SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006, as amended by Commission Regulation (EU) 2020/878

ROTOSTAR HE 81-41203 Silver

Version	Revision Date:	SDS Number:	Print Date: 28.03.2025
4.1	27.03.2025	102000022901	Date of first issue: 06.05.2015

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

1.1 Product identifier

Trade name : ROTOSTAR HE 81-41203 Silver

Product code : 072745FY0

1.2 Relevant identified uses of the substance or mixture and uses advised against

Use of the Substance/Mixture : Colorant; Printing ink related material; Printing ink, Colouring agents, dyes

1.3 Details of the supplier of the safety data sheet

Company : ECKART GmbH
Guentersthal 4
91235 Hartenstein

Telephone : +499152770

Telefax : +499152777008

E-mail address of person responsible for the SDS : msds.eckart@altana.com

1.4 Emergency telephone number

NCEC: +44 1235 239670 (Europe)
Call and response in your language is possible.
Contract no.: ECKART29003-NCEC.

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Flammable liquids, Category 2	H225: Highly flammable liquid and vapour.
Eye irritation, Category 2	H319: Causes serious eye irritation.
Specific target organ toxicity - single exposure, Category 3, Central nervous system	H336: May cause drowsiness or dizziness.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms :

Signal word : Danger

Hazard statements :

H225	Highly flammable liquid and vapour.
H319	Causes serious eye irritation.
H336	May cause drowsiness or dizziness.

Precautionary statements :

Prevention:

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233	Keep container tightly closed.
P261	Avoid breathing mist or vapours.
P280	Wear protective gloves/ protective clothing/ eye protection/ face protection/ hearing protection.

Response:

P303 + P361 + P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.
P370 + P378	In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.

Hazardous components which must be listed on the label:

1-methoxy-2-propanol
ethyl acetate
propan-2-ol

Additional Labelling

EUH208 Contains maleic anhydride. May produce an allergic reaction.

2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Components

Chemical name	CAS-No. EC-No. Index-No. Registration number	ClassificationREGULATION (EC) No 1272/2008	Concentration (% w/w)

1-methoxy-2-propanol	107-98-2 203-539-1 603-064-00-3 01-2119457435-35	Flam. Liq. 3; H226 STOT SE 3; H336 (Central nervous system)	>= 50 - <= 100
ethyl acetate	141-78-6 205-500-4 607-022-00-5 01-2119475103-46	Flam. Liq. 2; H225 Eye Irrit. 2; H319 STOT SE 3; H336 (Central nervous system) EUH066	>= 1 - < 10
propan-2-ol	67-63-0 200-661-7 603-117-00-0 01-2119457558-25	Flam. Liq. 2; H225 Eye Irrit. 2; H319 STOT SE 3; H336 (Central nervous system)	>= 1 - < 10
aluminium powder (stabilised)	7429-90-5 231-072-3 013-002-00-1 01-2119529243-45	Flam. Sol. 1; H228	>= 1 - < 10
butyl lactate	34451-19-9 205-316-4 01-2120767264-50	Skin Irrit. 2; H315 Eye Irrit. 2; H319	>= 1 - < 10
maleic anhydride	108-31-6 203-571-6 607-096-00-9	Acute Tox. 4; H302 Skin Corr. 1B; H314 Eye Dam. 1; H318 Resp. Sens. 1; H334 Skin Sens. 1A; H317 STOT RE 1; H372 (Respiratory system) EUH071 specific concentration limit Skin Sens. 1A; H317 >= 0.001 % Skin Sens. 1A; H317 >= 0.001 % Acute toxicity estimate Acute oral toxicity: 500 mg/kg	< 0.001

For explanation of abbreviations see section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

General advice : Move the victim to fresh air.

Move out of dangerous area.
Show this safety data sheet to the doctor in attendance.
Do not leave the victim unattended.

If inhaled : Remove to fresh air.
Consult a physician after significant exposure.
If unconscious, place in recovery position and seek medical advice.

