

Silver-Containing Conductive Lacquer JE900

Revision date: 29.08.2019

Product code: 69

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SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1. Product identifier**

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1.2. Relevant identified uses of the substance or mixture and uses advised against**1.3. Details of the supplier of the safety data sheet**

Company name:	Jentner Plating Technology GmbH	
Street:	Johann-Staib-Strasse 2	
Place:	D-75179 Pforzheim	
Telephone:	+49 (0)7231 418094 0	Telefax: +49 (0)7231 418094 77
e-mail:	info@jentner.de	
Contact person:	Department of Chemistry	
Internet:	www.jentner.de	
Responsible Department:	Poison Information Center of the University of Freiburg.	

1.4. Emergency telephone number: 0049 (0)761 19240 - 24 h german and english

SECTION 2: Hazards identification**2.1. Classification of the substance or mixture****Regulation (EC) No. 1272/2008**

Hazard categories:

Flammable liquid: Flam. Liq. 2

Serious eye damage/eye irritation: Eye Irrit. 2

Reproductive toxicity: Repr. 1B

Specific target organ toxicity - single exposure: STOT SE 3

Hazard Statements:

Highly flammable liquid and vapour.

Causes serious eye irritation.

May damage the unborn child.

May cause drowsiness or dizziness.

2.2. Label elements**Regulation (EC) No. 1272/2008****Hazard components for labelling**

1-ethoxypropan-2-ol; 2PG1EE; 1-ethoxy-2-propanol; propylene glycol monoethyl ether

acetone; propan-2-one; propanone

ethyl acetate

dibutyl phthalate; DBP

Signal word: Danger**Pictograms:****Hazard statements**

H225 Highly flammable liquid and vapour.

H319 Causes serious eye irritation.

H336 May cause drowsiness or dizziness.

H360D May damage the unborn child.

Precautionary statements

P102 Keep out of reach of children.

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P103	Read label before use.
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233	Keep container tightly closed.
P240	Ground and bond container and receiving equipment.
P241	Use explosion-proof electrical/ventilating/lighting equipment.
P242	Use non-sparking tools.
P243	Take action to prevent static discharges.
P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P271	Use only outdoors or in a well-ventilated area.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P312	Call a POISON CENTER/doctor if you feel unwell.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P313	If eye irritation persists: Get medical advice/attention.
P308+P313	IF exposed or concerned: Get medical advice/attention.
P233	Keep container tightly closed.
P403+P235	Store in a well-ventilated place. Keep cool.
P405	Store locked up.

Special labelling of certain mixtures

Restricted to professional users.

2.3. Other hazards

No information available.

SECTION 3: Composition/information on ingredients**3.2. Mixtures**

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Hazardous components

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	GHS Classification			
7440-22-4	Silver			30-50 %
	231-131-3			
1569-02-4	1-ethoxypropan-2-ol; 2PG1EE; 1-ethoxy-2-propanol; propylene glycol monoethyl ether			20-30 %
	216-374-5	603-177-00-8		
	Flam. Liq. 3, STOT SE 3; H226 H336			
64-17-5	ethanol; ethyl alcohol			15 %
	200-578-6	603-002-00-5		
	Flam. Liq. 2; H225			
67-64-1	acetone; propan-2-one; propanone			5-10 %
	200-662-2	606-001-00-8		
	Flam. Liq. 2, Eye Irrit. 2, STOT SE 3; H225 H319 H336 EUH066			
141-78-6	ethyl acetate			1-5 %
	205-500-4	607-022-00-5		
	Flam. Liq. 2, Eye Irrit. 2, STOT SE 3; H225 H319 H336 EUH066			
84-74-2	dibutyl phthalate; DBP			0,25-0,5 %
	201-557-4	607-318-00-4		
	Repr. 1B, Aquatic Acute 1; H360Df H400			

Full text of H and EUH statements: see section 16.

SECTION 4: First aid measures**4.1. Description of first aid measures****General information**

Take off immediately all contaminated clothing.

After inhalation

Provide fresh air. Medical treatment necessary. Move victim to fresh air. Put victim at rest and keep warm. In case of troubles or persistent symptoms, consult an ophthalmologist.

