

Safety Data Sheet

according to Regulation (EC) No 1907/2006

EP 310 S - B

Revision date: 03.05.2017

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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**Use of the substance/mixture**

Adhesives, sealants

1.3. Details of the supplier of the safety data sheet

Company name: Hottinger Baldwin Messtechnik GmbH
Darmstadt
Street: Im Tiefen See 45
Place: D-64293 Darmstadt
Telephone: +49 (0)6151 803-0
e-mail: info@de.hbm.com
e-mail (Contact person): support@hbm.com
Internet: www.hbm.com
Responsible Department: Customer Care Center CCC +49 6151 803 0

1.4. Emergency telephone number:

+49(0)6131/19240

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

Hazard categories:

Flammable liquid: Flam. Liq. 2

Skin corrosion/irritation: Skin Irrit. 2

Serious eye damage/eye irritation: Eye Irrit. 2

Respiratory or skin sensitisation: Skin Sens. 1

Carcinogenicity: Carc. 2

Specific target organ toxicity - single exposure: STOT SE 3

Hazardous to the aquatic environment: Aquatic Chronic 2

Hazard Statements:

Highly flammable liquid and vapour.

Causes skin irritation.

Causes serious eye irritation.

May cause an allergic skin reaction.

Suspected of causing cancer.

May cause respiratory irritation.

Toxic to aquatic life with long lasting effects.

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

Novolac epoxy resin

tetrahydrofuran

Signal word: Danger**Pictograms:**

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Hazard statements

H225	Highly flammable liquid and vapour.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H351	Suspected of causing cancer.
H411	Toxic to aquatic life with long lasting effects.

Precautionary statements

P235	Keep cool.
P405	Store locked up.
P391	Collect spillage.
P271	Use only outdoors or in a well-ventilated area.
P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P242	Use only non-sparking tools.
P240	Ground/bond container and receiving equipment.
P233	Keep container tightly closed.
P210	Keep away from heat. No Smoking.

Special labelling of certain mixtures

EUH019	May form explosive peroxides.
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SECTION 3: Composition/information on ingredients

3.2. Mixtures

Chemical characterization

Mixture related information

Hazardous components

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification according to Regulation (EC) No. 1272/2008 [CLP]			
28064-14-4	Novolac epoxy resin			50-100%
	Acute Tox. 5, Skin Irrit. 2, Eye Irrit. 2A, Skin Sens. 1, Aquatic Acute 2, Aquatic Chronic 2; H303 H315 H319 H317 H401 H411			
109-99-9	tetrahydrofuran			25-50 %
	203-726-8	603-025-00-0		
	Flam. Liq. 2, Carc. 2, Eye Irrit. 2, STOT SE 3; H225 H319 H335 H351 EUH019			
67-64-1	acetone; propan-2-one; propanone			10-50%
	200-662-2	606-001-00-8		
	Flam. Liq. 2, Eye Irrit. 2, STOT SE 3; H225 H319 H336 EUH066			

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

SECTION 4: First aid measures

4.1. Description of first aid measures

After inhalation

Provide fresh air. In case of respiratory tract irritation, consult a physician.

After contact with skin

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

Remove contaminated, saturated clothing immediately.

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In case of skin irritation, consult a physician.

After contact with eyes

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.

After ingestion

If accidentally swallowed rinse the mouth with plenty of water (only if the person is conscious) and obtain immediate medical attention.

Do NOT induce vomiting. Aspiration hazard

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

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

In case of major fire and large quantities: Water spray. alcohol resistant foam.

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.

5.3. Advice for firefighters

Wear a self-contained breathing apparatus and chemical protective clothing.

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**

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

6.2. Environmental precautions

Do not allow to enter into surface water or drains. Explosion hazard.

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). Keep away from sources of ignition - No smoking.

Treat the recovered material as prescribed in the section on waste disposal.

Provide adequate ventilation.

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.

Keep container tightly closed.

Avoid contact with eyes and skin.

Do not allow to enter into surface water or drains.

Advice on protection against fire and explosion

Keep away from sources of ignition - No smoking.

Take precautionary measures against static discharges.

Keep container tightly closed and in a well-ventilated place.

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7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

- Keep container tightly closed.
- Store in a place accessible by authorized persons only.
- Keep container in a well-ventilated place.
- Keep away from sources of ignition - No smoking.

Advice on storage compatibility

- Keep away from food, drink and animal feedingstuffs.
- Do not store together with: Pyrophoric liquids and solids

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
109-99-9	Tetrahydrofuran	50	150		TWA (8 h)	WEL
		100	300		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.

Protective and hygiene measures

- Protect skin by using skin protective cream.
- Remove contaminated, saturated clothing immediately.
- After work, wash hands and face.
- When using do not eat or drink.

Eye/face protection

- Tightly sealed safety glasses.

Hand protection

- When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits. DIN EN 374
- 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.
- The required protective gloves have to be specified by the glove material and the penetration time of the glove material depending on strength and duration of dermal exposition.
- Wear suitable protective clothing and gloves.
- Suitable gloves type: NBR (Nitrile rubber).
- Thickness of glove material: $\geq 0,4$ mm

Skin protection

- Wear suitable protective clothing.

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Respiratory protection

Provide adequate ventilation as well as local exhaust at critical locations.

