

Safety Data Sheet

according to 1907/2006/EC, Article 31

Printing date 28.06.2007

Revision: 28.06.2007

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

Product details

Trade name RHODIUM

Application of the substance / the preparation: Digital printing

Manufacturer/Supplier:

SIGNTRADE GmbH

Gartenweg 24

CH-6343 Buonas

Phone: +41 41-7920157

Informing department:

Product Safety Department

Ralf Timm

e-mail: ralf.timm@signtrade.ch

Emergency information: +41 41 7920157 (Business hours: 08.00-17.00)

2 Hazards identification

Hazard designation:



Xn Harmful

Information pertaining to particular dangers for man and environment

The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

R 20/21 Harmful by inhalation and in contact with skin.

Classification system

The classification is in line with current EC lists. It is expanded, however, by information from technical literature and by information furnished by supplier companies.

3 Composition/information on ingredients

Chemical characterization

Dangerous components:

CAS: 112-07-2 EINECS: 203-933-3	2-butoxyethyl acetate	Xn; R 20/21	50-80%
CAS: 872-50-4 EINECS: 212-828-1	N-methyl-2-pyrrolidone	Xi; R 36/38	1-5%

Additional information For the wording of the listed risk phrases refer to section 16.

4 First aid measures

General information Instantly remove any clothing soiled by the product.

After inhalation

Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.

After skin contact The product is not skin irritating.

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After eye contact Rinse opened eye for several minutes under running water.

After swallowing

Rinse out mouth and then drink plenty of water.
In case of persistent symptoms consult doctor.

5 Fire fighting measures

Suitable extinguishing agents

CO₂, extinguishing powder or water jet. Fight larger fire with alcohol-resistant foam.

For safety reasons unsuitable extinguishing agents Water with a full water jet.

Special hazards caused by the material, its products of combustion or flue gases:

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

Protective equipment: Put on breathing apparatus.

6 Accidental release measures

Person-related safety precautions: Ensure adequate ventilation

Measures for environmental protection: Do not allow product to reach sewage system or water bodies.

Measures for cleaning/collecting:

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

Dispose of contaminated material as waste according to chapter 13.

Ensure adequate ventilation.

7 Handling and storage

Handling**Information for safe handling:**

Ensure good ventilation/exhaustion at the workplace.

Prevent formation of aerosols.

Information about protection against explosions and fires: The product is combustible.

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:

Keep container tightly sealed.

Store in cool, dry conditions in well sealed containers.

8 Exposure controls and personal protection

Additional information about design of technical systems: No further data; see chapter 7.

Components with critical values that require monitoring at the workplace:**112-07-2 2-butoxyethyl acetate**

WEL	Short-term value: 50 ppm
	Long-term value: 20 ppm
Sk	

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872-50-4 N-methyl-2-pyrrolidone

WEL	Short-term value: 309 mg/m ³ , 75 ppm
	Long-term value: 103 mg/m ³ , 25 ppm
Sk	

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

Personal protective equipment**General protective and hygienic measures**

Keep away from foodstuffs, beverages and food.

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

Avoid contact with the eyes and skin.

Breathing equipment:

In case of brief exposure or low pollution use breathing filter apparatus. In case of intensive or longer exposure use breathing apparatus that is independent of circulating air.

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

Butyl rubber, BR

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.

Eye protection: Safety glasses recommended during refilling.

9 Physical and chemical properties:

General Information

Form:	Fluid
Colour:	Different according to colour
Smell:	Ester-like

Change in condition

Melting point/Melting range:	Not determined
Boiling point/Boiling range:	192°C
Setting temperature / range:	- 64°C

Flash point:	88°C (ASTM D92)
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Self-inflammability:	Product is not selfigniting.
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Danger of explosion:	Product is not explosive.
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Critical values for explosion:

