

EU Material Safety Data Sheet

According to 91/155 EEC& 93/112 EWG

Printing date 13.05.2005

V - 2

Reviewed on 13.05.2005

1 Identification of substance:

- **Product details:**
- **Trade name: URETHAN transparent**
- **Application of the substance / the preparation:**
Highly Resistant, Protective and Insulating Conformal Coating.
- **Manufacturer/Supplier:**
ITW Chemische Produkte GmbH
Mühlacker Str. 149
D-75417 Mühlacker
Tel: +49 7041 96340
Fax: +49 7041 963429
E-Mail: info@cramolin.de
Internet: www.carmolin.de
- **Informing department:** Product safety department
- **Emergency information:**
ITW Chemische Produkte GmbH
Tel: +49 7041 96340

2 Composition/Data on components:

- **Chemical characterization**
- **Description:** Mixture of the substances listed below with harmless additions.

· components:

| | | |
|--------------------------------------|---|---------|
| CAS: 107-83-5 EINECS: 203-523-4 | Isohexan Xn, F, N; R 11-38-51/53-65-67 | 25-<50% |
| CAS: 106-97-8 EINECS: 203-448-7 | butane, pure F+; R 12 | 10-<25% |
| CAS: 74-98-6 EINECS: 200-827-9 | propane liquefied F+; R 12 | 10-<25% |
| CAS: 64742-95-6 EINECS: 265-199-0 | Solvent naphtha (petroleum), light arom. Xn, N; R 10-37-51/53-65 | 10-<25% |
| CAS: 96-29-7 EINECS: 202-496-6 | 2-butanone oxime Xn; R 21-40-41-43 | < 2.5% |

- **Additional information** For the wording of the listed risk phrases refer to section 16.

3 Hazards identification

· Hazard designation:



Xi Irritant
F+ Extremely flammable
N Dangerous for the environment

· Information pertaining to particular dangers for man and environment

The marking is valid for all pressurized container up to 50ml carrying capacity.
The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.
Warning! Pressurized container.
Has a narcotizing effect.
R 12 Extremely flammable.

(Contd. on page 2)

GB



EU Material Safety Data Sheet

According to 91/155 EEC& 93/112 EWG

Printing date 13.05.2005

V - 2

Reviewed on 13.05.2005

Trade name: URETHAN transparent

(Contd. of page 1)

R 38 Irritating to skin.

R 51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

R 67 Vapours may cause drowsiness and dizziness.

Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50°C.

Do not pierce or burn, even after use.

Do not spray on a naked flame or any incandescent material. Keep away from sources of ignition - No smoking.

Buildup of explosive mixtures possible without sufficient ventilation.

Keep out of the reach of children

• **Classification system**

The classification is in line with current EC lists. It is expanded, however, by information from technical literature and by information furnished by supplier companies.

4 First aid measures

• **General information** Instantly remove any clothing soiled by the product.

• **After inhalation**

Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.

In case of unconsciousness bring patient into stable side position for transport.

• **After skin contact**

Instantly wash with water and soap and rinse thoroughly.

If skin irritation continues, consult a doctor.

• **After eye contact**

Rinse opened eye for several minutes under running water. Then consult doctor.

• **After swallowing**

Do not induce vomiting; instantly call for medical help.

A person vomiting while lying on their back should be turned onto their side.

5 Fire fighting measures

• **Suitable extinguishing agents** CO₂, sand, extinguishing powder. Do not use water.

• **For safety reasons unsuitable extinguishing agents** Water.

• **Special hazards caused by the material, its products of combustion or resulting gases:**

Formation of toxic gases is possible during heating or in case of fire.

Store in a cool place. Heat will increase pressure and may lead to the container exploding.

• **Protective equipment:**

Wear self-contained breathing apparatus.

Do not inhale explosion gases or combustion gases.

• **Additional information** Cool endangered containers with water spray jet.

6 Accidental release measures

• **Person-related safety precautions:**

Wear protective equipment. Keep unprotected persons away.

Ensure adequate ventilation

Keep away from ignition sources

Avoid contact with the eyes and skin.

• **Measures for environmental protection:**

Inform respective authorities in case product reaches water or sewage system.

Do not allow to enter drainage system, surface or ground water.

(Contd. on page 3)



EU Material Safety Data Sheet

According to 91/155 EEC& 93/112 EWG

Printing date 13.05.2005

V - 2

Reviewed on 13.05.2005

Trade name: URETHAN transparent

(Contd. of page 2)

- **Measures for cleaning/collecting:**
Ensure adequate ventilation.
Do not flush with water or aqueous cleansing agents
Absorb liquid components with liquid-binding material.
Dispose of the material collected according to regulations.
- **Additional information:** See Section 7 for information on safe handling

7 Handling and storage

- **Handling**
- **Information for safe handling:**
Store in cool, dry place in tightly closed containers.
Keep away from heat and direct sunlight.
Ensure good ventilation/exhaustion at the workplace.
Open and handle container with care.
- **Information about protection against explosions and fires:**
Do not spray on flames or red-hot objects.
Beware: Container is pressurized. Keep away from direct sun exposure and temperatures over 50°C. Do not open by force or throw into fire even after use.
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.
- **Storage**
- **Requirements to be met by storerooms and containers:**
Store in cool location.
Store only in the original container.
Observe official regulations on storing packagings with pressurized containers.
- **Information about storage in one common storage facility:** Store away from foodstuffs.
- **Further information about storage conditions:**
Store in cool, dry conditions in well sealed containers.
Store in a cool place. Heat will increase pressure and may lead to the container exploding.
Protect from heat and direct sunlight.