Filtering device (full mask or mouthpiece) with filter: A

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

Physical state:	liquid
Colour:	colourless
Odour:	Ether

Test method**Changes in the physical state**

Initial boiling point and boiling range: 65 °C

Flash point: -21 °C

Explosive properties

May form explosive peroxides.

Lower explosion limits: 1,5 vol. %

Upper explosion limits: 12 vol. %

Ignition temperature: 230 °C

Vapour pressure:
(at 20 °C) 200 hPaDensity (at 20 °C): 1,04561 g/cm³**SECTION 10: Stability and reactivity****10.3. Possibility of hazardous reactions**

Violent reaction with: Alkalis (alkalis), concentrated. Oxidizing agents, strong.

Reacts with : Alkali metals. Peroxides.

10.4. Conditions to avoid

Keep away from heat.

Keep away from sources of ignition - No smoking.

10.6. Hazardous decomposition products

Carbon monoxide Carbon dioxide.

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

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

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CAS No	Chemical name					
	Exposure route	Dose	Species	Source	Method	
28064-14-4	Novolac epoxy resin					
	oral	LD50 mg/kg	10000			
	dermal	LD50 mg/kg	6000	Rabbit		
67-64-1	acetone; propan-2-one; propanone					
	oral	LD50 mg/kg	5800	Rat	RTECS	
	dermal	LD50 mg/kg	20000	Rabbit	IUCLID	
	inhalative (4 h) vapour	LC50	76 mg/l	Rat		

Irritation and corrosivity

Causes skin irritation.

Causes serious eye irritation.

Irritant effect on the skin:

Prolonged or repeated contact with skin or mucous membrane result in irritation symptoms such as redness, blistering, dermatitis, etc.

Irritant effect on the eye: irritant.

Sensitising effects

May cause an allergic skin reaction.

May cause sensitization by skin contact.

Carcinogenic/mutagenic/toxic effects for reproduction

Suspected of causing cancer.

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

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

STOT-single exposure

May cause respiratory irritation. ((tetrahydrofuran))

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

SECTION 12: Ecological information

12.1. Toxicity

Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

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

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12.3. Bioaccumulative potential

Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
67-64-1	acetone; propan-2-one; propanone	-0,24

Further information

Do not allow to enter into surface water or drains.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Advice on disposal

Dispose of waste according to applicable legislation.

Waste disposal number of waste from residues/unused products

080409 WASTES FROM THE MANUFACTURE, FORMULATION, SUPPLY AND USE (MFSU) OF COATINGS (PAINTS, VARNISHES AND VITREOUS ENAMELS), ADHESIVES, SEALANTS AND PRINTING INKS; wastes from MFSU of adhesives and sealants (including waterproofing products); waste adhesives and sealants containing organic solvents or other hazardous substances
Classified as hazardous waste.

Contaminated packaging

Non-contaminated packages may be recycled.

SECTION 14: Transport information

Land transport (ADR/RID)

14.1. UN number: UN 1133
14.2. UN proper shipping name: Adhesives
14.3. Transport hazard class(es): 3
14.4. Packing group: II
Hazard label: 3



Classification code: F1
Special Provisions: 640C
Limited quantity: 5 L
Excepted quantity: E2
Transport category: 2
Hazard No: 33
Tunnel restriction code: D/E

Inland waterways transport (ADN)

14.1. UN number: UN 1133
14.2. UN proper shipping name: Adhesives
14.3. Transport hazard class(es): 3
14.4. Packing group: II
Hazard label: 3



Classification code: F1

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Special Provisions: 640C
 Limited quantity: 5 L
 Excepted quantity: E2

Marine transport (IMDG)

14.1. UN number: UN 1133
14.2. UN proper shipping name: ADHESIVES (epichlorhydrin novolak)
14.3. Transport hazard class(es): 3
14.4. Packing group: II
 Hazard label: 3



Marine pollutant: ja
 Special Provisions: -
 Limited quantity: 5 L
 Excepted quantity: E2
 EmS: F-E, S-D

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number: UN 1133
14.2. UN proper shipping name: Adhesives
14.3. Transport hazard class(es): 3
14.4. Packing group: II
 Hazard label: 3



Special Provisions: A3
 Limited quantity Passenger: 1 L
 Passenger LQ: Y341
 Excepted quantity: E2
 IATA-packing instructions - Passenger: 353
 IATA-max. quantity - Passenger: 5 L
 IATA-packing instructions - Cargo: 364
 IATA-max. quantity - Cargo: 60 L

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: yes



SECTION 15: Regulatory information

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

EU regulatory information

2010/75/EU (VOC): 35 %

National regulatory information

Water contaminating class (D): 2 - water contaminating

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SECTION 16: Other information**Changes**

This data sheet contains changes from the previous version in section(s): 1,2,3,11,13,15.

Relevant H and EUH statements (number and full text)

H225	Highly flammable liquid and vapour.
H303	May be harmful if swallowed.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H351	Suspected of causing cancer.
H401	Toxic to aquatic life.
H411	Toxic to aquatic life with long lasting effects.
EUH019	May form explosive peroxides.
EUH066	Repeated exposure may cause skin dryness or cracking.

Further Information

The information is based on present levels 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.)