Lower:	0.5 Vol %
Upper:	8.54 Vol %

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Steam pressure at 20°C:	0.2 mm Hg
Density at 25°C	0.972-1.000 g/cm ³
Solubility in / Miscibility with Water at 20°C:	15 g/l
pH-value:	Not determined
Segregation coefficient (n-octanol/water):	1,51-1,79 log POW
Viscosity: dynamic at 25°C:	4-5 cps
Solvent content:	
VOC/EC	826.2 g/l
VOC/EC	85.00 %

10 Stability and reactivity

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

Dangerous reactions

Reacts with strong acids and oxidizing agents

Can form explosive mixtures in air if heated above flash point and/or when sprayed or atomised

Dangerous products of decomposition: Carbon monoxide and carbon dioxide

11 Toxicological information

Acute toxicity:

LD/LC50 values that are relevant for classification:

112-07-2 2-butoxyethyl acetate

Oral	LD50	2400 mg/kg (rat)
Dermal	LD50	1580 mg/kg (rabbit)

872-50-4 N-methyl-2-pyrrolidone

Oral	LD50	3598 mg/kg (rat)
Dermal	LD50	1480 mg/kg (rabbit)
Inhalative	LC50/4h	3.1-8.8 mg/l (rat)

Primary irritant effect:

on the skin: No irritant effect.

on the eye: No irritant effect.

Sensitization: No sensitizing effect known.

Additional toxicological information:

The product shows the following dangers according to the calculation method of the General EC Classification Guidelines for Preparations as issued in the latest version:

Harmful

12 Ecological information:

Information about elimination (persistence and degradability): Not easily biodegradable

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Ecotoxicological effects:**Aquatic toxicity:****112-07-2 2-butoxyethyl acetate**

EC50	81.9 (24h) mg/l (daphnia magna)
	960 (17h) mg/l (pseudomonas putida)
	> 500 (72h) mg/l (scenedesmus subspicatus)
LC50	80 (48h) mg/l (leuciscus idus)

872-50-4 N-methyl-2-pyrrolidone

EC50	>9000 (48h) mg/l (bacteria)
	~4897 (48h) mg/l (daphnia magna)
IC50	>500 (72h) mg/l (desmodesmus subspicatus)
LC50	4000 (96h) mg/l (leuciscus idus)
	832 (96h) mg/l (lepomis macrochirus)

General notes:

Water hazard class 1 (Self-assessment): slightly hazardous for water.

Do not allow undiluted product or large quantities of it to reach ground water, water bodies or sewage system.

13 Disposal considerations

Product:**Recommendation**

Disposal according to official regulations.

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

European waste catalogue

07 00 00	WASTES FROM ORGANIC CHEMICAL PROCESSES
07 03 00	wastes from the MFSU of organic dyes and pigments (except 06 11)
07 03 08	other still bottoms and reaction residues

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

14 Transport information

Land transport ADR/RID and GGVS/GGVE (cross-border/domestic)

ADR/RID Class: -

Maritime transport IMDG:

IMDG Class: -

Marine pollutant: No

Air transport ICAO-TI and IATA-DGR:

ICAO/IATA Class: -

Transport/Additional information: Not dangerous according to the above specifications.

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15 Regulatory information

Designation according to EC guidelines:

The product has been classified and labelled in accordance with EC Directives / Ordinance on Hazardous Materials (GefStoffV)

Code letter and hazard designation of product:

Xn Harmful

Hazard-determining components of labelling:

2-butoxyethyl acetate

Risk phrases:

20/21 Harmful by inhalation and in contact with skin.

Safety phrases:

9 Keep container in a well-ventilated place.

23 Do not breathe fumes.

36/37 Wear suitable protective clothing and gloves.

41 In case of fire and/or explosion do not breathe fumes.

60 This material and its container must be disposed of as hazardous waste.

National regulations**Technical instructions (air):**

Class	Share in %
NK	85.0

Water hazard class: Water hazard class 1 (Self-assessment): slightly hazardous for water.

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 R-phrases

20/21 Harmful by inhalation and in contact with skin.

36/38 Irritating to eyes and skin.

Department issuing data specification sheet: Product safety department