In case of skin contact : Wash off immediately with soap and plenty of water.

If skin irritation persists, call a physician.
If on clothes, remove clothes.

In case of eye contact : Immediately flush eye(s) with plenty of water.

Immediately flush eye(s) with plenty of water.
Remove contact lenses.
Keep eye wide open while rinsing.
If eye irritation persists, consult a specialist.

If swallowed : Keep respiratory tract clear.
Do not give milk or alcoholic beverages.
Never give anything by mouth to an unconscious person.
If symptoms persist, call a physician.

4.2 Most important symptoms and effects, both acute and delayed

Risks : Causes serious eye irritation.
May cause drowsiness or dizziness.

Causes serious eye irritation.
May cause drowsiness or dizziness.

4.3 Indication of any immediate medical attention and special treatment needed

This information is not available.
This information is not available.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media : Dry sand
ABC powder

Foam

Unsuitable extinguishing media : High volume water jet
Carbon dioxide (CO2)

High volume water jet

5.2 Special hazards arising from the substance or mixture

Specific hazards during firefighting : Do not allow run-off from fire fighting to enter drains or water courses.

5.3 Advice for firefighters

Special protective equipment for firefighters : Wear self-contained breathing apparatus for firefighting if necessary.

Further information : Collect contaminated fire extinguishing water separately. This must not be discharged into drains.
Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.
For safety reasons in case of fire, cans should be stored separately in closed containments.
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Use a water spray to cool fully closed containers.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions : Evacuate personnel to safe areas.
Use personal protective equipment.
Ensure adequate ventilation.
Remove all sources of ignition.
Evacuate personnel to safe areas.
Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.

6.2 Environmental precautions

General advice : The product should not be allowed to enter drains, water courses or the soil.
Prevent product from entering drains.
Prevent further leakage or spillage if safe to do so.
If the product contaminates rivers and lakes or drains inform respective authorities.

6.3 Methods and material for containment and cleaning up

Methods for cleaning up : Use mechanical handling equipment.

Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).

Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).

6.4 Reference to other sections

For personal protection see section 8.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advice on safe handling	:	Avoid formation of aerosol. Do not breathe vapours/dust. Avoid exposure - obtain special instructions before use. Avoid contact with skin and eyes. For personal protection see section 8. Smoking, eating and drinking should be prohibited in the application area. Take precautionary measures against static discharges. Provide sufficient air exchange and/or exhaust in work rooms. Open drum carefully as content may be under pressure. Dispose of rinse water in accordance with local and national regulations.
Advice on protection against fire and explosion	:	Do not spray on a naked flame or any incandescent material. Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapours). Use only explosion-proof equipment. Keep away from open flames, hot surfaces and sources of ignition.
Hygiene measures	:	When using do not eat or drink. When using do not smoke. Wash hands before breaks and at the end of workday.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers	:	Earthing of containers and apparatuses is essential. Reaction with water liberates extremely flammable gas (hydrogen) Take measures to prevent the build up of electrostatic charge. Use explosion-proof equipment. Store in original container. Keep containers tightly closed in a cool, well-ventilated place. Keep away from sources of ignition - No smoking. Keep container closed when not in use. No smoking. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Observe label precautions. Electrical installations / working materials must comply with the technological safety

standards.

Further information on storage conditions : Protect from humidity and water.

Advice on common storage : Do not store near acids.
Do not store together with oxidizing and self-igniting products.
Never allow product to get in contact with water during storage.
Keep away from oxidizing agents, strongly alkaline and strongly acid materials in order to avoid exothermic reactions.

Further information on storage stability : No decomposition if stored and applied as directed.

