic effects	0.16 mg/kg (general population)
Dermal	long-term exposure-systemic effects	137 mg/kg bw/d (general population) 137 mg/kg bw/d (worker)
Inhalative	long-term exposure-systemic effects	18.2 mg/m ³ (general population) 18.2 mg/m ³ (worker)

7440-66-6 zinc powder -zinc dust (stabilized)

Oral	long-term exposure-systemic effects	0.83 mg/kg (general population)
Dermal	long-term exposure-systemic effects	83 mg/kg bw/d (general population) 83 mg/kg bw/d (worker)

(Contd. on page 4)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 30.04.2020

Version number 1.0

Revision: 30.04.2020

(Contd. of page 3)

Inhalative	long-term exposure-systemic effects	2.5 mg/m ³ (general population) 5 mg/m ³ (worker)
------------	-------------------------------------	--

· **PNECs****107-98-2 1-methoxy-2-propanol**

water	100 mg/l
freshwater	10 mg/l
marine water	1 mg/l
sewage treatment plant (STP)	100 mg/l
freshwater sediment	52.3 mg/kg
marine sediment	5.2 mg/kg

7440-50-8 copper

freshwater	0.0078 mg/l
marine water	0.0052 mg/l
sewage treatment plant (STP)	0.23 mg/l
freshwater sediment	87 mg/kg
marine sediment	676 mg/kg
soil	65.5 mg/kg

7440-66-6 zinc powder -zinc dust (stabilized)

freshwater	0.0206 mg/l
marine water	0.0061 mg/l
sewage treatment plant (STP)	0.0052 mg/l
freshwater sediment	87 mg/kg
marine sediment	56.5 mg/kg
soil	35.6 mg/kg

· **Additional information:** The lists valid during the making were used as basis.· **8.2 Exposure controls**· **Personal protective equipment:**· **General protective and hygienic measures:** Wash hands before breaks and at the end of work.· **Respiratory protection:** Not required.· **Protection of hands:**

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **Eye protection:**

Tightly sealed goggles

9 Physical and chemical properties

· **9.1 Information on basic physical and chemical properties**· **General Information**· **Appearance:**

Form:	Fluid
Colour:	According to product specification
Odour:	Ether-like
Odour threshold:	Not determined.

· **pH-value:** Not determined.· **Change in condition**

Melting point/freezing point:	Undetermined.
Initial boiling point and boiling range:	120 °C

· **Flash point:** 31 °C· **Flammability (solid, gas):** Not applicable.· **Ignition temperature:** >250 °C· **Decomposition temperature:** Not determined.

(Contd. on page 5)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 30.04.2020

Version number 1.0

Revision: 30.04.2020

(Contd. of page 4)

· Auto-ignition temperature:	Product is not selfigniting.
· Explosive properties:	Product is not explosive. However, formation of explosive air/vapour mixtures are possible.
· Explosion limits:	
Lower:	1.7 Vol %
Upper:	11.5 Vol %
· Vapour pressure at 20 °C:	12 hPa
· Density at 20 °C:	~1.2 g/cm ³
· Relative density	Not determined.
· Vapour density	Not determined.
· Evaporation rate	Not determined.
· Solubility in / Miscibility with water:	Not miscible or difficult to mix.
· Partition coefficient: n-octanol/water:	Not determined.
· Viscosity:	
Dynamic:	Not determined.
Kinematic:	Not determined.
· Solvent content:	
Organic solvents:	<70 %
· 9.2 Other information	No further relevant information available.

10 Stability and reactivity

- **10.1 Reactivity** No further relevant information available.
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **10.3 Possibility of hazardous reactions** No dangerous reactions known.
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:** No further relevant information available.
- **10.6 Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity** Based on available data, the classification criteria are not met.

· LD/LC50 values relevant for classification:

ATE (Acute Toxicity Estimates)

Oral	LD50	>2,000–5,000 mg/kg
------	------	--------------------

107-98-2 1-methoxy-2-propanol

Oral	LD50	5,660 mg/kg (rat)
------	------	-------------------

Dermal	LD50	13,000 mg/kg (rabbit)
--------	------	-----------------------

7440-50-8 copper

Oral	LD50	500 mg/kg (ATE)
------	------	-----------------

- **Primary irritant effect:**
- **Skin corrosion/irritation** Based on available data, the classification criteria are not met.
- **Serious eye damage/irritation** Based on available data, the classification criteria are not met.
- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- **Carcinogenicity** Based on available data, the classification criteria are not met.
- **Reproductive toxicity** Based on available data, the classification criteria are not met.
- **STOT-single exposure**
May cause drowsiness or dizziness.
- **STOT-repeated exposure** Based on available data, the classification criteria are not met.
- **Aspiration hazard** Based on available data, the classification criteria are not met.

12 Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **12.2 Persistence and degradability** No further relevant information available.
- **12.3 Bioaccumulative potential** No further relevant information available.
- **12.4 Mobility in soil** No further relevant information available.

(Contd. on page 6)

GB

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 30.04.2020

Version number 1.0

Revision: 30.04.2020

(Contd. of page 5)

- **Ecotoxicological effects:**
- **Remark:**
Very toxic for fish
Toxic for fish
- **Additional ecological information:**
- **General notes:**
Do not allow product to reach ground water, water course or sewage system.
Danger to drinking water if even small quantities leak into the ground.
Also poisonous for fish and plankton in water bodies.
Very toxic for aquatic organisms
Toxic for aquatic organisms
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Other adverse effects** No further relevant information available.

13 Disposal considerations



- **13.1 Waste treatment methods**
- **Recommendation** Must not be disposed together with household garbage. Do not allow product to reach sewage system.

