

Material Safety Data Sheet

according to Regulation (EC) No. 1907/2006
(revised by Regulation (EC) No. 453/2010)



Print Date: 23.07.2018
Revision: 23.07.2018
Replaced Version: 13.06.2018

Product: **Ink for KREUL Acryl Metallic Marker**

1. IDENTIFICATION OF SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

1.1 Identification of the substance/preparation

Trade name	Ink for KREUL Acryl Metallic Marker
Article No.	46261 – 46263, 46251 - 46253
Package size	Pen
Substance name	-
INDEX No.	-
EG No.	-
CAS No.	-
REACH Registration No.	-

1.2 Use of the substance/preparation

Metallic marker. For artists and hobby user.

1.3 Manufacturer/Supplier

	C. Kreul GmbH & Co. KG
	Carl-Kreul-Straße 2
	D-91352 Hallerndorf
Fon	0049 9545-925-0
Fax	0049 9545-925-511
E-Mail	info@c-kreul.de
Web	www.c-kreul.de

Information provided by

F&E Bettina Treiber b.treiber@c-kreul.de

1.4 Emergency information

Fon	+49 (0) 9545 925-0
Fax	+49 (0) 9545 925-511

(Monday – Thursday 8.00 – 17.00; Friday 8.00 – 15.00)

2. HAZARD IDENTIFICATION

2.1 Classification of the substance/preparation

Classification according to Regulation (EC) 1272/2008

Ink for KREUL Acryl Metallic Marker Silver: The product is not classified as hazardous according to Regulation (EC) 1272/2008.

Ink for KREUL Acryl Metallic Marker Gold: Aquatic Acute 1 H400; Aquatic Chronic 2 H411

Ink for KREUL Acryl Metallic Marker Copper: Aquatic Acute 1 H400; Aquatic Chronic 3 H412

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2.2 Labelling according to Regulation (EC) 1272/2008

KREUL ACRYL Metallic Marker Gold, Copper:

Hazard pictogram and signal word of the product



Warning

Hazard-determining components of labelling

-

Hazard statements

H410 Very toxic to aquatic life with long lasting effects.

European hazard statements

-

Precautionary statements

P273 Avoid release to the environment.

P391 Collect spillage.

P501 Dispose of contents/container to hazardous or special waste collection point.

KREUL ACRYL Metallic Marker Silver:

Hazard pictogram and signal word of the product

The product is not classified as hazardous according to Regulation (EC) 1272/2008.

Hazard-determining components of labelling

-

Hazard statements

-

European hazard statements

EUH -

Precautionary statements

-

2.3 Other Hazards

None.

Results of PBT and vPvB assessment: Not applicable.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical characterization

Aqueous preparation with pigments.

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3.1 Substance related information

Main component

-

INDEX No. -

EG No. -

CAS No. -

REACH Registration No.: -

Classification according to Regulation (EC) 1272/2008: -

Hazard impurities

-

INDEX No. -

EG No. -

CAS No. -

REACH Registration No.: -

Classification according to Regulation (EC) 1272/2008: -

*minimum classification

3.2 Preparation/mixture related information

10 - 20 % Copper, powder^{1,3}

INDEX No. -

EG No. 231-159-6

CAS No. 7440-50-8

REACH Registration No.: 01-2119480154-42-XXXX

Classification according to Regulation (EC) 1272/2008: Acute Tox. 4 * H302; Aquatic Acute 1 H400; Aquatic Chronic 2 H411

2,5 - 10 % Zinc powder (stabilized)¹

INDEX No. 030-002-00-7, 030-001-01-9

EG No. 231-175-3

CAS No. 7440-66-6

REACH Registration No.: 01-2119467174-37-XXXX

Classification according to Regulation (EC) 1272/2008: Aquatic Acute 1 H400; Aquatic Chron. 1 H410

1 - 10 % Aluminium powder (stabilised)²

INDEX No. 013-002-00-1

EG No. 231-072-3

CAS No. 7429-90-5

REACH Registration No.: 01-2119529243-45-XXXX

Classification according to Regulation (EC) 1272/2008: Flam. Sol. 1 H228

< 1 % Hydrogenated tallow alkyl amines³

INDEX No. 612-284-00-9

EG No. 262-976-6

CAS No. 61788-45-2

REACH Registration No.: -

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Product: **Ink for KREUL Acryl Metallic Marker**

Classification according to Regulation (EC) 1272/2008: Asp. Tox. 1 H304; Skin Irrit. 2 H315; Eye Dam. 1 H318; STOT RE 2 H373; Aquatic Acute 1 H400; Aquatic Chronic 1 H410

¹ Contains in KREUL Acryl Metallic Marker Gold.
² Contains in KREUL Acryl Metallic Marker Silver.
³ Contains in KREUL Acryl Metallic Marker Copper.