7.3 Specific end use(s)

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational Exposure Limits

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
1-methoxy-2-propanol	107-98-2	STEL	150 ppm 568 mg/m3	2000/39/EC
	Further information: Identifies the possibility of significant uptake through the skin, Indicative			
		TWA	100 ppm 375 mg/m3	2000/39/EC
	Further information: Identifies the possibility of significant uptake through the skin, Indicative			
		TWA	100 ppm 375 mg/m3	GB EH40
	Further information: Can be absorbed through the skin. The assigned substances are those for which there are concerns that dermal absorption will lead to systemic toxicity.			
		STEL	150 ppm 560 mg/m3	GB EH40
	Further information: Can be absorbed through the skin. The assigned substances are those for which there are concerns that dermal absorption will lead to systemic toxicity.			
ethyl acetate	141-78-6	TWA	200 ppm 734 mg/m3	GB EH40
		STEL	400 ppm 1,468 mg/m3	GB EH40
		STEL	400 ppm 1,468 mg/m3	2017/164/EU
	Further information: Indicative			
		TWA	200 ppm	2017/164/EU

			734 mg/m3	
	Further information: Indicative			
propan-2-ol	67-63-0	TWA	400 ppm 999 mg/m3	GB EH40
		STEL	500 ppm 1,250 mg/m3	GB EH40
aluminium powder (stabilised)	7429-90-5	TWA (Inhalable)	10 mg/m3	GB EH40
		TWA (Respirable fraction)	4 mg/m3	GB EH40
		TWA (inhalable dust)	10 mg/m3	GB EH40
	Further information: For the purposes of these limits, respirable dust and inhalable dust are those fractions of airborne dust which will be collected when sampling is undertaken in accordance with the methods described in MDHS14/4 General methods for sampling and gravimetric analysis or respirable, thoracic and inhalable aerosols., The COSHH definition of a substance hazardous to health includes dust of any kind when present at a concentration in air equal to or greater than 10 mg.m-3 8-hour TWA of inhalable dust or 4 mg.m-3 8-hour TWA of respirable dust. This means that any dust will be subject to COSHH if people are exposed to dust above these levels. Some dusts have been assigned specific WELs and exposure to these must comply with the appropriate limits., Most industrial dusts contain particles of a wide range of sizes. The behaviour, deposition and fate of any particular particle after entry into the human respiratory system, and the body response that it elicits, depend on the nature and size of the particle. HSE distinguishes two size fractions for limit-setting purposes termed 'inhalable' and 'respirable'., Inhalable dust approximates to the fraction of airborne material that enters the nose and mouth during breathing and is therefore available for deposition in the respiratory tract. Respirable dust approximates to the fraction that penetrates to the gas exchange region of the lung. Fuller definitions and explanatory material are given in MDHS14/4., Where dusts contain components that have their own assigned WEL, all the relevant limits should be complied with., Where no specific short-term exposure limit is listed, a figure three times the long-term exposure limit should be used.				
		TWA (Respirable dust)	4 mg/m3	GB EH40
	Further information: For the purposes of these limits, respirable dust and inhalable dust are those fractions of airborne dust which will be collected when sampling is undertaken in accordance with the methods described in MDHS14/4 General methods for sampling and gravimetric analysis or respirable, thoracic and inhalable aerosols., The COSHH definition of a substance hazardous to health includes dust of any kind when present at a concentration in air equal to or greater than 10 mg.m-3 8-hour TWA of inhalable dust or 4 mg.m-3 8-hour TWA of respirable dust. This means that any dust will be subject to COSHH if people are exposed to dust above these levels. Some dusts have been assigned specific WELs and exposure to these must comply with the appropriate limits., Most industrial dusts contain particles of a wide range of sizes. The behaviour, deposition and fate of any particular particle after entry into the human respiratory system, and the body			