- **European waste catalogue**

08 01 11*	waste paint and varnish containing organic solvents or other hazardous substances
15 01 02	plastic packaging
HP3	Flammable
HP5	Specific Target Organ Toxicity (STOT)/Aspiration Toxicity
HP14	Ecotoxic

- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

- | | |
|---|--|
| <ul style="list-style-type: none"> · 14.1 UN-Number · ADR, IMDG, IATA | UN1263 |
| <ul style="list-style-type: none"> · 14.2 UN proper shipping name · ADR · IMDG · IATA | 1263 PAINT, ENVIRONMENTALLY HAZARDOUS
PAINT (copper, zinc powder -zinc dust (stabilized)), MARINE
POLLUTANT
PAINT |
| <ul style="list-style-type: none"> · 14.3 Transport hazard class(es) · ADR, IMDG | 3 Flammable liquids. |
|  | 3 |
| <ul style="list-style-type: none"> · Class · Label | 3 |
| <ul style="list-style-type: none"> · IATA | 3 Flammable liquids. |
|  | 3 |
| <ul style="list-style-type: none"> · Class · Label | 3 |
| <ul style="list-style-type: none"> · 14.4 Packing group · ADR, IMDG, IATA | III |
| <ul style="list-style-type: none"> · 14.5 Environmental hazards: · Marine pollutant: · Special marking (ADR): | Symbol (fish and tree)
Symbol (fish and tree) |
| <ul style="list-style-type: none"> · 14.6 Special precautions for user · Hazard identification number (Kemler code): · EMS Number: · Stowage Category | Warning: Flammable liquids.
30
F-E,S-E
A |
| <ul style="list-style-type: none"> · 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code | Not applicable. |

(Contd. on page 7)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 30.04.2020

Version number 1.0

Revision: 30.04.2020

(Contd. of page 6)

· Transport/Additional information:

· ADR

· Limited quantities (LQ)

5L

· Excepted quantities (EQ)

Code: E1

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 1000 ml

· Transport category

3

· Tunnel restriction code

D/E

· IMDG

· Limited quantities (LQ)

5L

· Excepted quantities (EQ)

Code: E1

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 1000 ml

· UN "Model Regulation":

UN 1263 PAINT, 3, III, ENVIRONMENTALLY HAZARDOUS

15 Regulatory information

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

· Directive 2012/18/EU

· **Named dangerous substances - ANNEX I** None of the ingredients is listed.

· Seveso category

E1 Hazardous to the Aquatic Environment

P5c FLAMMABLE LIQUIDS

· **Qualifying quantity (tonnes) for the application of lower-tier requirements** 100 t

· **Qualifying quantity (tonnes) for the application of upper-tier requirements** 200 t

· **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 3

· **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· Relevant phrases

H226 Flammable liquid and vapour.

H302 Harmful if swallowed.

H315 Causes skin irritation.

H318 Causes serious eye damage.

H335 May cause respiratory irritation.

H336 May cause drowsiness or dizziness.

H360D May damage the unborn child.

H400 Very toxic to aquatic life.

H410 Very toxic to aquatic life with long lasting effects.

H411 Toxic to aquatic life with long lasting effects.

· **Department issuing SDS:** Product Safety Department

· **Contact:** B. Treiber, b.treiber@c-kreul.de

· Abbreviations and acronyms:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

DNEL: Derived No-Effect Level (REACH)

PNEC: Predicted No-Effect Concentration (REACH)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Flam. Liq. 3: Flammable liquids – Category 3

Acute Tox. 4: Acute toxicity - oral – Category 4

Skin Irrit. 2: Skin corrosion/irritation – Category 2

Eye Dam. 1: Serious eye damage/eye irritation – Category 1

Repr. 1B: Reproductive toxicity – Category 1B

STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1

Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1

Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2

GB

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 21.02.2020

Version number 1.0

Revision: 21.02.2020

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

- **1.1 Product identifier**
- **Trade name:**
KREUL Gloss Paint Marker medium Silver
KREUL Gloss Paint Marker fine Silver
KREUL Gloss Paint Marker extrafine Silver
KREUL Gloss Paint Marker calligraphy Silver
 (Safety data sheet for the included ink.)
- **Article number:** 47221, 47021, 47421, 47521
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**
 No further relevant information available.
- **Application of the substance / the mixture**
 Lacquer
 For artists and hobby user.
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
 C. KREUL GmbH & Co. KG
 Carl-Kreul-Straße 2
 D-91352 HALLERNDORF
 DEUTSCHLAND
 Tel. + 49 (0)9545 / 925 - 0
 Fax + 49 (0)9545 / 925 - 511
 E-Mail: info@c-kreul.de
- **Further information obtainable from:**
 Product Safety Department:
 Treiber, b.treiber@c-kreul.de
- **1.4 Emergency telephone number:** +44 (0)171 635 91 91

2 Hazards identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**



GHS02 flame

Flam. Liq. 3 H226 Flammable liquid and vapour.



GHS07

STOT SE 3 H336 May cause drowsiness or dizziness.

- **2.2 Label elements**

EC Regulation 1907/2006 (REACH) differentiates between substances, mixtures and articles. In accordance with the definition of articles in REACH, the European Writing Instrument Manufacturer's Association (EWIMA) considers writing instruments, marker pens etc. to be articles. However, no safety data sheets are provided for articles. In contrast, safety data sheets are mandatory for substances and mixtures. For this reason, the information in the safety data sheet provided always refers to the basic ink and not to the product as a whole.

- **Labelling according to Regulation (EC) No 1272/2008**

The product is classified and labelled according to the CLP regulation.

- **Hazard pictograms**



GHS02

GHS07

- **Signal word** Warning

- **Hazard-determining components of labelling:**

1-methoxy-2-propanol

- **Hazard statements**

H226 Flammable liquid and vapour.

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 21.02.2020

Version number 1.0

Revision: 21.02.2020

(Contd. of page 1)

H336 May cause drowsiness or dizziness.

Precautionary statements

- P101 If medical advice is needed, have product container or label at hand.
- P102 Keep out of reach of children.
- P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- P271 Use only outdoors or in a well-ventilated area.
- P370+P378 In case of fire: Use for extinction: CO₂, powder or water spray.
- P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

2.3 Other hazards**Results of PBT and vPvB assessment**

- **PBT:** Not applicable.
- **vPvB:** Not applicable.

3 Composition/information on ingredients

3.2 Chemical characterisation: Mixtures

- **Description:** Mixture of substances listed below with nonhazardous additions.

