



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

Printing date 03.06.2017

Version number 3

Revision: 03.06.2017

Hazardous according to criteria of Australian Safety and Compensation Council

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

· Product identifier

- Trade name: **Preciano conductive silver varnish TK**
- Relevant identified uses of the substance or mixture and uses advised against
No further relevant information available.
- Application of the substance / the mixture *Electroplating auxiliary*

· Details of the supplier of the safety data sheet

· Manufacturer/Supplier:

Heraeus Kulzer Australia Pty Ltd
Unit 32
11 – 21 Underwood Rd
HOMEBUSH NSW 2140
Australia

Tel: +61 (0) 2 9764 5222

- Informing department: see above
- Emergency telephone number: Emergency contact number: 13 11 26 (24 hours)

2 Hazards 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

· GHS label elements

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

· Hazard pictograms



GHS02 GHS07

· Signal word Warning

· Hazard statements

Flammable liquid and vapour.
May cause drowsiness or dizziness.

· Precautionary statements

Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
Use explosion-proof electrical/ventilating/lighting/equipment.
Avoid breathing dust/fume/gas/mist/vapours/spray.
Wear protective gloves/protective clothing/eye protection/face protection.
IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
Store locked up.

· Other hazards -

· Results of PBT and vPvB assessment

- PBT: Not applicable.

(Contd. on page 2)

AUS



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

Printing date 03.06.2017

Version number 3

Revision: 03.06.2017

Trade name: Preciano conductive silver varnish TK

· **vPvB:** Not applicable.

(Contd. of page 1)

3 Composition/information on ingredients

· **Chemical characterisation: Mixtures**

· **Description:** -

· **Dangerous components:**

CAS: 107-98-2 EINECS: 203-539-1	1-methoxypropan-2-ol Flam. Liq. 3, H226; STOT SE 3, H336	25-50%
CAS: 9004-70-0	cellulose nitrate Flam. Sol. 1, H228	10-25%
CAS: 141-78-6 EINECS: 205-500-4	ethyl acetate Flam. Liq. 2, H225; Eye Irrit. 2, H319; STOT SE 3, H336	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**

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

· **After skin contact** The product is not skin irritating.

· **After eye contact** Rinse opened eye for several minutes under running water. Then consult doctor.

· **After swallowing**

Rinse out mouth and then drink plenty of water.

In case of persistent symptoms consult doctor.

Product based on methacrylates

· **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 Firefighting measures

· **Extinguishing media**

· **Suitable extinguishing agents** CO₂, sand, extinguishing powder. Do not use water.

· **For safety reasons unsuitable extinguishing agents**

Water.

Water with a full water jet.

· **Special hazards arising from the substance or mixture** Can form explosive gas-air mixtures.

· **Advice for firefighters**

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

· **Additional information** -

6 Accidental release measures

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

Wear protective equipment. Keep unprotected persons away.

(Contd. on page 3)

AUS



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

Printing date 03.06.2017

Version number 3

Revision: 03.06.2017

Trade name: Preciano conductive silver varnish TK

(Contd. of page 2)

- **Environmental precautions:** No special measures required.
- **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (diatomite, universal binders, for small amounts tissues).
Do not flush with water or aqueous cleansing agents
Send for recovery or disposal in suitable containers.
- **Reference to other sections**
See Section 13 for information on disposal.
See Section 8 for information on personal protection equipment.

7 Handling and storage

- **Handling**
 - **Precautions for safe handling** Keep containers tightly sealed.
 - **Information about protection against explosions and fires:**
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 containers:** No special requirements.
 - **Information about storage in one common storage facility:** Not required.
 - **Further information about storage conditions:** None.
- **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

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

· **Components with critical values that require monitoring at the workplace:**

107-98-2 1-methoxypropan-2-ol

NES (Australia)	Short-term value: 553 mg/m ³ , 150 ppm Long-term value: 369 mg/m ³ , 100 ppm
REL (USA)	Short-term value: 540 mg/m ³ , 150 ppm Long-term value: 360 mg/m ³ , 100 ppm
TLV (USA)	Short-term value: 553 mg/m ³ , 150 ppm Long-term value: 369 mg/m ³ , 100 ppm

141-78-6 ethyl acetate

NES (Australia)	Short-term value: 1440 mg/m ³ , 400 ppm Long-term value: 720 mg/m ³ , 200 ppm
PEL (USA)	1400 mg/m ³ , 400 ppm
REL (USA)	1400 mg/m ³ , 400 ppm
TLV (USA)	1440 mg/m ³ , 400 ppm

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

(Contd. on page 4)



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

Printing date 03.06.2017

Version number 3

Revision: 03.06.2017

Trade name: Preciano conductive silver varnish TK

(Contd. of page 3)

· **Exposure controls**

· **Personal protective equipment**

· **General protective and hygienic measures**

Wash hands during breaks and at the end of the work.

· **Breathing equipment:** Not required.