Full text of H- and EUH-phrases: see section 16.

4. FIRST AID MEASURES

4.1 General information

In all cases of doubt, or when symptoms persist, seek medical attention. Never give anything by mouth to an unconscious person.

After inhalation

Remove to fresh air, keep patient warm and at rest. In case of unwellness, seek medical advice (show directions for use or safety data sheet if possible).

After skin contact

In case of skin reactions, consult a physician. After contact with skin, wash with plenty of water and soap. Do NOT use solvents or thinners.

After eye contact

Remove contact lens. Irrigate copiously with clean, fresh water for at least 10 - 15 minutes, holding the eyelids apart and seek medical advice.

After ingestion

If swallowed immediately drink: water. Do NOT induce vomiting. In case of unwellness, seek medical advice (show directions for use or safety data sheet if possible). During spontaneous vomiting hold the head of the casualty low with the body in a prone position in order to avoid aspiration.

4.2 The most important acute and delayed appearing symptoms and effects

No known symptoms to date. See part 11.

4.3 References to medical emergency relief or special treatment

Further instructions see section 4.1

5. FIRE-FIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media: Foam, water spray and carbon dioxide.
Extinguishing media which must not be used for safety reasons: Full water jet.

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5.2 Special risk posed by the substance or by the actual preparation, its combustion products or gases discharged

When product exposed to high temperatures it may produce hazardous decomposition products such as carbon monoxide and carbon dioxide, smoke and other hazards components.

5.3 Special protective equipment

In case of fire: Wear self-contained breathing apparatus. Use water spray jet to protect personnel and to cool endangered containers. Do not allow the quenching water into the sewage system. Dispose fire debris and contaminated fire fighting water in accordance with official regulations.

5.4 Additional information

Product itself does not burn. Compare section 3, 7, 8 and 10.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions

Special danger of slipping by leaking/spilling product.

6.2 Environmental precautions

Take up with a liquid absorbing material and proceed according to the waste disposal regulations. Do not empty into drains or watercourses. Further instructions see section 6.3.

6.3 Methods for cleaning up/collecting

Contain and collect spillage with non-combustible absorbent materials, e.g. sand, earth, vermiculite, diatomaceous earth and place in container for disposal according to local regulations (see section 13). Clean preferably with a detergent; avoid use of solvents. Further instructions see part 10.

6.4 Additional information

Further instructions see section 7, 8 and 10.

7. HANDLING AND STORAGE

7.1 Information for safe handling

Avoid eye and skin contact. Avoid inhalation of vapour and spray mist. Smoking, eating and drinking should be prohibited in application area. See protective measures under point 8.

Precautions against fire and explosion

No special measures necessary. Product itself does not burn. Further instructions see 7.1.

7.2 Conditions for safe storage, including incompatibilities

Information about storage conditions

Store between 5 and 30 °C in a dry, well-ventilated place away from sources of heat and direct sunlight. Protect against: frost.

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Hints on joint storage

Only substances of the same storage class should be stored together. Keep away from oxidizing agents, from strongly alkaline and strongly acid materials. The substance should not be stored with substances with which hazardous chemical reactions are possible.

Requirement for storage rooms and vessels

Store between 5 and 30 °C in a dry, well-ventilated place away from sources of heat and direct sunlight. Keep container tightly closed. Observe label precautions.

Additional information

Storage class (VCI): Ink 12 Non-combustible liquids

Specific uses

See section 1.2.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Components with critical values that require monitoring at the workplace (exposure limits)

Copper; CAS No. 7440-50-8

Specification: AGW
Value: 1,25 A mg/m³, 10E mg/m³
Peak limitation: 2 (II)
Toxic to reproduction: -
Remark: With reference to the inhalable fraction.

Aluminium powder (stabilised); CAS No. 7429-90-5

Specification: AGW
Value: 3 A mg/m³, 10E mg/m³
Peak limitation: 2 (II)
Toxic to reproduction: -
Remark: With reference to the inhalable fraction.

Zinc; CAS No. 7440-66-6-1753-3

Specification: AGW
Value: 2 A mg/m³
Peak limitation: 2 (II)
Toxic to reproduction: -
Remark: With reference to the inhalable fraction.