Dangerous components:

CAS: 107-98-2 EINECS: 203-539-1 Index number: 603-064-00-3	1-methoxy-2-propanol ⚠ Flam. Liq. 3, H226; ⚠ STOT SE 3, H336	70-<90%
CAS: 7429-90-5 EINECS: 231-072-3 Index number: 013-002-00-1 Reg.nr.: 01-2119529243-45-XXXX	aluminium powder (stabilised) ⚠ Flam. Sol. 1, H228	5-<10%
CAS: 1589-47-5 EINECS: 216-455-5 Index number: 603-106-00-0	2-methoxypropanol ⚠ Flam. Liq. 3, H226; ⚠ Repr. 1B, H360D; ⚠ Eye Dam. 1, H318; ⚠ Skin Irrit. 2, H315; STOT SE 3, H335	<0.25%

- **Additional information:** For the wording of the listed hazard phrases refer to section 16.

4 First aid measures

4.1 Description of first aid measures

- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:**
Wash with water and acidic soap.
Generally the product does not irritate the skin.
- **After eye contact:**
Remove contact lenses.
Rinse opened eye for several minutes under running water.
- **After swallowing:**
If symptoms persist consult doctor.
Rinse out mouth and then drink plenty of water.
- **4.2 Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **4.3 Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Firefighting measures

- **5.1 Extinguishing media**
- **Suitable extinguishing agents:** CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **For safety reasons unsuitable extinguishing agents:** Water with full jet
- **5.2 Special hazards arising from the substance or mixture** No further relevant information available.
- **5.3 Advice for firefighters**
- **Protective equipment:** No special measures required.
- **Additional information** Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

6 Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
- **6.2 Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **6.3 Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
- **6.4 Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.

(Contd. on page 3)

GB

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 21.02.2020

Version number 1.0

Revision: 21.02.2020

See Section 13 for disposal information.

(Contd. of page 2)

7 Handling and storage

7.1 Precautions for safe handling

No special precautions are necessary if used correctly.
Use only in well ventilated areas.
Keep away from heat and direct sunlight.

Information about fire - and explosion protection:

Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.

7.2 Conditions for safe storage, including any incompatibilities

Storage:

- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Store away from oxidising agents.
- **Further information about storage conditions:** Keep container tightly sealed.
- **7.3 Specific end use(s)** See chapter 1.2.

8 Exposure controls/personal protection

· **Additional information about design of technical facilities:** No further data; see item 7.

8.1 Control parameters

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

107-98-2 1-methoxy-2-propanol

WEL	Short-term value: 560 mg/m ³ , 150 ppm
	Long-term value: 375 mg/m ³ , 100 ppm
Sk	

DNELs

107-98-2 1-methoxy-2-propanol

Oral	long-term exposure-systemic effects	33 mg/kg (general population)
Dermal	long-term exposure-systemic effects	183 mg/kg bw/d (general population) 78 mg/kg bw/d (worker)
Inhalative	long-term exposure-systemic effects	43.9 mg/m ³ (general population) 369 mg/m ³ (worker)

PNECs

107-98-2 1-methoxy-2-propanol

water	100 mg/l
freshwater	10 mg/l
marine water	1 mg/l
sewage treatment plant (STP)	100 mg/l
freshwater sediment	52.3 mg/kg
marine sediment	5.2 mg/kg

· **Additional information:** The lists valid during the making were used as basis.

8.2 Exposure controls

Personal protective equipment:

- **General protective and hygienic measures:** Wash hands before breaks and at the end of work.
- **Respiratory protection:** Use suitable respiratory protective device when high concentrations are present.
- **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

For the permanent contact gloves made of the following materials are suitable:

Butyl rubber, BR

Recommended thickness of the material: ≥ 0.5 mm

Value for the permeation: Level ≤ 8 h

(Contd. on page 4)

GB

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 21.02.2020

Version number 1.0

Revision: 21.02.2020

· Eye protection:

(Contd. of page 3)



Tightly sealed goggles

9 Physical and chemical properties

· 9.1 Information on basic physical and chemical properties

· General Information

· Appearance:

· Form:	Fluid
· Colour:	According to product specification
· Odour:	Ether-like
· Odour threshold:	Not determined.

· pH-value: Not determined.

· Change in condition

· Melting point/freezing point:	Undetermined.
· Initial boiling point and boiling range:	120 °C

· Flash point: 31 °C

· Flammability (solid, gas): Not applicable.

· Ignition temperature: >250 °C

· Decomposition temperature: Not determined.

· Auto-ignition temperature: Product is not selfigniting.

· Explosive properties: Product is not explosive. However, formation of explosive air/vapour mixtures are possible.

· Explosion limits:

· Lower:	1.7 Vol %
· Upper:	11.5 Vol %

· Vapour pressure at 20 °C: 12 hPa

· Density at 20 °C:	~1 g/cm ³
· Relative density	Not determined.
· Vapour density	Not determined.
· Evaporation rate	Not determined.

· Solubility in / Miscibility with water: Not miscible or difficult to mix.

· Partition coefficient: n-octanol/water: Not determined.

· Viscosity:

· Dynamic:	Not determined.
· Kinematic:	Not determined.

· Solvent content:

· Organic solvents:	<82 %
· VOC (EC)	<82.00 %

· 9.2 Other information: No further relevant information available.

10 Stability and reactivity

· 10.1 Reactivity: No further relevant information available.

· 10.2 Chemical stability

· Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.

· 10.3 Possibility of hazardous reactions: No dangerous reactions known.

· 10.4 Conditions to avoid: No further relevant information available.

· 10.5 Incompatible materials: Keep away from oxidizing agents, strong alkaline and acidic materials.

· 10.6 Hazardous decomposition products: No dangerous decomposition products known.

11 Toxicological information

· 11.1 Information on toxicological effects

· Acute toxicity: Based on available data, the classification criteria are not met.

· LD/LC50 values relevant for classification:

107-98-2 1-methoxy-2-propanol

Oral	LD50	5,660 mg/kg (rat)
------	------	-------------------

(Contd. on page 5)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 21.02.2020

Version number 1.0

Revision: 21.02.2020

(Contd. of page 4)

Dermal	LD50	13,000 mg/kg (rabbit)
7429-90-5 aluminium powder (stabilised)		
Oral	LD50	>2,000 mg/kg (rat)
Inhalative	LC50/4h	888 mg/m ³ (rat)

- **Primary irritant effect:**
- **Skin corrosion/irritation** Based on available data, the classification criteria are not met.
- **Serious eye damage/irritation** Based on available data, the classification criteria are not met.
- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- **Carcinogenicity** Based on available data, the classification criteria are not met.
- **Reproductive toxicity** Based on available data, the classification criteria are not met.
- **STOT-single exposure**
May cause drowsiness or dizziness.
- **STOT-repeated exposure** Based on available data, the classification criteria are not met.
- **Aspiration hazard** Based on available data, the classification criteria are not met.