· **Protection of hands:**

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

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

Check protective gloves prior to each use for their proper condition.
recommended

· **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 trough time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **For the permanent contact of a maximum of 15 minutes gloves made of the following materials are suitable:**

Butyl rubber, BR

Nitrile rubber, NBR

· **Eye protection:**

Protective goggles are recommended.

Tightly sealed safety glasses.

· **Body protection:** Light weight protective clothing

9 Physical and chemical properties

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

· **General Information**

· **Appearance:**

· **Form:**

Fluid

· **Colour:**

Colourless

· **Smell:**

Characteristic

· **Odour threshold:**

Not determined.

· **pH-value:**

Not determined.

· **Change in condition**

· **Melting point/Melting range:**

Not determined

· **Boiling point/Boiling range:**

55 °C

· **Flash point:**

< 32 °C

· **Inflammability (solid, gaseous)**

Not applicable.

· **Ignition temperature:**

<300 °C

(Contd. on page 5)



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

Printing date 03.06.2017

Version number 3

Revision: 03.06.2017

Trade name: Preciano conductive silver varnish TK

(Contd. of page 4)

· Decomposition temperature:	Not determined.
· Self-inflammability:	Product is not selfigniting.
· Danger of explosion:	Product is not explosive. However, formation of explosive air/vapour mixtures is possible.
· Critical values for explosion:	
· Lower:	2.3 Vol %
· Upper:	15.0 Vol %
· Steam pressure at 20 °C:	58.7 hPa
· Density at 20 °C	1.4 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.
· Other information	No further relevant information available.

10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
 - **Conditions to be avoided:** No decomposition if used and stored 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:** None

11 Toxicological information

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

· LD/LC50 values that are relevant for classification:		
107-98-2 1-methoxypropan-2-ol		
Oral	LD50	5000 mg/kg (rat)
Dermal	LD50	13500 mg/kg (rabbit)
141-78-6 ethyl acetate		
Oral	LD50	5600 mg/kg (rat)
Dermal	LD50	18000 mg/kg (rabbit)

(Contd. on page 6)



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

Printing date 03.06.2017

Version number 3

Revision: 03.06.2017

Trade name: Preciano conductive silver varnish TK

(Contd. of page 5)

Sensitisation Sensib. nicht sensibil. (guinea pig) (OECD-Prüfrichtlinie 406)

- **Primary irritant effect:**
 - **Skin corrosion/irritation** No irritant effect.
 - **Serious eye damage/irritation** No irritant effect.
- **Respiratory or skin sensitisation** No sensitizing effect known.

12 Ecological information

· **Toxicity**

· **Aquatic toxicity:**

141-78-6 ethyl acetate

EC50/48h	3300 mg/l (algae)
	717 mg/l (daphnia) (DIN 38412)
LC50/96h	230 mg/l (fish)

- **Persistence and degradability** No further relevant information available.
- **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 bodies 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 of together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packagings:**
 - **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

- **UN-Number**
 - **ADG, IMDG, IATA** 1263
- **UN proper shipping name**
 - **ADG** 1263 PAINT, special provision 640E
 - **IMDG, IATA** PAINT

(Contd. on page 7)



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



Printing date 03.06.2017

Version number 3

Revision: 03.06.2017

Trade name: Preciano conductive silver varnish TK

(Contd. of page 6)

· Transport hazard class(es)	
· ADG	
	
· Class	3 (F1) Flammable liquids.
· Label	3
· IMDG, IATA	
	
· Class	3 Flammable liquids.
· Label	3
· Packing group	
· ADG, IMDG, IATA	III
· Environmental hazards:	
· Marine pollutant:	No
· Special precautions for user	
· Warning:	Flammable liquids.
· Kemler Number:	33
· EMS Number:	F-E, S-E
· Transport in bulk according to Annex II of Marpol and the IBC Code	
	Not applicable.
· Transport/Additional information:	
	-
· UN "Model Regulation":	
	UN1263, PAINT, special provision 640E, 3, III

15 Regulatory information

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

· **GHS label elements**

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

· **Hazard pictograms**



GHS02 GHS07

· **Signal word** Warning

· **Hazard statements**

Flammable liquid and vapour.

(Contd. on page 8)

AUS



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

Printing date 03.06.2017

Version number 3

Revision: 03.06.2017

Trade name: Preciano conductive silver varnish TK

(Contd. of page 7)

May cause drowsiness or dizziness.

· **Precautionary statements**

Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

Use explosion-proof electrical/ventilating/lighting/equipment.

Avoid breathing dust/fume/gas/mist/vapours/spray.

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

IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

Store locked up.

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

16 Other information

These data are based on our present knowledge. However, they 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.

H226 Flammable liquid and vapour.

H228 Flammable solid.

H319 Causes serious eye irritation.

H336 May cause drowsiness or dizziness.

· **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

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)

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

Flam. Liq. 3: Flammable liquids – Category 3

Flam. Sol. 1: Flammable solids – Category 1

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

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

· *** Data compared to the previous version altered.**