

Safety Data Sheet
according to WHS Regulations

Printing date 30.05.2022

Version number 1.1

Revision: 30.05.2022

1 Identification

- **Product identifier**
- **Trade name:**
KREUL Transfer Marker edge, XXL
(Safety data sheet for the included ink.)
- **Article number:** 49931, 49932, 499300
- **Relevant identified uses of the substance or mixture and uses advised against**
No further relevant information available.
- **Application of the substance / the mixture**
Transfer Marker.
For artists and hobby user.
- **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
-
- Importer
Zart Art Pty Ltd
48 Overseas Drive
Noble Park North 3174
VIC
Australia
Ph: 61 3 9890 1867 Fax: 61 3 9898 6527
- **Further information obtainable from:** Ph: 61 3 9890 1867 Fax: 61 3 9898 6527
- **Emergency telephone number:** Poison Centre 13 11 26

2 Hazard(s) Identification

- **Classification of the substance or mixture**



Flam. Liq. 3 H226 Flammable liquid and vapour.



STOT SE 3 H336 May cause drowsiness or dizziness.

- **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.

- **GHS label elements** The product is classified and labelled according to the Globally Harmonised System (GHS).

- **Hazard pictograms**



- **Signal word** Warning

- **Hazard-determining components of labelling:**
2-methoxy-1-methylethyl acetate

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· 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/sparks/open flames/hot surfaces. No smoking.
P271 Use only outdoors or in a well-ventilated area.
P370+P378 In case of fire: Use CO₂, powder or water spray for extinction.
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.

· Other hazards

· Results of PBT and vPvB assessment

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

3 Composition and Information on Ingredients

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

· Dangerous components:

CAS: 108-65-6 EINECS: 203-603-9 Index number: 607-195-00-7	2-methoxy-1-methylethyl acetate ⚠ Flam. Liq. 3, H226	25-<50%
CAS: 687-47-8 EINECS: 211-694-1 Index number: 607-129-00-7	ethyl (S)-2-hydroxypropionate ⚠ Flam. Liq. 3, H226; ⚠ Acute Tox. 3, H331; ⚠ Eye Dam. 1, H318; ⚠ STOT SE 3, H335	10-<25%
	Ester of inorganic acid ⚠ Eye Irritation 2A, H319	10-<25%
	Ester of aliphatic acid ⚠ Flam. Liq. 3, H226	5-<10%
CAS: 112-07-2 EINECS: 203-933-3 Index number: 607-038-00-2	2-butoxyethyl acetate ⚠ Acute Tox. 4, H302; Acute Tox. 4, H312; Acute Tox. 4, H332; Flam. Liq. 4, H227	5-<10%

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

4 First Aid Measures

· 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:

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

· After swallowing:

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

· Information for doctor:

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

· **Indication of any immediate medical attention and special treatment needed** No further relevant information available.

5 Fire Fighting Measures

· 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

· Special hazards arising from the substance or mixture

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

· Advice for firefighters

· **Protective equipment:** Wear self-contained respiratory protective device.

· Additional information

Cool endangered receptacles with water spray.
Collect contaminated fire fighting water separately. It must not enter the sewage system.

6 Accidental Release Measures

· Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation
Keep away from ignition sources.

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- Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:**
Keep contaminated washing water and dispose of appropriately.
Do not allow to enter sewers/ surface or ground water.
- **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.
- **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

- **Handling:**
- **Precautions for safe handling**
Keep receptacles tightly sealed.
Keep away from heat and direct sunlight.
- **Information about fire - and explosion protection:**
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.
- **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 oxidising and acidic materials.
- **Further information about storage conditions:**
Store receptacle in a well ventilated area.
Keep container tightly sealed.
Protect from heat and direct sunlight.
- **Storage class:** 3
- **Specific end use(s)** See chapter 1.2.

8 Exposure controls and personal protection

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

108-65-6 2-methoxy-1-methylethyl acetate

WES	Short-term value: 548 mg/m ³ , 100 ppm Long-term value: 274 mg/m ³ , 50 ppm Sk
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112-07-2 2-butoxyethyl acetate

WES	Short-term value: 333 mg/m ³ , 50 ppm Long-term value: 133 mg/m ³ , 20 ppm Sk
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· DNELs

108-65-6 2-methoxy-1-methylethyl acetate

Oral	long-term exposure-systemic effects	1.67 mg/kg (general population)
Dermal	long-term exposure-systemic effects	54.8 mg/kg bw/d (general population) 153.5 mg/kg bw/d (worker)
Inhalative	long-term exposure-systemic effects	33 mg/m ³ (general population) 275 mg/m ³ (worker)