	response that it elicits, depend on the nature and size of the particle. HSE distinguishes two size fractions for limit-setting purposes termed 'inhalable' and 'respirable'., Inhalable dust approximates to the fraction of airborne material that enters the nose and mouth during breathing and is therefore available for deposition in the respiratory tract. Respirable dust approximates to the fraction that penetrates to the gas exchange region of the lung. Fuller definitions and explanatory material are given in MDHS14/4., Where dusts contain components that have their own assigned WEL, all the relevant limits should be complied with., Where no specific short-term exposure limit is listed, a figure three times the long-term exposure limit should be used.			
butyl lactate	34451-19-9	TWA	5 ppm 30 mg/m3	GB EH40
	Further information: Where no specific short-term exposure limit is listed, a figure three times the long-term exposure limit should be used.			
maleic anhydride	108-31-6	TWA	1 mg/m3	GB EH40
	Further information: Substances that can cause occupational asthma (also known as asthmagens and respiratory sensitisers) can induce a state of specific airway hyper-responsiveness via an immunological irritant or other mechanism. Once the airways have become hyper-responsive, further exposure to the substance, sometimes even in tiny quantities, may cause respiratory symptoms. These symptoms can range in severity from a runny nose to asthma. Not all workers who are exposed to a sensitiser will become hyper-responsive and it is impossible to identify in advance those who are likely to become hyper-responsive. Substances that can cause occupational asthma should be distinguished from substances which may trigger the symptoms of asthma in people with pre-existing airway hyper-responsiveness, but which do not include the disease themselves. The latter substances are not classified as asthmagens or respiratory sensitisers. Further information can be found in the HSE publication Asthmagen? Critical assessments of the evidence for agents implicated in occupational asthma., Wherever it is reasonably practicable, exposure to substances that can cause occupational asthma should be prevented. Where this is not possible, the primary aim is to apply adequate standards of control to prevent workers from becoming hyper-responsive. For substances that can cause occupational asthma, COSHH requires that exposure be reduced to as low as is reasonably practicable. Activities giving rise to short-term peak concentrations should receive particular attention when risk management is being considered. Health surveillance is appropriate for all employees exposed or liable to be exposed to a substance which may cause occupational asthma and there should be appropriate consultation with an occupational health professional over the degree of risk and level of surveillance., Capable of causing occupational asthma., The 'Sen' notation in the list of WELs has been assigned only to those substances which may cause occupational asthma in the categories shown in Table 1. It should be remembered that other substances not in these tables may cause occupational asthma. HSE's asthma web pages (www.hse.gov.uk/asthma) provide further information.			
		STEL	3 mg/m3	GB EH40
	Further information: Substances that can cause occupational asthma (also known as asthmagens and respiratory sensitisers) can induce a state of specific airway hyper-responsiveness via an immunological irritant or other			

	mechanism. Once the airways have become hyper-responsive, further exposure to the substance, sometimes even in tiny quantities, may cause respiratory symptoms. These symptoms can range in severity from a runny nose to asthma. Not all workers who are exposed to a sensitiser will become hyper-responsive and it is impossible to identify in advance those who are likely to become hyper-responsive. Substances that can cause occupational asthma should be distinguished from substances which may trigger the symptoms of asthma in people with pre-existing airway hyper-responsiveness, but which do not include the disease themselves. The latter substances are not classified as asthmagens or respiratory sensitisers. Further information can be found in the HSE publication Asthmagen? Critical assessments of the evidence for agents implicated in occupational asthma., Wherever it is reasonably practicable, exposure to substances that can cause occupational asthma should be prevented. Where this is not possible, the primary aim is to apply adequate standards of control to prevent workers from becoming hyper-responsive. For substances that can cause occupational asthma, COSHH requires that exposure be reduced to as low as is reasonably practicable. Activities giving rise to short-term peak concentrations should receive particular attention when risk management is being considered. Health surveillance is appropriate for all employees exposed or liable to be exposed to a substance which may cause occupational asthma and there should be appropriate consultation with an occupational health professional over the degree of risk and level of surveillance., Capable of causing occupational asthma., The 'Sen' notation in the list of WELs has been assigned only to those substances which may cause occupational asthma in the categories shown in Table 1. It should be remembered that other substances not in these tables may cause occupational asthma. HSE's asthma web pages (www.hse.gov.uk/asthma) provide further information.

Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006:

Substance name	End Use	Exposure routes	Potential health effects	Value
1-methoxy-2-propanol	Workers	Inhalation	Long-term systemic effects	369 mg/m3
	Workers	Inhalation	Acute systemic effects	553.5 mg/m3
	Workers	Inhalation	Acute local effects	553.5 mg/m3
	Workers	Dermal	Long-term systemic effects	50.6 mg/kg
	Consumers	Inhalation	Long-term systemic effects	43.9 mg/m3
	Consumers	Dermal	Long-term systemic effects	18.1 mg/kg
	Consumers	Oral	Long-term systemic effects	3.3 mg/kg
ethyl acetate	Workers	Inhalation	Long-term systemic effects	734 mg/m3
	Workers	Inhalation	Long-term local effects	734 mg/m3
	Workers	Inhalation	Acute systemic	1468 mg/m3

			effects	
	Workers	Inhalation	Acute local effects	1468 mg/m3
	Workers	Dermal	Long-term systemic effects	63 mg/kg
	Workers	Dermal	Long-term local effects	63 mg/kg
	Consumers	Inhalation	Long-term systemic effects	367 mg/m3
	Consumers	Inhalation	Long-term local effects	367 mg/m3
	Consumers	Inhalation	Acute systemic effects	734 mg/m3
	Consumers	Inhalation	Acute local effects	734 mg/m3
	Consumers	Dermal	Long-term systemic effects	37 mg/kg
	Consumers	Oral	Long-term systemic effects	4.5 mg/kg
propan-2-ol	Workers	Inhalation	Long-term systemic effects	500 mg/m3
	Workers	Dermal	Long-term systemic effects	888 mg/kg
	Consumers	Inhalation	Long-term systemic effects	89 mg/m3
	Consumers	Dermal	Long-term systemic effects	319 mg/kg
	Consumers	Oral	Long-term systemic effects	26 mg/kg
aluminium powder (stabilised)	Workers	Inhalation	Long-term systemic effects	3.72 mg/m3
	Workers	Inhalation	Long-term local effects	3.72 mg/m3
	Consumers	Oral	Long-term systemic effects	3.95 mg/kg
maleic anhydride	Workers	Inhalation	Long-term systemic effects	0.081 mg/m3
	Workers	Inhalation	Long-term local effects	0.081 mg/m3
	Workers	Inhalation	Acute systemic effects	0.200 mg/m3
	Workers	Inhalation	Acute local effects	0.200 mg/m3
	Workers	Dermal	Long-term systemic effects	0.200 mg/kg
	Workers	Dermal	Acute systemic effects	0.04 mg/kg
	Workers	Dermal	Acute local effects	0.04 mg/kg
	Consumers	Inhalation	Long-term systemic effects	0.05 mg/m3
	Consumers	Inhalation	Long-term local effects	0.08 mg/m3
	Consumers	Dermal	Long-term systemic	0.100 mg/kg

			effects	
	Consumers	Dermal	Acute systemic effects	0.100 mg/kg
	Consumers	Oral	Long-term systemic effects	0.06 mg/kg
	Consumers	Oral	Acute systemic effects	0.100 mg/kg

Predicted No Effect Concentration (PNEC) according to Regulation (EC) No. 1907/2006:

Substance name	Environmental Compartment	Value
1-methoxy-2-propanol	Fresh water	10 mg/l
	Marine water	1 mg/l
	STP	100 mg/l
	Fresh water sediment	41.6 mg/kg
	Marine sediment	4.17 mg/kg
	Soil	2.47 mg/kg
	periodical release	100 mg/l
ethyl acetate	Fresh water	0.24 mg/l
	Marine water	0.024 mg/l
	STP	650 mg/l
	Fresh water sediment	1.15 mg/kg
	Marine sediment	0.115 mg/kg
	Soil	0.148 mg/kg
	periodical release	1.65 mg/l
	Secondary Poisoning	200 mg/kg
propan-2-ol	Fresh water	140.9 mg/l
	Marine water	140.9 mg/l
	Fresh water sediment	552 mg/kg
	Marine sediment	552 mg/kg
	STP	2251 mg/l
	Soil	28 mg/kg
aluminium powder (stabilised)	Fresh water	0.0749 mg/l
	clarification plant	20 mg/l
maleic anhydride	Fresh water	0.04281 mg/l
	Marine water	0.004281 mg/l
	Fresh water sediment	0.344 mg/kg
	Marine sediment	0.0334 mg/kg
	STP	44.6 mg/l
	Soil	0.0415 mg/l
	periodical release	0.4281 mg/l