12 Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **12.2 Persistence and degradability** No further relevant information available.
- **12.3 Bioaccumulative potential** No further relevant information available.
- **12.4 Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**
Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Other adverse effects** No further relevant information available.


13 Disposal considerations

- **13.1 Waste treatment methods**
- **Recommendation** Must not be disposed together with household garbage. Do not allow product to reach sewage system.

· European waste catalogue	
08 01 11*	waste paint and varnish containing organic solvents or other hazardous substances
15 01 02	plastic packaging
HP3	Flammable
HP5	Specific Target Organ Toxicity (STOT)/Aspiration Toxicity

- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

· 14.1 UN-Number · ADR, IMDG, IATA	UN1263
· 14.2 UN proper shipping name · ADR · IMDG, IATA	1263 PAINT PAINT
· 14.3 Transport hazard class(es) · ADR, IMDG, IATA	
	
· Class · Label	3 Flammable liquids. 3
· 14.4 Packing group · ADR, IMDG, IATA	III
· 14.5 Environmental hazards:	Not applicable.
· 14.6 Special precautions for user	Warning: Flammable liquids.

(Contd. on page 6)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 21.02.2020

Version number 1.0

Revision: 21.02.2020

(Contd. of page 5)

· Danger code (Kemler):	30
· EMS Number:	F-E, S-E
· Stowage Category	A
· 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code	Not applicable.
· Transport/Additional information:	
· ADR	
· Limited quantities (LQ)	5L
· Excepted quantities (EQ)	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· Transport category	3
· Tunnel restriction code	D/E
· IMDG	
· Limited quantities (LQ)	5L
· Excepted quantities (EQ)	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· UN "Model Regulation":	UN 1263 PAINT, 3, III

15 Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Directive 2012/18/EU**
- **Named dangerous substances - ANNEX I** None of the ingredients is listed.
- **Seveso category P5c** FLAMMABLE LIQUIDS
- **Qualifying quantity (tonnes) for the application of lower-tier requirements** 5,000 t
- **Qualifying quantity (tonnes) for the application of upper-tier requirements** 50,000 t
- **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 3
- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Relevant phrases**
H226 Flammable liquid and vapour.
H228 Flammable solid.
H315 Causes skin irritation.
H318 Causes serious eye damage.
H335 May cause respiratory irritation.
H336 May cause drowsiness or dizziness.
H360D May damage the unborn child.
- **Department issuing SDS:** Product Safety Department
- **Contact:** B. Treiber, b.treiber@c-kreul.de
- **Abbreviations and acronyms:**
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
VOC: Volatile Organic Compounds (USA, EU)
DNEL: Derived No-Effect Level (REACH)
PNEC: Predicted No-Effect Concentration (REACH)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
Flam. Liq. 3: Flammable liquids – Category 3
Flam. Sol. 1: Flammable solids – Category 1
Skin Irrit. 2: Skin corrosion/irritation – Category 2
Eye Dam. 1: Serious eye damage/eye irritation – Category 1
Repr. 1B: Reproductive toxicity – Category 1B
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

GB

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 30.04.2020

Version number 1.0

Revision: 30.04.2020

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

- **1.1 Product identifier**
- **Trade name:**
KREUL Gloss Paint Marker medium Copper
KREUL Gloss Paint Marker fine Copper
KREUL Gloss Paint Marker extrafine Copper
KREUL Gloss Paint Marker calligraphy Copper
 (Safety data sheet for the included ink.)
- **Article number:** 47022, 47222, 47422, 47522
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**
 No further relevant information available.
- **Application of the substance / the mixture**
 Lacquer
 For artists and hobby user.
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
 C. KREUL GmbH & Co. KG
 Carl-Kreul-Straße 2
 D-91352 HALLERNDORF
 DEUTSCHLAND
 Tel. + 49 (0)9545 / 925 - 0
 Fax + 49 (0)9545 / 925 - 511
 E-Mail: info@c-kreul.de
- **Further information obtainable from:**
 Product Safety Department:
 Treiber, b.treiber@c-kreul.de
- **1.4 Emergency telephone number:** +44 (0)171 635 91 91

2 Hazards identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**



GHS02 flame

Flam. Liq. 3 H226 Flammable liquid and vapour.



GHS09 environment

Aquatic Chronic 2 H411 Toxic to aquatic life with long lasting effects.



GHS07

Eye Irrit. 2 H319 Causes serious eye irritation.
 STOT SE 3 H336 May cause drowsiness or dizziness.

- **2.2 Label elements**
 EC Regulation 1907/2006 (REACH) differentiates between substances, mixtures and articles. In accordance with the definition of articles in REACH, the European Writing Instrument Manufacturer's Association (EWIMA) considers writing instruments, marker pens etc. to be articles. However, no safety data sheets are provided for articles. In contrast, safety data sheets are mandatory for substances and mixtures. For this reason, the information in the safety data sheet provided always refers to the basic ink and not to the product as a whole.
- **Labelling according to Regulation (EC) No 1272/2008**
 The product is classified and labelled according to the CLP regulation.

(Contd. on page 2)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 30.04.2020

Version number 1.0

Revision: 30.04.2020

(Contd. of page 1)

Hazard pictograms



GHS02

GHS07

GHS09

Signal word Warning

Hazard-determining components of labelling:

1-methoxy-2-propanol

Hazard statements

H226 Flammable liquid and vapour.

H319 Causes serious eye irritation.

H336 May cause drowsiness or dizziness.

H411 Toxic to aquatic life with long lasting effects.

Precautionary statements

P101 If medical advice is needed, have product container or label at hand.

P102 Keep out of reach of children.

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P271 Use only outdoors or in a well-ventilated area.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

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

P370+P378 In case of fire: Use for extinction: CO₂, powder or water spray.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

2.3 Other hazards

Results of PBT and vPvB assessment

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

3 Composition/information on ingredients

3.2 Chemical characterisation: Mixtures

· **Description:** Mixture of substances listed below with nonhazardous additions.

