

**Safety Data Sheet**

according to UK REACH Regulation

WS-Epoxid-Härter EH 203

Revision date: 13.03.2025

Product code: 5203

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

WS-Epoxid-Härter EH 203

UFI: 8KY5-G95M-0VJY-5C61

1.2. Relevant identified uses of the substance or mixture and uses advised against**Use of the substance/mixture**

Curing agent (crosslinking agent)

Uses advised against

Do not use for products which come into contact with the food stuffs.

1.3. Details of the supplier of the safety data sheet

Company name: W+S GmbH Lackchemie und Aerosol-Technik

Street: Am Sportplatz 5

Place: D-63791 Karlstein-Dettingen

Telephone: +49 6188 9575-0

Telefax: +49 6188 9575-30

E-mail: info@ws-lackchemie.de

Contact person: Abt. Produkt / Sicherheit

Responsible Department: Abt. Produkt / Sicherheit

1.4. Emergency telephone number: +49 551-19240 GIZ-Nord Poisons Centre**SECTION 2: Hazards identification****2.1. Classification of the substance or mixture****GB CLP Regulation**

Flam. Liq. 3; H226

Acute Tox. 4; H332

Acute Tox. 4; H312

Skin Irrit. 2; H315

Eye Dam. 1; H318

Full text of hazard statements: see SECTION 16.

2.2. Label elements**GB CLP Regulation****Hazard components for labelling**

Hardener (reaction mass)

2-methylpropan-1-ol; iso-butanol

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

H226 Flammable liquid and vapour.

H312+H332 Harmful in contact with skin or if inhaled.

H315 Causes skin irritation.

H318 Causes serious eye damage.

Precautionary statements

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No

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P280	smoking. Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P370+P378	In case of fire: Use sand, dry chemical or alcohol-resistant foam to extinguish.
P501	Dispose of contents/container to Offer surplus and non-recyclable solutions to a licensed disposal company..

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

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification (GB CLP Regulation)			
	Hardener (reaction mass)			60 - < 65 %
	Acute Tox. 4, Acute Tox. 4, Skin Irrit. 2, Eye Dam. 1; H332 H312 H315 H318			
78-83-1	2-methylpropan-1-ol; iso-butanol			5 - < 10 %
	201-148-0	603-108-00-1		
	Flam. Liq. 3, Skin Irrit. 2, Eye Dam. 1, STOT SE 3, STOT SE 3; H226 H315 H318 H335 H336			

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

Specific Conc. Limits, M-factors and ATE

CAS No	EC No	Chemical name	Quantity
		Specific Conc. Limits, M-factors and ATE	
		Hardener (reaction mass)	60 - < 65 %
		inhalation: ATE = 11 mg/l (vapours); inhalation: ATE = 1,5 mg/l (dusts or mists); dermal: ATE = 1100 mg/kg	
78-83-1	201-148-0	2-methylpropan-1-ol; iso-butanol	5 - < 10 %
		inhalation: LC50 = > 24 mg/l (vapours); dermal: LD50 = > 2000 mg/kg; oral: LD50 = > 2830 mg/kg	

Further Information

Full text of R-phrases: see section 16.

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

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible). Give nothing to eat or drink.

After inhalation

In all cases of doubt, or when symptoms persist, seek medical advice. In case of inhaling spray mists, consult a doctor immediately and show him box or label. If victim is at risk of losing consciousness, position and transport on their side. Provide fresh air.

After contact with skin

After contact with skin, wash immediately with: Water. Medical treatment necessary. Remove contaminated, saturated clothing immediately. Change contaminated clothing. Wash thoroughly the body (shower or bath).

After contact with eyes

In case of contact with eyes, rinse immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart. Subsequently consult an ophthalmologist. If product gets into the eye, keep eyelid open and rinse immediately with large quantities of water, for at least 5 minutes. Subsequently consult an ophthalmologist.

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After ingestion

If swallowed, immediately drink: Water. Do NOT induce vomiting. Call a physician immediately.

Caution if victim vomits: Risk of aspiration!

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

Frequently or prolonged contact with skin may cause dermal irritation.

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

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

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

Foam. Dry extinguishing powder. Carbon dioxide (CO₂). ABC powder.

Unsuitable extinguishing media

High power water jet.

5.2. Special hazards arising from the substance or mixture

Combustible. Vapours may form explosive mixtures with air. Burning produces heavy smoke. In case of fire and/or explosion do not breathe fumes. Use water spray jet to protect personnel and to cool endangered containers. Contaminated fire-fighting water must be collected separately.

Additional information

Contaminated fire-fighting water must be collected separately. Remove product from area of fire. Co-ordinate fire-fighting measures to the fire surroundings.

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

Do not breathe gas/fumes/vapour/spray. Avoid contact with skin, eyes and clothes. Wear personal protection equipment. Remove all sources of ignition. Provide adequate ventilation. See protective measures under point 7 and 8.