8.2 Exposure controls

Personal protective equipment

Eye/face protection : Goggles
Tightly fitting safety goggles
Wear face-shield and protective suit for abnormal processing problems.

Hand protection
Material : Solvent-resistant gloves (butyl-rubber)

Remarks	:	Take note of the information given by the producer concerning permeability and break through times, and of special workplace conditions (mechanical strain, duration of contact). The exact break through time can be obtained from the protective glove producer and this has to be observed. Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time. Recommended preventive skin protection Skin should be washed after contact. The suitability for a specific workplace should be discussed with the producers of the protective gloves.
Skin and body protection	:	Impervious clothing Choose body protection according to the amount and concentration of the dangerous substance at the work place.
Respiratory protection	:	Use suitable breathing protection if workplace concentration requires.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Form	:	liquid
Colour	:	silver
Odour	:	characteristic
Odour Threshold	:	No data available
Melting point/ range	:	Not applicable
Boiling point/boiling range	:	82 °C
Flammability	:	No data available
Upper explosion limit / Upper flammability limit	:	No data available
Lower explosion limit / Lower flammability limit	:	No data available
Flash point	:	-4 °C

Auto-ignition temperature	:	No data available
Decomposition temperature	:	No data available
pH	:	6 - 8 Concentration: 100 %
Viscosity, kinematic	:	No data available
Solubility(ies)		
Water solubility	:	insoluble
Solubility in other solvents	:	No data available
Partition coefficient: n-octanol/water	:	No data available
Vapour pressure	:	No data available
Vapor Pressure for Components:		
1-methoxy-2-propanol	:	11.3 hPa (20 °C)
ethyl acetate	:	98.4 hPa (20 °C)
propan-2-ol	:	44 hPa (20 °C)
butyl lactate	:	0.3 hPa (20 °C)
Relative density	:	No data available
Density	:	0.9 - 1.0 g/cm3
Relative vapour density	:	No data available
Particle characteristics		
Particle Size Distribution	:	No data available

9.2 Other information

No data available

SECTION 10: Stability and reactivity

10.1 Reactivity

No decomposition if stored and applied as directed.

10.2 Chemical stability

No decomposition if stored and applied as directed.

10.3 Possibility of hazardous reactions

Hazardous reactions : Contact with acids and alkalis may release hydrogen.

No decomposition if stored and applied as directed.

Vapours may form explosive mixture with air.

10.4 Conditions to avoid

Conditions to avoid : Do not allow evaporation to dryness.

Heat, flames and sparks.

10.5 Incompatible materials

Materials to avoid : Acids
Bases
Oxidizing agents

10.6 Hazardous decomposition products

This information is not available.

SECTION 11: Toxicological information

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity

Not classified based on available information.
Not classified due to lack of data.

Components:

ethyl acetate:

Acute oral toxicity : (Rat): 5,620 mg/kg

Acute inhalation toxicity : LC50 (Rat): 56 mg/l
Exposure time: 4 h
Test atmosphere: vapour

Acute dermal toxicity : LD50 (Rabbit): > 18,000 mg/kg

propan-2-ol:

Acute oral toxicity : LD50 (Rat): > 2,000 mg/kg

Acute dermal toxicity : LD50 (Rabbit): > 2,000 mg/kg

aluminium powder (stabilised):

Acute inhalation toxicity : LC50 (Rat): > 5 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist

maleic anhydride:

Acute oral toxicity : Acute toxicity estimate: 500 mg/kg
Method: Converted acute toxicity point estimate

Assessment: The component/mixture is moderately toxic after single ingestion.