After contact with skin

After contact with skin, wash immediately with plenty of water and soap.

After contact with eyes

After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time, then consult an ophthalmologist immediately. Immediately flush eyes with plenty of flowing water for 10 to 15 minutes holding eyelids apart.

Seek medical attention if problems persist.

After ingestion

Observe risk of aspiration if vomiting occurs. Induce vomiting when the affected person is not unconscious. Medical treatment necessary. Rinse mouth immediately and drink plenty of water. Seek medical advice immediately.

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

No information available.

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

Treat symptomatically.

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SECTION 5: Firefighting measures**5.1. Extinguishing media****Suitable extinguishing media**

Water spray. Carbon dioxide (CO₂). Foam. Extinguishing powder.

Unsuitable extinguishing media

High power water jet.

5.2. Special hazards arising from the substance or mixture

Highly flammable. Vapours can form explosive mixtures with air.

5.3. Advice for firefighters

In case of fire: Wear self-contained breathing apparatus.

Additional information

Use water spray jet to protect personnel and to cool endangered containers. Suppress gases/vapours/mists with water spray jet. Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

SECTION 6: Accidental release measures**6.1. Personal precautions, protective equipment and emergency procedures**

Remove all sources of ignition. Do not breathe gas/fumes/vapour/spray. Avoid contact with skin, eyes and clothes. Use personal protection equipment.

Keep away from sources of ignition - No smoking. Provide adequate ventilation.

6.2. Environmental precautions

Do not allow uncontrolled discharge of product into the environment. Danger of explosion Do not empty into drains.

6.3. Methods and material for containment and cleaning up

Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents). Treat the recovered material as prescribed in the section on waste disposal.

6.4. Reference to other sections

Safe handling: see section 7

Personal protection equipment: see section 8

Disposal: see section 13

SECTION 7: Handling and storage**7.1. Precautions for safe handling****Advice on safe handling**

If handled uncovered, arrangements with local exhaust ventilation have to be used. Do not breathe gas/fumes/vapour/spray. Handle and open container with care.

Always close containers tightly after the removal of product.

Advice on protection against fire and explosion

Keep away from sources of ignition - No smoking. Take precautionary measures against static discharges.

Vapours can form explosive mixtures with air.

Take action to prevent static discharges.

7.2. Conditions for safe storage, including any incompatibilities**Requirements for storage rooms and vessels**

Keep container tightly closed. Keep locked up. Store in a place accessible by authorized persons only. Provide adequate ventilation as well as local exhaust at critical locations. Keep in a cool, well-ventilated place. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

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Hints on joint storage

Do not store together with: Oxidising agent. Pyrophoric or self-heating substances.

SECTION 8: Exposure controls/personal protection**8.1. Control parameters****Exposure limits (EH40)**

CAS No	Substance	ppm	mg/m ³	fibres/ml	Category	Origin
67-64-1	Acetone	500	1210		TWA (8 h)	WEL
		1500	3620		STEL (15 min)	WEL
84-74-2	Dibutyl phthalate	-	5		TWA (8 h)	WEL
		-	10		STEL (15 min)	WEL
64-17-5	Ethanol	1000	1920		TWA (8 h)	WEL
141-78-6	Ethyl acetate	200	-		TWA (8 h)	WEL
		400	-		STEL (15 min)	WEL
7440-22-4	Silver, metallic	-	0.1		TWA (8 h)	WEL

8.2. Exposure controls**Appropriate engineering controls**

If handled uncovered, arrangements with local exhaust ventilation have to be used. Do not breathe gas/fumes/vapour/spray.

Protective and hygiene measures

Remove contaminated, saturated clothing immediately. Draw up and observe skin protection programme.

Wash hands and face before breaks and after work and take a shower if necessary. When using do not eat or drink.

Eye/face protection

Suitable eye protection: goggles.

Hand protection

When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits. The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves. NBR (Nitrile rubber).

Skin protection

Flame-retardant protective clothing. Wear anti-static footwear and clothing

Respiratory protection

In case of inadequate ventilation wear respiratory protection.