Dangerous components:

CAS: 107-98-2 EINECS: 203-539-1 Index number: 603-064-00-3	1-methoxy-2-propanol ⚠ Flam. Liq. 3, H226; ⚠ STOT SE 3, H336	50–≤100%
CAS: 7440-50-8 EINECS: 231-159-6	copper ⚠ Aquatic Acute 1, H400; Aquatic Chronic 1, H410; ⚠ Acute Tox. 4, H302; Eye Irrit. 2, H319	10–<25%

· **Additional information:** For the wording of the listed hazard phrases refer to section 16.

4 First aid measures

4.1 Description of first aid measures

· **After inhalation:** Supply fresh air; consult doctor in case of complaints.

After skin contact:

Wash with water and acidic soap.

If skin irritation continues, consult a doctor.

After eye contact:

Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

Rinse opened eye for several minutes under running water.

Remove contact lenses.

After swallowing:

If symptoms persist consult doctor.

Rinse out mouth and then drink plenty of water.

· **4.2 Most important symptoms and effects, both acute and delayed** No further relevant information available.

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

No further relevant information available.

5 Firefighting measures

5.1 Extinguishing media

· **Suitable extinguishing agents:** CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

· **For safety reasons unsuitable extinguishing agents:** Water with full jet

· **5.2 Special hazards arising from the substance or mixture** No further relevant information available.

5.3 Advice for firefighters

· **Protective equipment:** No special measures required.

(Contd. on page 3)

GB

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 30.04.2020

Version number 1.0

Revision: 30.04.2020

(Contd. of page 2)

· **Additional information** Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

6 Accidental release measures

· **6.1 Personal precautions, protective equipment and emergency procedures**

Wear protective equipment. Keep unprotected persons away.

· **6.2 Environmental precautions:**

Inform respective authorities in case of seepage into water course or sewage system.

Do not allow to enter sewers/ surface or ground water.

· **6.3 Methods and material for containment and cleaning up:**

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Dispose contaminated material as waste according to item 13.

Ensure adequate ventilation.

Dispose of the material collected according to regulations.

· **6.4 Reference to other sections**

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

7 Handling and storage

· **7.1 Precautions for safe handling**

No special precautions are necessary if used correctly.

Keep away from heat and direct sunlight.

Use only in well ventilated areas.

· **Information about fire - and explosion protection:**

Keep ignition sources away - Do not smoke.

Protect against electrostatic charges.

· **7.2 Conditions for safe storage, including any incompatibilities**

· **Storage:**

· **Requirements to be met by storerooms and receptacles:** No special requirements.

· **Information about storage in one common storage facility:** Store away from oxidising agents.

· **Further information about storage conditions:** Keep container tightly sealed.

· **7.3 Specific end use(s)** See chapter 1.2.

8 Exposure controls/personal protection

· **Additional information about design of technical facilities:** No further data; see item 7.

· **8.1 Control parameters**

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

107-98-2 1-methoxy-2-propanol

WEL Short-term value: 560 mg/m³, 150 ppm

Long-term value: 375 mg/m³, 100 ppm

Sk

7440-50-8 copper

WEL Short-term value: 2** mg/m³

Long-term value: 0.2* 1** mg/m³

*fume **dusts and mists (as Cu)

· **DNELs**

107-98-2 1-methoxy-2-propanol

Oral	long-term exposure-systemic effects	33 mg/kg (general population)
Dermal	long-term exposure-systemic effects	183 mg/kg bw/d (general population) 78 mg/kg bw/d (worker)
Inhalative	long-term exposure-systemic effects	43.9 mg/m ³ (general population) 369 mg/m ³ (worker)

7440-50-8 copper

Oral	long-term exposure-systemic effects	0.16 mg/kg (general population)
Dermal	long-term exposure-systemic effects	137 mg/kg bw/d (general population) 137 mg/kg bw/d (worker)
Inhalative	long-term exposure-systemic effects	18.2 mg/m ³ (general population) 18.2 mg/m ³ (worker)

· **PNECs**

107-98-2 1-methoxy-2-propanol

water	100 mg/l
freshwater	10 mg/l
marine water	1 mg/l

(Contd. on page 4)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 30.04.2020

Version number 1.0

Revision: 30.04.2020

(Contd. of page 3)

sewage treatment plant (STP)	100 mg/l
freshwater sediment	52.3 mg/kg
marine sediment	5.2 mg/kg
7440-50-8 copper	
freshwater	0.0078 mg/l
marine water	0.0052 mg/l
sewage treatment plant (STP)	0.23 mg/l
freshwater sediment	87 mg/kg
marine sediment	676 mg/kg
soil	65.5 mg/kg

· **Additional information:** The lists valid during the making were used as basis.

· **8.2 Exposure controls**

· **Personal protective equipment:**

· **General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing
Wash hands before breaks and at the end of work.
Avoid contact with the eyes.
Avoid contact with the eyes and skin.

· **Respiratory protection:** Not required.

· **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **For the permanent contact gloves made of the following materials are suitable:**

Butyl rubber, BR
Recommended thickness of the material: ≥ 0.5 mm
Value for the permeation: Level ≤ 8 h

· **Eye protection:**



Tightly sealed goggles

9 Physical and chemical properties

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

· **General Information**

· **Appearance:**

Form: Fluid
Colour: According to product specification

· **Odour:** Ether-like

· **Odour threshold:** Not determined.

· **pH-value:** Not determined.

· **Change in condition**

Melting point/freezing point: Undetermined.
Initial boiling point and boiling range: 120 °C

· **Flash point:** 31 °C

· **Flammability (solid, gas):** Not applicable.

· **Ignition temperature:** 287 °C

· **Decomposition temperature:** Not determined.

· **Auto-ignition temperature:** Product is not selfigniting.

· **Explosive properties:** Product is not explosive. However, formation of explosive air/vapour mixtures are possible.