6.2. Environmental precautions

Do not allow to enter into surface water or drains. Explosion hazard. In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities.

6.3. Methods and material for containment and cleaning up**Other information**

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

6.4. Reference to other sections

See protective measures under point 7 and 8.

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. Preventive measures: If handled uncovered, arrangements with local exhaust ventilation have to be used. It is recommended to design all work processes always so that the following is excluded: inhalation. skin contact. Eye contact. Take precautionary measures against static discharges.

Advice on protection against fire and explosion

Keep away from sources of ignition - No smoking. Vapours may form explosive mixtures with air.

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Advice on general occupational hygiene

Remove contaminated, saturated clothing immediately. Protect skin by using skin protective cream. After work, wash hands and face. When using do not eat or drink. Observe the wear time limits according GefStoffV in combination with the rules for using respiratory protection apparatus (BGR 190).

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. Keep container in a well-ventilated place. Keep only in the original container in a cool, well-ventilated place. Take precautionary measures against static discharges.

Hints on joint storage

Do not store together with: Material, rich in oxygen, oxidizing. Materials to avoid: Acid. Base. Material, combustible. Oxidizing agents.

Further information on storage conditions

Keep away from sources of ignition - No smoking. Protect against: heat. Keep/Store only in original container.

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

CAS No	Substance	ppm	mg/m ³	fibres/ml	Category	Origin
78-83-1	2-Methylpropan-1-ol	50	154		TWA (8 h)	WEL
		75	231		STEL (15 min)	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. Occupational exposure controls: Refer to chapter 7. No further action is necessary.

Individual protection measures, such as personal protective equipment**Eye/face protection**

Suitable eye protection: Framed glasses. Goggles.

Hand protection

Tested protective gloves are to be worn:
Suitable material: NBR (Nitrile rubber), Butyl rubber.
Thickness of glove material: >0,4mm
penetration time (maximum wearing period): >480min
DIN-/EN-Norms EN ISO 374

Skin protection

Suitable protective clothing: Lab apron.

Respiratory protection

Respiratory protection necessary at: exceeding exposure limit values insufficient ventilation. insufficient absorption.

Environmental exposure controls

Refer to chapter 7 No further action is necessary.

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

Physical state:	liquid
Colour:	colourless
Odour:	characteristic

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Odour threshold: not determined

Boiling point or initial boiling point and
boiling range:

117 °C

Lower explosion limits:

1 vol. %

Upper explosion limits:

11,3 vol. %

Flash point:

27 °C

Auto-ignition temperature:

343 °C

Vapour pressure:
(at 20 °C)

7 hPa

Density (at 20 °C):

0,9267 g/cm³ DIN 53217**Test method****9.2. Other information****Other safety characteristics**

Solvent content:

VOCV (CH): 7,75 %

VOC (EU): 71,819 g/l

Solid content:

92 %

Flow time:

56 (3 mm) 3 DIN 53211

(at 20 °C)

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

No risks worthy of mention. Please observe the information on the safety data sheet at all times.

10.2. Chemical stability

No risks worthy of mention. Please observe the information on the safety data sheet at all times.

10.3. Possibility of hazardous reactions

No risks worthy of mention. Please observe the information on the safety data sheet at all times.

10.4. Conditions to avoid

Keep away from heat. Ignition hazard. Conditions to avoid:

In case of warming: Danger of bursting container.

10.5. Incompatible materials

Alkalis (alkalis). Acid. Oxidizing agents.

10.6. Hazardous decomposition products

Thermal decomposition can lead to the escape of irritating gases and vapors.

SECTION 11: Toxicological information**11.1. Information on hazard classes as defined in GB CLP Regulation****Acute toxicity**

Acute toxicity, oral. Acute toxicity, inhalant. Toxicological data are not available.

ATEmix calculatedATE (oral) > 2000 mg/kg; ATE (dermal) 1833 mg/kg; ATE (inhalation vapour) 18,33 mg/l; ATE (inhalation
dust/mist) 2,500 mg/l

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CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
	Hardener (reaction mass)				
	dermal	ATE 1100 mg/kg			
	inhalation vapour	ATE 11 mg/l			
	inhalation dust/mist	ATE 1,5 mg/l			
78-83-1	2-methylpropan-1-ol; iso-butanol				
	oral	LD50 > 2830 mg/kg	Rat		
	dermal	LD50 > 2000 mg/kg	Rat		
	inhalation (4 h) vapour	LC50 > 24 mg/l	Rat		

Irritation and corrosivity

@1501.B015550 @1101.B011136 After skin contact: irritant. Evaluation: non-irritant.

STOT-repeated exposure

Has de-greasing effect on the skin.

Specific effects in experiment on an animal

Rat LD50: 4300 - 5800 mg/kg Acute toxicity, oral

Data apply to the main component.