DNEL/DMEL-Values

Copper powder; CAS No. 7440-50-8

Oral	DNEL long-term exposure – systemic effects	0,16 mg/kg bw/d	(general population)
Dermal	DNEL long-term exposure – systemic effects	137 mg/kg bw/d	(general population)
		137 mg/kg bw/d	(worker)
Dermal	DNEL short-term exposure – systemic effects	273 mg/kg bw/d	(general population)
		273 mg/kg bw/d	(worker)

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Inhalativ DNEL long-term exposure – systemic effects 18,2 mg/m³ (general population)
18,2 mg/m³ (worker)

Zinc; CAS No. 7440-66-6

Oral DNEL long-term exposure – systemic effects 0,83 mg/kg bw/d (general population)
Dermal DNEL long-term exposure – systemic effects 83 mg/kg bw/d (general population)
83mg/kg bw/d (worker)
Inhalativ DNEL long-term exposure – systemic effects 2,5 mg/m³ (general population)
5 mg/m³ (worker)

PNEC-Values

Copper powder; CAS No. 7440-50-8

STP	0,230 mg/l	(environmental)
freshwater	0,0078 mg/l	(environmental)
marine water	0,0052 mg/l	(environmental)
sediment estuarine	288 mg/kg dry weight	(environmental)
sediment freshwater	87 mg/kg dry weight	(environmental)
sediment marine	676 mg/kg dry weight	(environmental)
soil	65 mg/kg dry weight	(environmental)

Zinc; CAS No. 7440-66-6

STP	0,0052 mg/l	(environmental)
freshwater	0,0206 mg/l	(environmental)
marine water	0,0061 mg/l	(environmental)
sediment freshwater	87 mg/kg dry weight	(environmental)
sediment marine	56,5 mg/kg dry weight	(environmental)
soil	35,6 mg/kg dry weight	(environmental)

Occupational exposure controls

Technical measures and the application of suitable working methods have precedence before the application of personal protective equipment. Suitable judgement methods of the examination of the effectiveness of the grievied preventive measures enclose measuring-technical and non-technical inquiry methods like they in the technical rules for danger materials (TRGS) 402.

Personal protective equipment

Do not eat or drink during work. Keep away from foodstuffs and beverages. Wash hands before breaks and after work. Avoid contact with eyes. Remove soiled or soaked clothing immediately.

Respiratory protection

Provide good ventilation when handling large quantities.

Skin protection

Avoid contact with skin. Use rubber gloves according to EN 374.

Eye protection

Avoid contact with eyes. Use safety glasses according to EN 166:2001.

Body protection

No special measures necessary.

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Limitation and supervision of the environmental exposition

See section 6 and 7.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 General information

Form: liquid
Colour: refer to label
Odour: characteristic

9.2 Relevant safety data

Flashpoint:	not determined	DIN EN 22719
Viscosity:	not determined	
Density: (20 °C)	not determined	DIN 53217
Explosive limits:		
Lower / Upper:	not applicable	
Ignition temperature:	not applicable	
Vapour pressure:	not determined	(20 °C)
pH-value:	not applicable	
Solubility in water:	soluble	

9.3 Additional information

No other physical-chemical data available.

10. STABILITY AND REACTIVITY

10.1 Reactivity

Keep away from oxidizing agents, strongly alkaline and strongly acid materials in order to avoid exothermic reactions. See section 7.

10.2 Chemical stability

If handled properly then product has chemical stability.

10.3 Possible dangerous reactions

None, if handled according to order. Further instructions see section 10.1 and 10.2.

10.4 Conditions to avoid

Keep cool. Protect from sunlight.

10.5 Incompatible materials

See section 10.1.

10.6 Hazardous decomposition products

When product exposed to high temperatures, it may produce hazardous decomposition products such as carbon monoxide and carbon dioxide, smoke and other hazardous components.

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11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity

There are no data available on the preparation itself.

Primary irritant effect after inhalation

There are no data available on the preparation itself.

on the skin

Frequent contact can lead to skin irritation, especially if product is allowed to dry out.

on the eyes

The liquid splashed in the eyes may cause irritation and reversible damage.

after ingestion

There are no data available on the preparation itself.

Sensitization

No sensitizing effects know.

Chronic

There are no data available on the preparation itself.

11.2 Additional toxicological information

The product is classified according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version.

12. ECOLOGICAL INFORMATION

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12.1 Ecotoxicity

KREUL Acryl Metallic Marker Gold, Copper: Very toxic to aquatic life with long lasting effects.