(Contd. on page 5)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 30.04.2020

Version number 1.0

Revision: 30.04.2020

(Contd. of page 4)

· Explosion limits:	
Lower:	1.7 Vol %
Upper:	11.5 Vol %
· Vapour pressure at 20 °C:	13.3 hPa
· Density at 20 °C:	~1.2 g/cm ³
· Relative density	Not determined.
· Vapour density	Not determined.
· Evaporation rate	Not determined.
· Solubility in / Miscibility with water:	Not miscible or difficult to mix.
· Partition coefficient: n-octanol/water:	Not determined.
· Viscosity:	
Dynamic:	Not determined.
Kinematic:	Not determined.
· Solvent content:	
Organic solvents:	63.4 %
Solids content:	36.5 %
· 9.2 Other information	No further relevant information available.

10 Stability and reactivity

- **10.1 Reactivity** No further relevant information available.
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **10.3 Possibility of hazardous reactions** No dangerous reactions known.
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:** No further relevant information available.
- **10.6 Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity** Based on available data, the classification criteria are not met.

· **LD/LC50 values relevant for classification:**

ATE (Acute Toxicity Estimates)

Oral	LD50	>2,000–5,000 mg/kg
------	------	--------------------

107-98-2 1-methoxy-2-propanol

Oral	LD50	5,660 mg/kg (rat)
Dermal	LD50	13,000 mg/kg (rabbit)

7440-50-8 copper

Oral	LD50	500 mg/kg (ATE)
------	------	-----------------

- **Primary irritant effect:**
- **Skin corrosion/irritation** Based on available data, the classification criteria are not met.
- **Serious eye damage/irritation**
Causes serious eye irritation.
- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- **Carcinogenicity** Based on available data, the classification criteria are not met.
- **Reproductive toxicity** Based on available data, the classification criteria are not met.
- **STOT-single exposure**
May cause drowsiness or dizziness.
- **STOT-repeated exposure** Based on available data, the classification criteria are not met.
- **Aspiration hazard** Based on available data, the classification criteria are not met.

12 Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **12.2 Persistence and degradability** No further relevant information available.
- **12.3 Bioaccumulative potential** No further relevant information available.
- **12.4 Mobility in soil** No further relevant information available.
- **Ecotoxicological effects:**
- **Remark:** Toxic for fish

(Contd. on page 6)

GB

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 30.04.2020

Version number 1.0

Revision: 30.04.2020

(Contd. of page 5)

- **Additional ecological information:**

- **General notes:**

Water hazard class 3 (German Regulation) (Self-assessment): extremely hazardous for water
Do not allow product to reach ground water, water course or sewage system, even in small quantities.
Danger to drinking water if even extremely small quantities leak into the ground.
Also poisonous for fish and plankton in water bodies.

Toxic for aquatic organisms

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

- **PBT:** Not applicable.

- **vPvB:** Not applicable.

- **12.6 Other adverse effects** No further relevant information available.

13 Disposal considerations

- **13.1 Waste treatment methods**

- **Recommendation** Must not be disposed together with household garbage. Do not allow product to reach sewage system.

- **European waste catalogue**

08 01 11*	waste paint and varnish containing organic solvents or other hazardous substances
15 01 02	plastic packaging
HP3	Flammable
HP4	Irritant - skin irritation and eye damage
HP5	Specific Target Organ Toxicity (STOT)/Aspiration Toxicity
HP14	Ecotoxic

- **Uncleaned packaging:**

- **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

- **14.1 UN-Number**

- **ADR, IMDG, IATA**

UN1263

- **14.2 UN proper shipping name**

- **ADR**

1263 PAINT, ENVIRONMENTALLY HAZARDOUS

- **IMDG**

PAINT (copper), MARINE POLLUTANT

- **IATA**

PAINT

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

- **ADR, IMDG**



- **Class**

3 Flammable liquids.

- **Label**

3

- **IATA**



- **Class**

3 Flammable liquids.

- **Label**

3

- **14.4 Packing group**

- **ADR, IMDG, IATA**

III

- **14.5 Environmental hazards:**

- **Marine pollutant:**

Symbol (fish and tree)

- **Special marking (ADR):**

Symbol (fish and tree)

- **14.6 Special precautions for user**

Warning: Flammable liquids.

- **Hazard identification number (Kemler code):**

30

- **EMS Number:**

F-E,S-E

- **Stowage Category**

A

- **14.7 Transport in bulk according to Annex II of Marpol and the IBC Code**

Not applicable.

(Contd. on page 7)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 30.04.2020

Version number 1.0

Revision: 30.04.2020

(Contd. of page 6)

· Transport/Additional information:

· ADR

· Limited quantities (LQ)

5L

· Excepted quantities (EQ)

Code: E1

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 1000 ml

· Transport category

3

· Tunnel restriction code

D/E

· IMDG

· Limited quantities (LQ)

5L

· Excepted quantities (EQ)

Code: E1

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 1000 ml

· UN "Model Regulation":

UN 1263 PAINT, 3, III, ENVIRONMENTALLY HAZARDOUS

15 Regulatory information

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

· Directive 2012/18/EU

· **Named dangerous substances - ANNEX I** None of the ingredients is listed.

· Seveso category

E2 Hazardous to the Aquatic Environment

P5c FLAMMABLE LIQUIDS

· **Qualifying quantity (tonnes) for the application of lower-tier requirements** 200 t

· **Qualifying quantity (tonnes) for the application of upper-tier requirements** 500 t

· **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 3

· **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· Relevant phrases

H226 Flammable liquid and vapour.

H302 Harmful if swallowed.

H319 Causes serious eye irritation.

H336 May cause drowsiness or dizziness.

H400 Very toxic to aquatic life.

H410 Very toxic to aquatic life with long lasting effects.

· **Department issuing SDS:** Product Safety Department

· **Contact:** B. Treiber, b.treiber@c-kreul.de

· Abbreviations and acronyms:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

DNEL: Derived No-Effect Level (REACH)

PNEC: Predicted No-Effect Concentration (REACH)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Flam. Liq. 3: Flammable liquids – Category 3

Acute Tox. 4: Acute toxicity - oral – Category 4

Eye Irrit. 2: Serious eye damage/eye irritation – Category 2

STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1

Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1

Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2

GB

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 10.12.2020

Version number 1.1

Revision: 10.12.2020

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

- **1.1 Product identifier**
- **Trade name:**
KREUL Gloss Paint Marker medium Neon
(Safety data sheet for the included ink.)
- **Article number:** 47035, 47036, 47037
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**
No further relevant information available.
- **Application of the substance / the mixture**
Paint
For artists and hobby user.
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
C. KREUL GmbH & Co. KG
Carl-Kreul-Straße 2
D-91352 HALLERNDORF
DEUTSCHLAND
Tel. + 49 (0)9545 / 925 - 0
Fax + 49 (0)9545 / 925 - 511
E-Mail: info@c-kreul.de
- **Further information obtainable from:**
Product Safety Department:
Treiber, b.treiber@c-kreul.de
- **1.4 Emergency telephone number:** +44 (0)171 635 91 91

2 Hazards identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**



GHS02 flame

Flam. Liq. 2 H225 Highly flammable liquid and vapour.