SECTION 9: Physical and chemical properties**9.1. Information on basic physical and chemical properties**

Physical state:	Suspension
Colour:	silver grey / silver
Odour:	characteristic

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Test method**Changes in the physical state**

Melting point: not determined

Flash point: 12 °C DIN 51755

Flammability

Solid: not applicable

Gas: not applicable

Explosive properties

The product is not potentially explosive, but a creation of potentially explosive damp / fuel air mixture is possible.

Lower explosion limits: 1,3 vol. %

Upper explosion limits: 19 vol. %

Auto-ignition temperature

Solid: not applicable

Gas: not applicable

Decomposition temperature: not determined

Oxidizing properties

Not oxidising.

Density (at 20 °C): 1,45 g/cm³Water solubility:
(at 20 °C) 0 g/L**Solubility in other solvents**

not determined

Partition coefficient: not determined

Viscosity / kinematic:
(at 23 °C) 411 mm²/s

Vapour density: not determined

Evaporation rate: not determined

9.2. Other information

Solid content: not determined

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

Highly flammable.

10.2. Chemical stability

The product is stable under storage at normal ambient temperatures.

10.3. Possibility of hazardous reactions

No known hazardous reactions.

10.4. Conditions to avoid

Keep away from sources of heat (e.g. hot surfaces), sparks and open flames. Vapours can form explosive mixtures with air. Keep away from heat.

10.5. Incompatible materials

No information available.

10.6. Hazardous decomposition products

No dangerous decomposition products known.

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SECTION 11: Toxicological information**11.1. Information on toxicological effects****Acute toxicity**

Based on available data, the classification criteria are not met.

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
64-17-5	ethanol; ethyl alcohol				
	oral	LD50 mg/kg	6200	Rat	IUCLID
	inhalation (4 h) vapour	LC50	95,6 mg/l	Rat	RTECS
67-64-1	acetone; propan-2-one; propanone				
	oral	LD50 mg/kg	5800	Rat	RTECS
	dermal	LD50 mg/kg	20000	Rabbit	IUCLID
	inhalation (4 h) vapour	LC50	76 mg/l	Rat	

Irritation and corrosivity

Causes serious eye irritation.

Skin corrosion/irritation: Based on available data, the classification criteria are not met.

Sensitising effects

Based on available data, the classification criteria are not met.

Carcinogenic/mutagenic/toxic effects for reproduction

May damage the unborn child. (dibutyl phthalate; DBP)

Germ cell mutagenicity: Based on available data, the classification criteria are not met.

Carcinogenicity: Based on available data, the classification criteria are not met.

STOT-single exposure

May cause drowsiness or dizziness. (1-ethoxypropan-2-ol; 2PG1EE; 1-ethoxy-2-propanol; propylene glycol monoethyl ether)

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.

Additional information on tests

The mixture is classified as hazardous according to regulation (EC) No 1272/2008 [CLP]. Special hazards arising from the substance or mixture!

SECTION 12: Ecological information**12.1. Toxicity**

The product is not: Ecotoxic.

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CAS No	Chemical name					
	Aquatic toxicity	Dose	[h] [d]	Species	Source	Method
64-17-5	ethanol; ethyl alcohol					
	Acute crustacea toxicity	EC50 9268 - 14221 mg/l	48 h	Daphnia magna	IUCLID	
67-64-1	acetone; propan-2-one; propanone					
	Acute fish toxicity	LC50 5540 mg/l	96 h	Onchorhynchus mykiss		
	Acute crustacea toxicity	EC50 6100 mg/l	48 h	Daphnia magna		

12.2. Persistence and degradability

The product has not been tested.

12.3. Bioaccumulative potential

The product has not been tested.

Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
64-17-5	ethanol; ethyl alcohol	-0,31
67-64-1	acetone; propan-2-one; propanone	-0,24
84-74-2	dibutyl phthalate; DBP	4,57

12.4. Mobility in soil

The product has not been tested.

12.5. Results of PBT and vPvB assessment

The product has not been tested.

12.6. Other adverse effects

not known

Further information

Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil.

SECTION 13: Disposal considerations**13.1. Waste treatment methods****Advice on disposal**

Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil. Dispose of waste according to applicable legislation.

