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1. Identification**Product identifier**

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Relevant identified uses of the substance or mixture and uses advised against**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 telephone number: +49(0)6131/19240**2. Hazard identification****Classification of the substance or mixture****Regulation (EC) No. 1272/2008**

Hazard categories:

Flammable liquid: Flam. Liq. 2

Serious eye damage/eye irritation: Eye Dam. 1

Respiratory or skin sensitization: Resp. Sens. 1

Respiratory or skin sensitization: Skin Sens. 1

Carcinogenicity: Carc. 2

Specific target organ toxicity - single exposure: STOT SE 3

Hazard Statements:

Highly flammable liquid and vapour.

Causes serious eye damage.

May cause allergy or asthma symptoms or breathing difficulties if inhaled.

May cause an allergic skin reaction.

Suspected of causing cancer.

May cause respiratory irritation.

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

Highly flammable liquid and vapour.

May cause an allergic skin reaction.

Causes serious eye damage.

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Suspected of causing cancer.

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Precautionary statements

Avoid breathing dust/fume/gas/mist/vapours/spray.
Wear protective gloves/protective clothing/eye protection/face protection.
Wear respiratory protection.
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.
Continue rinsing.
Immediately call a POISON CENTER/doctor.
If experiencing respiratory symptoms: Call a POISON CENTER/doctor.

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

Mixture related information

Hazardous components

CAS No	Chemical name	Quantity
109-99-9	tetrahydrofuran	50-100%
89-32-7	benzene-1,2:4,5-tetracarboxylic dianhydride, pyromellitic dianhydride	2.5-10%

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 (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.

Specific hazards arising from the hazardous product

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

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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

Exposure limits (ACGIH)

CAS No	Chemical name	ppm	mg/m ³	F/ml	Category	Origin
109-99-9	Tetrahydrofuran	50			TWA (8 h)	ACGIH-2016
		100			STEL (15 min)	ACGIH-2016

Exposure controls

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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

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.
Avoid contact with eyes and skin.

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: $\geq 0,4$ mm

Skin protection

Wear suitable protective clothing.

Respiratory protection

Provide adequate ventilation as well as local exhaustion at critical locations.
Filtering device (full mask or mouthpiece) with filter: A

9. Physical and chemical properties

Information on basic physical and chemical properties

Physical state:	liquid
Colour:	colourless
Odour:	ester

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 explosive limits:	1,5 vol. %
Upper explosive limits:	12 vol. %
Ignition temperature:	230 °C
Vapour pressure: (at 20 °C)	200 hPa
Density (at 20 °C):	0,9572 g/cm ³

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10. Stability and reactivity

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.

CAS No	Chemical name				
	Route of exposure	Dose	Species	Source	Method
89-32-7	benzene-1,2,4,5-tetracarboxylic dianhydride, pyromellitic dianhydride				
	oral	LD50 mg/kg	2250	Rat	GESTIS

Irritation and corrosivity

- Causes serious eye damage.
- Skin corrosion/irritation: Based on available data, the classification criteria are not met.
- May cause respiratory irritation.
- Causes serious eye irritation.

Sensitizing effects

- May cause an allergic skin reaction.
- May cause allergy or asthma symptoms or breathing difficulties if inhaled.
- May cause sensitization by inhalation and 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).

12. Ecological information

Other adverse effects

Do not allow to enter into surface water or drains.

13. Disposal considerations

Waste treatment methods

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Advice on disposal

Dispose of waste according to applicable legislation.

Contaminated packaging

Non-contaminated packages may be recycled.

14. Transport information

Marine transport (IMDG)

UN number:	UN 1133
United Nations proper shipping name:	Adhesives tetrahydrofuran benzene-1,2:4,5-tetracarboxylic dianhydride, pyromellitic dianhydride
Transport hazard class(es):	3
Packing group:	II
Hazard label:	3



Limited quantity:	5 L
EmS:	F-E, S-D

Air transport (ICAO-TI/IATA-DGR)

UN number:	UN 1133
United Nations proper shipping name:	Adhesives tetrahydrofuran benzene-1,2:4,5-tetracarboxylic dianhydride, pyromellitic dianhydride
Transport hazard class(es):	3
Packing group:	II
Hazard label:	3



Limited quantity Passenger:	1 L	
IATA-packing instructions - Passenger:		353
IATA-max. quantity - Passenger:		5 L
IATA-packing instructions - Cargo:		364
IATA-max. quantity - Cargo:		60 L

15. Regulatory information

Canadian regulations

16. Other information

Changes

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

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.)