687-47-8 ethyl (S)-2-hydroxypropionate

Inhalative	long-term exposure-systemic effects	6 mg/m ³ (general population) 1.6 mg/m ³ (worker)
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112-07-2 2-butoxyethyl acetate

Dermal	chronic - systemic effect	169 mg/kg bw/d (worker)
Inhalative	chronic - systemic effect	133 mg/m ³ (worker)

· PNECs

108-65-6 2-methoxy-1-methylethyl acetate

water	6.35 mg/l
freshwater	0.635 mg/l
marine water	0.0635 mg/l
sewage treatment plant (STP)	100 mg/l
freshwater sediment	3.29 mg/kg
marine sediment	0.329 mg/kg
soil	0.29 mg/kg

687-47-8 ethyl (S)-2-hydroxypropionate

water	3.2 mg/l
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112-07-2 2-butoxyethyl acetate

freshwater	0.304 mg/l
marine water	0.03 mg/l
sewage treatment plant (STP)	90 mg/l
freshwater sediment	2.03 mg/kg
marine sediment	0.203 mg/kg
soil	0.415 mg/kg

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

· **Exposure controls**

· **General protective and hygienic measures:**

The usual precautionary measures are to be adhered to when handling chemicals.

Do not eat, drink, smoke or sniff while working.

Wash hands before breaks and at the end of work.

· **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: ≥ 0.7 mm

Value for the permeation: Level ≤ 480 min

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

Butyl rubber, BR

Recommended thickness of the material: ≥ 0.7 mm

Value for the permeation: Level ≤ 480 min

· **Eye protection:**



Tightly sealed goggles

· **Body protection:** Protective work clothing

9 Physical and Chemical Properties

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

· **General Information**

· **Appearance:**

Form: Fluid

· **Odour:** Solvent-like

· **pH-value:** Not determined.

· **Change in condition**

Melting point/freezing point: Undetermined.

Initial boiling point and boiling range: Undetermined.

· **Flash point:** 59 °C

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

· **Ignition temperature:** 315 °C

· **Decomposition temperature:** Not determined.

· **Explosive properties:** Not determined.

· **Explosion limits:**

Lower: 1.5 Vol %

Upper: 11.4 Vol %

· **Vapour pressure at 20 °C:** 3.4 hPa

· **Density at 20 °C:** 1.038 g/cm³

· **Relative density:** Not determined.

· **Vapour density:** Not determined.

· **Evaporation rate:** Not determined.

· **Solubility in / Miscibility with**

water: Not determined.

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

· **Viscosity:**

Dynamic: Not determined.

Kinematic: Not determined.

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· Solvent content: VOC (EC)	40.00 %
· Other information	No further relevant information available.

10 Stability and Reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:**
In case of fire, the following can be released:
Carbon monoxide and carbon dioxide

11 Toxicological Information

- **Information on toxicological effects**
- **Acute toxicity**

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

ATE (Acute Toxicity Estimates)

Oral	LD50	>4,921–6,984 mg/kg (rat)
Dermal	LD50	>4,688 mg/kg
Inhalative	LC50/4h	>10.7–14.1 mg/m ³ (rat)

108-65-6 2-methoxy-1-methylethyl acetate

Oral	LD50	8,532 mg/kg (rat)
Dermal	LD50	>5,000 mg/kg (rab) >2,000 mg/kg (rat) (OECD 401)
Inhalative	LC50/4h	>10,000 mg/l /4h (rat)

687-47-8 ethyl (S)-2-hydroxypropionate

Oral	LD50	>2,000 mg/kg (rat) (OECD 401)
Dermal	LD50	>5,000 mg/kg (rabbit)
Inhalative	LC50/4h	>5.4 mg/m ³ (rat) (OECD 403)

Ester of aliphatic acid

Oral	LD50	5,001 mg/kg (rat)
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112-07-2 2-butoxyethyl acetate

Oral	LD50	1,880 mg/kg (rat) (OECD 401)
Dermal	LD50	1,580 mg/kg (rabbit) (ECHA)
Inhalative	LC50/4h	>2.66 mg/m ³ (rat) (EU B.1, ECHA)

- **Primary irritant effect:**
- **Serious eye damage/irritation**
Ethyl-(S)-2-hydroxypropionat (CAS 687-47-8): Experimental tests done on this blend by certified laboratories have evidenced that this product is not dangerous for eyes contact. Accordingly to OECD 491 – August 2016