Skin corrosion/irritation

Not classified based on available information.
Not classified due to lack of data.

Product:

Remarks : May cause skin irritation and/or dermatitis.

Components:

butyl lactate:

Result : Skin irritation

maleic anhydride:

Result : Corrosive after 3 minutes to 1 hour of exposure

Serious eye damage/eye irritation

Causes serious eye irritation.
Causes serious eye irritation.

Product:

Remarks : May cause irreversible eye damage.

Components:

ethyl acetate:

Result : Eye irritation

propan-2-ol:

Result : Eye irritation

butyl lactate:

Result : Eye irritation
Remarks : May cause irreversible eye damage.

maleic anhydride:

Result : Irreversible effects on the eye

Respiratory or skin sensitisation

Skin sensitisation
Not classified based on available information.

Skin sensitisation
Not classified due to lack of data.

Respiratory sensitisation
Not classified based on available information.

Respiratory sensitisation
Not classified due to lack of data.

Components:

maleic anhydride:

Assessment	:	The product is a skin sensitiser, sub-category 1A.
Assessment	:	May cause sensitisation by inhalation.

Germ cell mutagenicity
Not classified based on available information.
Not classified due to lack of data.

Carcinogenicity
Not classified based on available information.
Not classified due to lack of data.

Reproductive toxicity
Not classified based on available information.
Not classified due to lack of data.

STOT - single exposure
May cause drowsiness or dizziness.
May cause drowsiness or dizziness.

Components:

1-methoxy-2-propanol:

Assessment	:	May cause drowsiness or dizziness.

ethyl acetate:

Assessment	:	May cause drowsiness or dizziness.

propan-2-ol:

Assessment	:	May cause drowsiness or dizziness.

STOT - repeated exposure
Not classified based on available information.

Not classified due to lack of data.

Components:

maleic anhydride:

Assessment : Causes damage to organs through prolonged or repeated exposure.

Aspiration toxicity

Not classified based on available information.
Not classified due to lack of data.

11.2 Information on other hazards

Further information

Product:

Remarks : Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting.
Concentrations substantially above the TLV value may cause narcotic effects.
Solvents may degrease the skin.

SECTION 12: Ecological information

12.1 Toxicity

Components:

ethyl acetate:

Toxicity to daphnia and other aquatic invertebrates : (Daphnia (water flea)): 717 mg/l

12.2 Persistence and degradability

No data available

12.3 Bioaccumulative potential

No data available

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

Product:

Assessment : This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 Endocrine disrupting properties

No data available

12.7 Other adverse effects

Product:

Additional ecological information : No data available

Components:

butyl lactate:

Additional ecological information : No data available

SECTION 13: Disposal considerations

European Waste Catalogue : 08 03 12* - waste ink containing dangerous substances

13.1 Waste treatment methods

Product : Do not dispose of waste into sewer.
Do not contaminate ponds, waterways or ditches with chemical or used container.
Send to a licensed waste management company.

Contaminated packaging : Empty remaining contents.
Dispose of as unused product.
Do not re-use empty containers.
Do not burn, or use a cutting torch on, the empty drum.

SECTION 14: Transport information

14.1 UN number or ID number

ADR : UN 1210

IMDG : UN 1210

IATA : UN 1210

14.2 UN proper shipping name

ADR : PRINTING INK

IMDG : PRINTING INK

IATA : Printing ink

14.3 Transport hazard class(es)

	Class	Subsidiary risks

ADR	:	3
IMDG	:	3
IATA	:	3

14.4 Packing group

ADR

Packing group	:	II
Classification Code	:	F1
Hazard Identification Number	:	33
Labels	:	3
Tunnel restriction code	:	(D/E)

IMDG

Packing group	:	II
Labels	:	3
EmS Code	:	F-E, S-D

IATA (Cargo)

Packing instruction (cargo aircraft)	:	364
Packing instruction (LQ)	:	Y341
Packing group	:	II
Labels	:	3

IATA (Passenger)

Packing instruction (passenger aircraft)	:	353
Packing instruction (LQ)	:	Y341
Packing group	:	II
Labels	:	3

14.5 Environmental hazards

ADR

Environmentally hazardous	:	no

IMDG

Marine pollutant	:	no

14.6 Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

14.7 Maritime transport in bulk according to IMO instruments

Not applicable for product as supplied.