- **2.2 Label elements**
EC Regulation 1907/2006 (REACH) differentiates between substances, mixtures and articles. In accordance with the definition of articles in REACH, the European Writing Instrument Manufacturer's Association (EWIMA) considers writing instruments, marker pens etc. to be articles. However, no safety data sheets are provided for articles. In contrast, safety data sheets are mandatory for substances and mixtures. For this reason, the information in the safety data sheet provided always refers to the basic ink and not to the product as a whole.
- **Labelling according to Regulation (EC) No 1272/2008**
The product is classified and labelled according to the CLP regulation.

- **Hazard pictograms**



GHS02

- **Signal word** Danger
- **Hazard statements**
H225 Highly flammable liquid and vapour.
- **Precautionary statements**
P101 If medical advice is needed, have product container or label at hand.
P102 Keep out of reach of children.
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P370+P378 In case of fire: Use for extinction: CO₂, powder or water spray.
P403+P235 Store in a well-ventilated place. Keep cool.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.
- **Additional information:**
EUH211 Warning! Hazardous respirable droplets may be formed when sprayed. Do not breathe spray or mist.
- **2.3 Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.

(Contd. on page 2)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 10.12.2020

Version number 1.1

Revision: 10.12.2020

· **vPvB:** Not applicable.

(Contd. of page 1)

3 Composition/information on ingredients

- **3.2 Chemical characterisation: Mixtures**
- **Description:** Mixture of substances listed below with nonhazardous additions.

- **Dangerous components:**

CAS: 64-17-5 EINECS: 200-578-6 Index number: 603-002-00-5 Reg.nr.: 01-2119457610-43-XXXX	ethanol	⚠ Flam. Liq. 2, H225	50–≤100%
---	---------	----------------------	----------

- **Additional information:** For the wording of the listed hazard phrases refer to section 16.

4 First aid measures

- **4.1 Description of first aid measures**
- **General information:** Immediately remove any clothing soiled by the product.
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:**
Wash with water and acidic soap.
If skin irritation continues, consult a doctor.
- **After eye contact:**
Rinse opened eye for several minutes under running water.
Remove contact lenses.
- **After swallowing:**
If symptoms persist consult doctor.
Rinse out mouth and then drink plenty of water.
- **4.2 Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **4.3 Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Firefighting measures

- **5.1 Extinguishing media**
- **Suitable extinguishing agents:** CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **For safety reasons unsuitable extinguishing agents:** Water with full jet
- **5.2 Special hazards arising from the substance or mixture**
Formation of toxic gases is possible during heating or in case of fire.
- **5.3 Advice for firefighters**
- **Protective equipment:**
Mouth respiratory protective device.
No special measures required.
- **Additional information** Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

6 Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
- **6.2 Environmental precautions:**
Dilute with plenty of water.
Do not allow to enter sewers/ surface or ground water.
- **6.3 Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
Dispose of the material collected according to regulations.
- **6.4 Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage

- **7.1 Precautions for safe handling** No special precautions are necessary if used correctly.
- **Information about fire - and explosion protection:**
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.
Protect from heat.

(Contd. on page 3)

GB

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 10.12.2020

Version number 1.1

Revision: 10.12.2020

(Contd. of page 2)

- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** Store in a cool location.
- **Information about storage in one common storage facility:**
Do not store together with reducing agents, heavy-metal compounds, acids and alkalis.
- **Further information about storage conditions:**
Keep container tightly sealed.
Store in cool, dry conditions in well sealed receptacles.
- **Storage class:** 10
- **7.3 Specific end use(s)** See chapter 1.2.

8 Exposure controls/personal protection

- **8.1 Control parameters**
- **Additional information about design of technical facilities:** No further data; see item 7.

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

64-17-5 ethanol

WEL | Long-term value: 1920 mg/m³, 1000 ppm

- **DNELs**

64-17-5 ethanol

Oral	long-term exposure-systemic effects	87 mg/kg (general population)
Dermal	long-term exposure-systemic effects	206 mg/kg bw/d (general population) 343 mg/kg bw/d (worker)
Inhalative	long-term exposure-systemic effects	114 mg/m ³ (general population) 950 mg/m ³ (worker)

- **PNECs**

64-17-5 ethanol

water	2.75 mg/l
freshwater	0.96 mg/l
marine water	0.79 mg/l
sewage treatment plant (STP)	580 mg/l
freshwater sediment	3.6 mg/kg
soil	0.63 mg/kg

- **Additional information:** The lists valid during the making were used as basis.

- **8.2 Exposure controls**

- **Personal protective equipment:**

- **General protective and hygienic measures:**

Immediately remove all soiled and contaminated clothing
Wash hands before breaks and at the end of work.

- **Respiratory protection:** Not required.

- **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

- **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

- **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

- **For the permanent contact gloves made of the following materials are suitable:**

Butyl rubber, BR

Recommended thickness of the material: ≥ 0.5 mm

Value for the permeation: Level ≤ 8 h

- **As protection from splashes gloves made of the following materials are suitable:**

Nitrile rubber, NBR

Recommended thickness of the material: ≥ 0.38 mm mm

Value for the permeation: Level ≤ 2 -4h

(Contd. on page 4)

GB

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 10.12.2020

Version number 1.1

Revision: 10.12.2020

· Eye protection:

(Contd. of page 3)



Tightly sealed goggles

9 Physical and chemical properties

· 9.1 Information on basic physical and chemical properties

· General Information

· Appearance:

· Form:	Fluid
· Colour:	According to product specification
· Odour:	Like alcohol
· Odour threshold:	Not determined.

· pH-value: Not determined.