12 Ecological Information

- **Toxicity**

- **Aquatic toxicity:**

108-65-6 2-methoxy-1-methylethyl acetate

EC50	>500 mg/l /48h (daphnia magna) >100 mg/l /21d (daphnia magna) (OECD 211)
NOEC	47.5 mg/l /48d (oryzias latipes) (OECD 204)
(EbCx) 10%	>1,000 mg/l (microorganisms)
ErC50	>1,000 mg/l /96h (pseudokirchneriella subcapitata)
LC50	63.5 mg/l (oryzias latipes) (OECD 204) 180 mg/l /96h (oncorhynchus mykiss)
LOEC	>1,000 mg/l /96h (pseudokirchneriella subcapitata)

687-47-8 ethyl (S)-2-hydroxypropionate

EC50	683 mg/l /48h (daphnia magna) (OECD 202)
NOEC	320 mg/l /72h (algae) (OECD 201) 320 mg/l /48h (daphnia magna) (OECD 202)

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ErC50	3,500 mg/l /72h (pseudokirchneriella subcapitata) (OECD 201)
LC50	320 mg/l /96h (danio rerio) (OECD 203)
112-07-2 2-butoxyethyl acetate	
EC50	37 mg/l /48h (daphnia magna) (EU B.1, ECHA)
EBC50	520 mg/l /72h (pseudokirchneriella subcapitata) (ISO 8692, ECHA)
(EbCx) 10%	30.4 mg/l /7d (ceriodaphnia dubia) (OECD 211)
ErC50	1,570 mg/l /72h (pseudokirchneriella subcapitata) (ISO 8692, ECHA)
LC50	<40 mg/l /96h (oncorhynchus mykiss) (EU B.1, ECHA)

- **Persistence and degradability** Easily biodegradable
- **Behaviour in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **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.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation** Must not be disposed together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

· UN-Number	UN1993
· ADG, IMDG, IATA	
· UN proper shipping name	1993 FLAMMABLE LIQUID, N.O.S. (2-methoxy-1-methylethyl acetate, ETHYL LACTATE)
· ADG	
· IMDG, IATA	FLAMMABLE LIQUID, N.O.S. (2-methoxy-1-methylethyl acetate, ETHYL LACTATE)
· Transport hazard class(es)	
· ADG, IMDG, IATA	
	
· Class	3 Flammable liquids.
· Label	3
· Packing group	
· ADG, IMDG, IATA	III
· Environmental hazards:	Not applicable.
· Special precautions for user	Warning: Flammable liquids.
· Hazard identification number (Kemler code):	30
· EMS Number:	F-E, S-E
· Stowage Category	A
· Transport in bulk according to Annex II of Marpol and the IBC Code	Not applicable.
· Transport/Additional information:	
· ADG	
· 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

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<ul style="list-style-type: none"> · IMDG · Limited quantities (LQ) · Excepted quantities (EQ) 	5L Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
<ul style="list-style-type: none"> · UN "Model Regulation": 	UN 1993 FLAMMABLE LIQUID, N.O.S. (2-METHOXY-1-METHYLETHYL ACETATE, ETHYL LACTATE), 3, III

15 Regulatory information

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

- **Australian Inventory of Industrial Chemicals**

We confirm that they we are have checked the AICS under here <https://www.industrialchemicals.gov.au/search-inventory> and we can confirm that each ingredient is either listed on the AICS and within the allowable limit or meets restrictions on said ingredient.

All ingredients are listed.

- **Standard for the Uniform Scheduling of Medicines and Poisons**

None of the ingredients is listed.

- **Australia: Priority Existing Chemicals**

None of the ingredients is listed.

- **GHS label elements** The product is classified and labelled according to the Globally Harmonised System (GHS).

- **Hazard pictograms**



- **Signal word** Warning

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

2-methoxy-1-methylethyl acetate

- **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/sparks/open flames/hot surfaces. No smoking.

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

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

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.

- **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

- **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.

H227 Combustible liquid.

H302 Harmful if swallowed.

H312 Harmful in contact with skin.

H318 Causes serious eye damage.

H319 Causes serious eye irritation.

H331 Toxic if inhaled.

H332 Harmful if inhaled.

H335 May cause respiratory irritation.

- **Contact:** Ph: 61 3 9890 1867 Fax: 61 3 9898 6527

- **Abbreviations and acronyms:**

ADR: Accord relatif au transport international 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

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)

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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. Liq. 4: Flammable liquids – Category 4
Acute Tox. 4: Acute toxicity – Category 4
Acute Tox. 3: Acute toxicity – Category 3
Eye Dam. 1: Serious eye damage/eye irritation – Category 1
Eye Irritation 2A: Serious eye damage/eye irritation – Category 2A
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

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