	Value	Species	Method	Reference
LC ₅₀ , fish, 96h	0,665 mg/l	Fish	-	Shariff, M., P.A.H.L. Jayawardena, F.M. Yusoff, and R. Subasinghe 2001. Immunological Parameters of Javanese Carp Puntius gonionotus (Bleeker) Exposed to Copper and Challenged with Aeromonas hydrophila. Fish Shellfish Immunol. 11(4):281-291; Rehwoldt, R., L.W. Menapace, B. Nerrie, and D. Alessandrello 1972. The Effect

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				of Increased Temperature upon the Acute Toxicity of Some Heavy Metal Ions. Bull. Environ. Contam. Toxicol. 8(2):91-96.
LC ₅₀ , crustaceans, 48h	0,044 mg/l	Pseudokirchneriella subcapitata	-	Lazorchak, J.M. 1987. The Significance of Weight Loss of Daphnia magna Straus During Acute Toxicity Tests with Copper. Ph.D Thesis, Univ. of Texas, Dallas, TX :191 p.
EC ₅₀ , crustaceans, 48h	0,02 mg/l	Pseudokirchneriella subcapitata	-	Bossuyt, B.T.A., B.T.A. Muysen, and C.R. Janssen 2005. Relevance of Generic and Site-Specific Species Sensitivity Distributions in the Current Risk Assessment Procedures for Copper and Zinc. Environ. Toxicol. Chem. 24(2):470-478.)
EC ₅₀ , algae, 72h	0,57 mg/l	Algae	-	Peterson, S.M., and J.L. Stauber 1996. new Algal Enzyme Bioassay for the Rapid Assessment of Aquatic Toxicity. Bull. Environ. Toxicol. Chem. 56(5):750-757.
EC ₅₀ , algae, 96h	7,9 mg/l	Algae	-	Gatidou, G., and N.S. Thomaidis 2007. Evaluation of Single and Joint Toxic Effects of Two Antifouling Biocides, Their Main Metabolites and Copper Using Phytoplankton Bioassays. Aquat. Toxicol. 85(3):184-191
Remark	-			

12.2 Persistence/degradability
There are no data available.

12.3 Bioaccumulative potential
There are no data available.

12.4 Mobility
There are no data available.

12.5 Results of PBT and vPvP assessment
There are no data available.

12.6 Other adverse effects
There are no data available.

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12.7 Further ecological information

Water hazard class:

KREUL Acryl Metallic Marker Silver: WGK 1 slightly hazardous to water (according VwVwS)

KREUL Acryl Metallic Marker Gold, Copper: WGK 3 hazardous to water (according VwVwS)

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Send to a hazardous waste incinerator facility under observation of official regulations. The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process.

Recommendation

Disposal must be made according to official regulations.

13.2 European waste code number in accordance with AAV

EWC No.: 08 01 11 waste paint and varnish containing organic solvents or other dangerous substances

EWC No.: 20 01 27 paint, inks, adhesives and resins containing dangerous substances

13.3 Packaging

Contaminated packaging

Contaminated packaging should be emptied as far as possible and after appropriate cleansing, may be taken for reuse. Packaging that cannot be cleaned should be disposed in the same manner as the medium.

EWC No. 15 01 10 packaging containing residues of or contaminated by dangerous substances

Non-contaminated packages

EWC No.: 15 01 02 plastic packaging

14. TRANSPORT INFORMATION

14.1 Land transport ADR/RID and GVS/GGVE

Inf for KREUL Acryl Metallic Marker Gold, Copper:



Class:	9
Kemler-Code:	90
UN No.:	3082
Packaging group:	III
Label:	9
Special marking:	-
Proper shipping name:	3082 – Environmentally hazardous substance liquid, n.o.s. (Contains Copper metal powder)

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Classification-Code: M6
Limit: LQ7
Tunnel restriction code: 3(E)

14.2 Maritime transport IMDG/GGVSea

Ink for KREUL Acryl Metallic Marker Gold, Copper:



Class: 9
UN No.: 3082
Label: 9
Packaging group: III
EmS-No.: F-A, S-F
Marine pollutant: yes
Proper shipping name: 3082 – Environmentally hazardous substance liquid, n.o.s.
(Contains Copper metal powder)

14.3 Air transport ICAO-TI and IATA-DGR

Ink for KREUL Acryl Metallic Marker Gold, Copper:



ICAO/IATA Class: 9
UN no.: 3082
Label: 9
Packaging group: III
Proper shipping name: 3082 – Environmentally hazardous substance liquid, n.o.s.
(Contains Copper metal powder)

14.4 Remarks

Ink for KREUL Acryl Metallic Marker Silver: Not classified as hazardous.
Product contains environmentally hazardous substances: Ink for KREUL Acryl Metallic Marker Gold & Copper: Copper metal powder.

