

## Safety Data Sheet

EP 310 S - B

Revision date: 03.05.2017

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**1. Identification****Product identifier**

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**Recommended use of the chemical and restrictions on use****Use of the substance/mixture**

Adhesives, sealants

**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

**Emergency phone number:** +49(0)6131/19240**2. Hazard(s) identification****Classification of the chemical****Regulation (EC) No. 1272/2008**

Hazard categories:

Flammable liquids: Flam. Liq. 2

Skin corrosion/irritation: Skin Irrit. 2

Serious eye damage/eye irritation: Eye Irrit. 2

Respiratory or skin sensitization: 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 vapor

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

**Label elements****Regulation (EC) No. 1272/2008****Signal word:** Danger**Pictograms:****Hazard statements**

Highly flammable liquid and vapor

Causes skin irritation

May cause an allergic skin reaction

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May cause respiratory irritation  
Suspected of causing cancer  
Toxic to aquatic life with long lasting effects

**Precautionary statements**

Keep cool.  
Store locked up.  
Collect spillage.  
Use only outdoors or in a well-ventilated area.  
Avoid breathing dust/fume/gas/mist/vapors/spray.  
Use only non-sparking tools.  
Ground/bond container and receiving equipment.  
Keep container tightly closed.  
Keep away from heat. - No Smoking.

**3. Composition/information on ingredients****Mixtures****Chemical characterization**

Mixture related information

**Hazardous components**

CAS No	Components	Quantity
28064-14-4	Novolac epoxy resin	50-100%
109-99-9	tetrahydrofuran	25-50 %
67-64-1	acetone; propan-2-one; propanone	10-50%

**4. First-aid measures****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.  
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

**5. Fire-fighting measures****Extinguishing media****Suitable extinguishing media**

Carbon dioxide (CO<sub>2</sub>). Extinguishing powder. Water spray.  
In case of major fire and large quantities: Water spray. alcohol resistant foam.

**Unsuitable extinguishing media**

High power water jet.

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**Specific hazards arising from the chemical**

Combustible. Vapours may form explosive mixtures with air.

**Special protective equipment and precautions for fire-fighters**

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.

**6. Accidental release measures**

**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.

**Environmental precautions**

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

**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.

**7. Handling and storage**

**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.

**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

**8. Exposure controls/personal protection**

**Control parameters**

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**Exposure limits**

CAS No.	Substance	ppm	mg/m <sup>3</sup>	f/cc	Category	Origin
67-64-1	Acetone	1000	2400		TWA (8 h)	REL
		250	590		TWA (8 h)	REL
		250			TWA (8 h)	ACGIH-2016
		500			STEL (15 min)	ACGIH-2016
109-99-9	Tetrahydrofuran	200	590		TWA (8 h)	REL
		200	590		TWA (8 h)	REL
		50			TWA (8 h)	ACGIH-2016
		250	735		STEL (15 min)	REL
		100			STEL (15 min)	ACGIH-2016

**Biological Exposure Indices (BEI-ACGIH)**

CAS No.	Substance	Determinant	Value	Test material	Sampling time
67-64-1	ACETONE	Acetone	25 mg/L	urine	End of shift
109-99-9	TETRAHYDROFURAN	Tetrahydrofuran	2 mg/L	urine	End of shift

**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.  
Wear suitable protective clothing and gloves.  
Suitable gloves type: NBR (Nitrile rubber).  
Thickness of glove material: >= 0,4 mm

**Skin protection**

Wear suitable protective clothing.

**Respiratory protection**

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

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

9. Physical and chemical properties

Information on basic physical and chemical properties

Physical state:	liquid
Color:	colourless
Odor:	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
Vapor pressure: (at 20 °C)	200 hPa
Density (at 20 °C):	1,04561 g/cm <sup>3</sup>

10. Stability and reactivity

Possibility of hazardous reactions

Violent reaction with: Alkalis (alkalis), concentrated. Oxidizing agents, strong.  
Reacts with : Alkali metals. Peroxides.

Conditions to avoid

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

Hazardous decomposition products

Carbon monoxide Carbon dioxide.

11. Toxicological information

Information on toxicological effects

**Acute toxicity**

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

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CAS No	Components				
	Exposure route	Dose	Species	Source	Method
28064-14-4	Novolac epoxy resin				
	oral	LD50 10000 mg/kg			
	dermal	LD50 6000 mg/kg	Rabbit		
67-64-1	acetone; propan-2-one; propanone				
	oral	LD50 5800 mg/kg	Rat	RTECS	
	dermal	LD50 20000 mg/kg	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.

**Sensitizing 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.

**Specific target organ toxicity (STOT) - single exposure**

May cause respiratory irritation ( (tetrahydrofuran))

**Specific target organ toxicity (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).

**12. Ecological information**

Ecotoxicity

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

**Further information**

Do not allow to enter into surface water or drains.

**13. Disposal considerations**

Waste treatment methods

**Advice on disposal**

Dispose of waste according to applicable legislation.

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**Contaminated packaging**

Non-contaminated packages may be recycled.

**14. Transport information****Marine transport (IMDG)**

**UN number:** UN 1133  
**UN proper shipping name:** ADHESIVES (epichlorhydrin novolak)  
**Transport hazard class(es):** 3  
**Packing group:** II  
Hazard label: 3



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

**Air transport (ICAO-TI/IATA-DGR)**

**UN number:** UN 1133  
**UN proper shipping name:** Adhesives  
**Transport hazard class(es):** 3  
**Packing group:** II  
Hazard label: 3



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

**Environmental hazards**

ENVIRONMENTALLY HAZARDOUS: yes

**15. Regulatory information****U.S. Regulations****National regulatory information**

SARA Section 304 CERCLA:  
Furan, tetrahydro- (109-99-9): Reportable quantity = 1,000 (454) lbs. (kg)  
Acetone (67-64-1): Reportable quantity = 5,000 (2270) lbs. (kg)  
SARA Section 311/312 Hazards:  
Novolac epoxy resin (28064-14-4): Immediate (acute) health hazard

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Furan, tetrahydro- (109-99-9): Fire hazard, Delayed (chronic) health hazard, Immediate (acute) health hazard

Acetone (67-64-1): Fire hazard, Immediate (acute) health hazard

**State Regulations****Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65, State of California)**

This product contains no chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

**16. Other information****Changes**

Revision date: 03.05.2017

Revision No: 1,01

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

**Other data**

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.)*