· Change in condition

· Melting point/freezing point:	-114.5 °C
· Initial boiling point and boiling range:	78.3 °C

· Flash point: 13 °C

· Flammability (solid, gas): Not applicable.

· Ignition temperature: 425 °C

· Decomposition temperature: Not determined.

· Auto-ignition temperature: Product is not selfigniting.

· Explosive properties: Product is not explosive. However, formation of explosive air/vapour mixtures are possible.

· Explosion limits:

· Lower:	3.5 Vol %
· Upper:	12 Vol %

· Vapour pressure at 20 °C: 59 hPa

· Density: Not determined.

· Relative density: Not determined.

· Vapour density: Not determined.

· Evaporation rate: Not determined.

· Solubility in / Miscibility with water: Fully miscible.

· Partition coefficient: n-octanol/water: Not determined.

· Viscosity:

· Dynamic:	Not determined.
· Kinematic:	Not determined.

· Solvent content:

· Organic solvents:	<60.0 %
· VOC (EC)	<60.00 %

· 9.2 Other information: No further relevant information available.

10 Stability and reactivity

· 10.1 Reactivity: No further relevant information available.

· 10.2 Chemical stability

· Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.

· 10.3 Possibility of hazardous reactions: No dangerous reactions known.

· 10.4 Conditions to avoid: No further relevant information available.

· 10.5 Incompatible materials: No further relevant information available.

· 10.6 Hazardous decomposition products: No dangerous decomposition products known.

11 Toxicological information

· 11.1 Information on toxicological effects

· Acute toxicity: Based on available data, the classification criteria are not met.

(Contd. on page 5)

GB

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 10.12.2020

Version number 1.1

Revision: 10.12.2020

(Contd. of page 4)

· LD/LC50 values relevant for classification:

64-17-5 ethanol

Oral	LD50	7,060 mg/kg (rat)
Dermal	LD50	12,800 mg/kg (rabbit)
Inhalative	LC50/4h	20,000 mg/m ³ (rat)

13463-67-7 titanium dioxide

Oral	LD50	>20,000 mg/kg (rat)
Dermal	LD50	>10,000 mg/kg (rabbit)
Inhalative	LC50/4h	>6.82 mg/m ³ (rat)

· Primary irritant effect:

- **Skin corrosion/irritation** Based on available data, the classification criteria are not met.
- **Serious eye damage/irritation** Based on available data, the classification criteria are not met.
- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
- **Additional toxicological information:**
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- **Carcinogenicity** Based on available data, the classification criteria are not met.
- **Reproductive toxicity** Based on available data, the classification criteria are not met.
- **STOT-single exposure** Based on available data, the classification criteria are not met.
- **STOT-repeated exposure** Based on available data, the classification criteria are not met.
- **Aspiration hazard** Based on available data, the classification criteria are not met.

12 Ecological information

· 12.1 Toxicity

· Aquatic toxicity:

64-17-5 ethanol

LC50/96h	11,000 mg/l (fish)
LC50/48h	5,012 mg/l (daphnia)
EC50/48h	9,950 mg/l (crustaceans)

- **12.2 Persistence and degradability** No further relevant information available.
- **12.3 Bioaccumulative potential** No further relevant information available.
- **12.4 Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Other adverse effects** No further relevant information available.

13 Disposal considerations

· 13.1 Waste treatment methods

- **Recommendation** Must not be disposed together with household garbage. Do not allow product to reach sewage system.

· European waste catalogue

08 01 11*	waste paint and varnish containing organic solvents or other hazardous substances
08 03 12*	waste ink containing hazardous substances
15 01 02	plastic packaging
HP 3	Flammable

· Uncleaned packaging:

- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agents:** Water, if necessary together with cleansing agents.

14 Transport information

· 14.1 UN-Number

· ADR, IMDG, IATA

UN1993

· 14.2 UN proper shipping name

· ADR

1993 FLAMMABLE LIQUID, N.O.S. (ETHANOL (ETHYL ALCOHOL))

· IMDG

FLAMMABLE LIQUID, N.O.S. (ETHANOL (ETHYL ALCOHOL))

· IATA

FLAMMABLE LIQUID, N.O.S. (ETHANOL)

(Contd. on page 6)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 10.12.2020

Version number 1.1

Revision: 10.12.2020

(Contd. of page 5)

14.3 Transport hazard class(es)

· ADR, IMDG, IATA



· Class 3 Flammable liquids.
· Label 3

14.4 Packing group

· ADR, IMDG, IATA III

· 14.5 Environmental hazards: Not applicable.

· 14.6 Special precautions for user Warning: Flammable liquids.

· Hazard identification number (Kemler code): 30

· EMS Number: F-E,S-D

· Stowage Category A

· 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code Not applicable.

Transport/Additional information:

· ADR

· Limited quantities (LQ) 5L
· Excepted quantities (EQ) Code: E1
Maximum net quantity per inner packaging: 30 ml
Maximum net quantity per outer packaging: 1000 ml

· Transport category 3
· Tunnel restriction code D/E

· IMDG

· Limited quantities (LQ) 5L
· Excepted quantities (EQ) Code: E1
Maximum net quantity per inner packaging: 30 ml
Maximum net quantity per outer packaging: 1000 ml

· UN "Model Regulation": UN 1993 FLAMMABLE LIQUID, N.O.S. (ETHANOL (ETHYL ALCOHOL)), 3, III

15 Regulatory information

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

- Directive 2012/18/EU
- Named dangerous substances - ANNEX I None of the ingredients is listed.
- Seveso category P5c FLAMMABLE LIQUIDS
- Qualifying quantity (tonnes) for the application of lower-tier requirements 5.000 t
- Qualifying quantity (tonnes) for the application of upper-tier requirements 50.000 t
- REGULATION (EC) No 1907/2006 ANNEX XVII Conditions of restriction: 3

· 15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· Relevant phrases

H225 Highly flammable liquid and vapour.

· Department issuing SDS: Product Safety Department

· Contact: B. Treiber, b.treiber@c-kreul.de

· Abbreviations and acronyms:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

VOC: Volatile Organic Compounds (USA, EU)

DNEL: Derived No-Effect Level (REACH)

PNEC: Predicted No-Effect Concentration (REACH)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Flam. Liq. 2: Flammable liquids – Category 2

· * Data compared to the previous version altered.