15. REGULATORY INFORMATION

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15.1 European Regulation

Chemical Safety Assessment: For this substance a chemical safety assessment is not required.

15.2 National Regulations

Statutory order on hazardous incidents (StörfallIV): -
Regulation on inflammable liquids: -
Emission control act ("TA-Luft"): -
Water hazard class:
KREUL Acryl Metallic Marker Silver: WGK 1 slightly hazardous to water (according VwVwS)

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KREUL Acryl Metallic Marker Gold, Copper: WGK 3 hazardous to water (according VwVwS)

15.3 Additional information

The product is classified according to the EEC directives and the Ordinance on Hazardous Materials (GefStoffV).

If bottle ≤ 125 ml then the following H- and P-phrases are not necessary: –.

Volatile organic compounds (Swiss): < 3 %

The advertised use (section 1) is not subject of the Directive 2004/42/EC.

16. OTHER INFORMATION

16.1 Changes compared with the last version

The last version was all changed and revised completely. Alterations to the previous edition are marked in the right-hand margin.

16.2 Literature reference and data source

Regulation (EC) 1999/45, last changed by Regulation (EC) 1907/2006
Regulation (EC) 67/548, last changed by Regulation (EC) 2009/2
REACH Regulation (EC) 1907/2006, last changed by Regulation (EC) 453/2010
Regulation (EC) 1272/2008, last changed by Regulation (EC) 790/2009

Internet

<http://www.baua.de>
<http://www.arbeitssicherheit.de>
<http://www.gischem.de>

16.3 Full text of H- and R-phrases appearing in section 2 and 3:

According to Regulation (EC) 1272/2008

Flam. Liq. 3 H226	Flammable liquid and vapour.
Acute Tox.4 H302	Harmful if swallowed.
Asp. Tox.1 H304	May be fatal if swallowed and enters airways.
Skin Irrit. 2 H315	Causes skin irritation.
Eye Dam. 1 H318	Causes serious eye damage.
STOT RE 2 H373	May cause damage to organs through prolonged or repeated exposure.
Aquatic Acute 1 H400	Very toxic to aquatic life.
Aquatic Chron. 1 H410	Very toxic to aquatic life with long lasting effects.
Aquatic Chronic 2 H411	Toxic to aquatic life with long lasting effects.

EUH – statements

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Methods according to article 9 of the order (EC) No. 1272/2008 for the assessment of the information for the purpose of the classification were used:

Classification according to Regulation (EC) 1272/2008, Annex VII (conversion table)

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16.4 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)
BImSchV:	Order for the realisation of the Federal Immission Protection Law
CAS:	Chemical Abstracts Service
DIN:	Norm of the German institute of standardization
EC:	Effective concentration
EC50:	Effective concentration, 50 percent
EG:	European Community
EINECS:	European Inventory of Existing Commercial Chemical Substances
EN:	European Standard
GefStoffV:	Ordinance on Hazardous Substances, Germany
GHS:	Globally Harmonized System of Classification and Labelling of Chemicals
IATA:	International Air Transport Association
IMDG:	International Maritime Code for Dangerous Goods
LC50:	Lethal concentration, 50 percent
LD50:	Lethal dose, 50 percent
Log K_{ow}:	n-octanol-water partition coefficient
OECD:	Organisation for Economic Co-operation and Development
PBT:	Persistent, bioaccumulateable, toxically
RID:	Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
TRGS:	Technical rules for danger materials
UN:	United Nations (Vereinte Nationen)
VOC:	Volatile Organic Compounds
vPvB:	very much persistent and very bioaccumulateable
VwVwS:	Administrative regulation of hazardous to waters materials
WGK:	Water hazardous class

16.5 Department issuing safety data sheet

Laboratory, Mrs. Dipl.-Ing. Treiber, b.treiber@c-kreul.de.

16.6 Additional information

The data is based on our present knowledge. The data correspond to the national and EEC legislation. However, they shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

It is not permitted to use the product for any other application mentioned in chapter 1 except with a written permission. The user is responsible for the compliance with all valid legal regulation.

This safety data sheet is only valid for Ink for KREUL Acryl Metallic Marker. It's not valid for other products placed in the according sales displays or sets.