SECTION 15: Regulatory information

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

Relevant EU provisions transposed through retained EU law

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles (Annex XVII)	:	Conditions of restriction for the following entries should be considered: Number on list 3: 1-methoxy-2-propanol, ethyl acetate, propan-2-ol, butyl lactate, ethanol Number on list 3 Number on list 40: 1-methoxy-2-propanol, ethyl acetate, aluminium powder (stabilised) Number on list 75: If you intend to use this product as tattoo ink, please contact your vendor.
UK REACH Candidate list of substances of very high concern (SVHC) for Authorisation	:	Not applicable
The Persistent Organic Pollutants Regulations (retained Regulation (EU) 2019/1021 as amended for Great Britain)	:	Not applicable
Regulation (EC) on substances that deplete the ozone layer	:	Not applicable
UK REACH List of substances subject to authorisation (Annex XIV)	:	Not applicable
Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances.	P5c	FLAMMABLE LIQUIDS

15.2 Chemical safety assessment

No data available

SECTION 16: Other information

Full text of H-Statements

H225	:	Highly flammable liquid and vapour.
H226	:	Flammable liquid and vapour.
H228	:	Flammable solid.
H302	:	Harmful if swallowed.
H314	:	Causes severe skin burns and eye damage.
H315	:	Causes skin irritation.
H317	:	May cause an allergic skin reaction.
H318	:	Causes serious eye damage.
H319	:	Causes serious eye irritation.
H334	:	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H336	:	May cause drowsiness or dizziness.
H372	:	Causes damage to organs through prolonged or repeated exposure if inhaled.
EUH066	:	Repeated exposure may cause skin dryness or cracking.
EUH071	:	Corrosive to the respiratory tract.

Full text of other abbreviations

Acute Tox.	:	Acute toxicity
Eye Dam.	:	Serious eye damage
Eye Irrit.	:	Eye irritation
Flam. Liq.	:	Flammable liquids
Flam. Sol.	:	Flammable solids
Resp. Sens.	:	Respiratory sensitisation
Skin Corr.	:	Skin corrosion
Skin Irrit.	:	Skin irritation
Skin Sens.	:	Skin sensitisation
STOT RE	:	Specific target organ toxicity - repeated exposure
STOT SE	:	Specific target organ toxicity - single exposure
2000/39/EC	:	Europe. Commission Directive 2000/39/EC establishing a first list of indicative occupational exposure limit values
2017/164/EU	:	Europe. Commission Directive 2017/164/EU establishing a fourth list of indicative occupational exposure limit values
GB EH40	:	UK. EH40 WEL - Workplace Exposure Limits
2000/39/EC / TWA	:	Limit Value - eight hours
2000/39/EC / STEL	:	Short term exposure limit
2017/164/EU / STEL	:	Short term exposure limit
2017/164/EU / TWA	:	Limit Value - eight hours
GB EH40 / TWA	:	Long-term exposure limit (8-hour TWA reference period)
GB EH40 / STEL	:	Short-term exposure limit (15-minute reference period)

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - Agreement concerning the International Carriage of Dangerous Goods by Road; AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN -

Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; SVHC - Substance of Very High Concern; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

Further information

Classification of the mixture:		**Classification procedure:**
Flam. Liq. 2	H225	Based on product data or assessment
Eye Irrit. 2	H319	Calculation method
STOT SE 3	H336	Calculation method

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

GB / EN