Waste disposal number of waste from residues/unused products

110198 WASTES FROM CHEMICAL SURFACE TREATMENT AND COATING OF METALS AND OTHER MATERIALS; NON-FERROUS HYDRO-METALLURGY; wastes from chemical surface treatment and coating of metals and other materials (for example galvanic processes, zinc coating processes, pickling processes, etching, phosphating, alkaline degreasing, anodising); other wastes containing hazardous substances; hazardous waste

Contaminated packaging

This material and its container must be disposed of as hazardous waste. Handle contaminated packages in the same way as the substance itself. Contaminated packages must be completely emptied and can be re-used following proper cleaning.

SECTION 14: Transport information**Land transport (ADR/RID)****14.1. UN number:**

UN 1263

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14.2. UN proper shipping name: Paint**14.3. Transport hazard class(es):** 3**14.4. Packing group:** III

Hazard label: 3



Classification code: F1
 Special Provisions: 163 367 640E 650
 Limited quantity: 5 L
 Excepted quantity: E1
 Transport category: 3
 Hazard No: 30
 Tunnel restriction code: D/E

Inland waterways transport (ADN)**14.1. UN number:** UN 1263**14.2. UN proper shipping name:** Paint**14.3. Transport hazard class(es):** 3**14.4. Packing group:** III

Hazard label: 3



Classification code: F1
 Special Provisions: 163 367 640E 650
 Limited quantity: 5 L
 Excepted quantity: E1

Marine transport (IMDG)**14.1. UN number:** UN 1263**14.2. UN proper shipping name:** Paint**14.3. Transport hazard class(es):** 3**14.4. Packing group:** III

Hazard label: 3



Special Provisions: 163, 223, 367, 955
 Limited quantity: 5 L
 Excepted quantity: E1
 EmS: F-E, S-E

Air transport (ICAO-TI/IATA-DGR)**14.1. UN number:** UN 1263**14.2. UN proper shipping name:** Paint**14.3. Transport hazard class(es):** 3**14.4. Packing group:** III

Hazard label: 3

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Special Provisions:	A3 A72 A192	
Limited quantity Passenger:	10 L	
Passenger LQ:	Y344	
Excepted quantity:	E1	
IATA-packing instructions - Passenger:		355
IATA-max. quantity - Passenger:		60 L
IATA-packing instructions - Cargo:		366
IATA-max. quantity - Cargo:		220 L

14.6. Special precautions for user

Warning: Combustible liquid.

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

not applicable

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

Authorisations (REACH, annex XIV):

dibutyl phthalate; DBP

Restrictions on use (REACH, annex XVII):

Entry 30: dibutyl phthalate; DBP

2010/75/EU (VOC):	22,5 % (382,5 g/l)
2004/42/EC (VOC):	22,5 % (382,5 g/l)
Information according to 2012/18/EU (SEVESO III):	P5c FLAMMABLE LIQUIDS

National regulatory information

Employment restrictions:

Observe restrictions to employment for juvenils according to the 'juvenile work protection guideline' (94/33/EC). Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers.

Water contaminating class (D):

3 - highly water contaminating

15.2. Chemical safety assessment

Chemical safety assessments for substances in this mixture were not carried out.

SECTION 16: Other information**Changes**

This data sheet contains changes from the previous version in section(s): 2,4,5,6,7,8,9,10,11,12,13,14,15,16.

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 Harmonized 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

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LC50: Lethal concentration, 50%

LD50: Lethal dose, 50%

Classification for mixtures and used evaluation method according to Regulation (EC) No. 1272/2008 [CLP]

Classification	Classification procedure
Flam. Liq. 2; H225	On basis of test data
Eye Irrit. 2; H319	Calculation method
Repr. 1B; H360D	Calculation method
STOT SE 3; H336	Calculation method

Relevant H and EUH statements (number and full text)

H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H319	Causes serious eye irritation.
H336	May cause drowsiness or dizziness.
H360D	May damage the unborn child.
H360Df	May damage the unborn child. Suspected of damaging fertility.
H400	Very toxic to aquatic life.
EUH066	Repeated exposure may cause skin dryness or cracking.

Further Information

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material. The information is based on present level of our knowledge. It does not, however, give assurances of product properties and establishes no contract legal rights.

(The data for the hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)