Additional information on tests

The classification was carried out according to the calculation method of the Preparations Directive (1999/45/EC).

11.2. Information on other hazards**Further information**

Toxicological data are not available.

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

Doesn't get into the sewage water as long as the process is carried out according to regulations.

Very toxic for Water fleas.

CAS No	Chemical name				
	Aquatic toxicity	Dose	[h] [d]	Species	Source
78-83-1	2-methylpropan-1-ol; iso-butanol				
	Acute fish toxicity	LC50 1430 mg/l	96 h	Pimephales promelas	
	Acute algae toxicity	ErC50 1250 mg/l		Desmodesmus subspicatus	
	Acute crustacea toxicity	EC50 1439 mg/l	48 h	Daphnia magna	

12.2. Persistence and degradability

No data available

12.3. Bioaccumulative potential

No data available

Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
78-83-1	2-methylpropan-1-ol; iso-butanol	0,79

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12.4. Mobility in soil

No data available

12.5. Results of PBT and vPvB assessment

The substances in the mixture do not meet the PBT/vPvB criteria according to UK REACH.

No data available

12.6. Endocrine disrupting properties

This product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms as no components meets the criteria.

12.7. Other adverse effects

No data available

Further information

Do not allow to enter into surface water or drains. The classification was carried out according to the calculation method of the Preparations Directive (1999/45/EC).

SECTION 13: Disposal considerations**13.1. Waste treatment methods****Disposal recommendations**

Dispose of waste according to applicable legislation.

List of Wastes Code - residues/unused products

080111 WASTES FROM THE MANUFACTURE, FORMULATION, SUPPLY AND USE (MFSU) OF COATINGS (PAINTS, VARNISHES AND VITREOUS ENAMELS), ADHESIVES, SEALANTS AND PRINTING INKS; wastes from MFSU and removal of paint and varnish; waste paint and varnish containing organic solvents or other hazardous substances; hazardous waste

List of Wastes Code - used product

080111 WASTES FROM THE MANUFACTURE, FORMULATION, SUPPLY AND USE (MFSU) OF COATINGS (PAINTS, VARNISHES AND VITREOUS ENAMELS), ADHESIVES, SEALANTS AND PRINTING INKS; wastes from MFSU and removal of paint and varnish; waste paint and varnish containing organic solvents or other hazardous substances; hazardous waste

List of Wastes Code - contaminated packaging

080111 WASTES FROM THE MANUFACTURE, FORMULATION, SUPPLY AND USE (MFSU) OF COATINGS (PAINTS, VARNISHES AND VITREOUS ENAMELS), ADHESIVES, SEALANTS AND PRINTING INKS; wastes from MFSU and removal of paint and varnish; waste paint and varnish containing organic solvents or other hazardous substances; hazardous waste

Contaminated packaging

Non-contaminated packages may be recycled. Handle contaminated packages in the same way as the substance itself. Hand over to officially registered waste disposal company.

SECTION 14: Transport information**Land transport (ADR/RID)****14.1. UN number or ID 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: 163 367 650

Limited quantity: 5 L

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Excepted quantity: E1
Transport category: 3
Hazard No: 30
Tunnel restriction code: D/E

Inland waterways transport (ADN)

14.1. UN number or ID 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: 163 367 650
Limited quantity: 5 L
Excepted quantity: E1

Marine transport (IMDG)

14.1. UN number or ID 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 or ID 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: 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

No information available.

14.7. Maritime transport in bulk according to IMO instruments

No information available.

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

Restrictions on use (REACH, annex XVII):

Entry 3, Entry 40, Entry 75

Directive 2004/42/EC on VOC in
paints and varnishes:

VOCV (CH): 7,75 %

VOC (EU): 71,819 g/l

National regulatory information

Employment restrictions:

Observe restrictions to employment for juveniles 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 hazard class (D):

2 - obviously hazardous to water

15.2. Chemical safety assessment

For this substance a chemical safety assessment has not been carried out.

SECTION 16: Other information**Abbreviations and acronyms**

Flam. Liq: Flammable liquids

Acute Tox: Acute toxicity

Skin Irrit: Skin irritation

Eye Dam: Eye damage

STOT SE: Specific target organ toxicity - single exposure

Classification for mixtures and used evaluation method according to GB CLP Regulation

Classification	Classification procedure
Flam. Liq. 3; H226	On basis of test data
Acute Tox. 4; H332	Calculation method
Acute Tox. 4; H312	Calculation method
Skin Irrit. 2; H315	Calculation method
Eye Dam. 1; H318	Calculation method

Relevant H and EUH statements (number and full text)

H226	Flammable liquid and vapour.
H312	Harmful in contact with skin.
H312+H332	Harmful in contact with skin or if inhaled.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.

Further Information

The product is classified and labelled according to EC directives or corresponding national laws.

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.



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