8 Exposure controls and personal protection

- **Additional information about design of technical systems:** No further data; see item 7.

- **Components with limit values that require monitoring at the workplace:**

107-83-5 IsohexanTLV (European Union) Long-term value: 700 mg/m³, 200 ppm**106-97-8 butane, pure**OES (Great Britain) Short-term value: 1810 mg/m³, 750 ppm
Long-term value: 1450 mg/m³, 600 ppm**74-98-6 propane liquefied**

OES (Great Britain) Asphyxiant

- **Additional information:** The lists that were valid during the compilation were used as basis.
- **Personal protective equipment**
- **General protective and hygienic measures**
The usual precautionary measures should be adhered to general rules for handling chemicals.
Keep away from foodstuffs, beverages and food.
Take off immediately all contaminated clothing
Wash hands during breaks and at the end of the work.

(Contd. on page 4)

GB



EU Material Safety Data Sheet

According to 91/155 EEC& 93/112 EWG

Printing date 13.05.2005

V - 2

Reviewed on 13.05.2005

Trade name: URETHAN transparent

(Contd. of page 3)

Avoid contact with the eyes and skin.

Do not eat, drink or smoke while working.

· **Breathing equipment:** Use breathing protection in case of insufficient ventilation.

· **Protection of hands:**

Protective gloves.

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **Eye protection:** Tightly sealed safety glasses.

9 Physical and chemical properties:

· General Information

| | |
|----------------|--------------|
| Form: | Aerosol |
| Colour: | Yellowish |
| Odour: | Solvent-like |

· Change in condition

Melting point/Melting range: Not determined

Boiling point/Boiling range: -44°C

· **Flash point:** -97°C

· **Ignition temperature:** 200°C

· **Self-inflammability:** Product is not self igniting.

· **Danger of explosion:** Product is not explosive. However, formation of explosive air/ steam mixtures is possible.

· Critical values for explosion:

Lower: 0.6 Vol %

Upper: 9.5 Vol %

· **Vapour pressure at 20°C:** 240 hPa

· **Density at 20°C** 0.7 g/cm³

· Solubility in / Miscibility with

Water: Not miscible or difficult to mix

· Solvent content:

Organic solvents: 73.4 %

GB

(Contd. on page 5)



EU Material Safety Data Sheet

According to 91/155 EEC& 93/112 EWG

Printing date 13.05.2005

V - 2

Reviewed on 13.05.2005

Trade name: URETHAN transparent

(Contd. of page 4)

10 Stability and reactivity

- **Thermal decomposition/ Conditions to be avoided:** Protect from heat and direct sunlight.
- **Dangerous reactions** Danger of bursting
- **Dangerous products of decomposition:**
No dangerous products of decomposition if used and stored according to specifications.

11 Toxicological information

- **Acute toxicity:**

- **LD/LC50 values that are relevant for classification:**

107-83-5 Isohexan

| | | |
|------------|----------|-------------------|
| Oral | LD50 | >2000 mg/kg (rat) |
| Dermal | LD50 | >2000 mg/kg (rat) |
| Inhalative | LC50/4 h | >190 mg/l (rat) |

- **Primary irritant effect:**

- **on the skin:** Irritant to skin and mucous membranes.
- **on the eye:** no data available.

- **Sensitisation:** No sensitising effect known.

- **Additional toxicological information:**

The product shows the following dangers according to the calculation method of the General EC Classification Guidelines for Preparations as issued in the latest version:

Irritant

12 Ecological information:

- **Ecotoxicological effects:**

- **Remark:** Toxic for fish

- **General notes:**

Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water.

Toxic for aquatic organisms

Do not allow product to reach ground water, water bodies or sewage system.

Danger to drinking water if even small quantities leak into soil.

13 Disposal considerations

- **Product:**

- **Recommendation**

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

Hand over to disposers of hazardous waste.

Disposal must be made according to official regulations.

- **European waste catalogue**

16 05 04 gases in pressure containers (including halons) containing dangerous substances

- **Uncleaned packagings:**

- **Recommendation:** Disposal must be made according to official regulations.

GB

(Contd. on page 6)

EU Material Safety Data Sheet According to 91/155 EEC& 93/112 EWG

Printing date 13.05.2005

V - 2

Reviewed on 13.05.2005

Trade name: URETHAN transparent

(Contd. of page 5)

14 Transport information

Land transport ADR/RID (cross-border)



- ADR/RID-GGVS/E Class: 2 5F Gases.
- Kemler Number: 23
- UN-Number: 1950
- Packaging group: -
- Label 2.1
- Designation of goods: 1950 AEROSOLS (BUTANE, PROPANE)

Maritime transport IMDG:



- IMDG Class: 2.1
- UN Number: 1950
- Label 2.1
- Packaging group: -
- EMS Number: F-D,S-U
- Marine pollutant: No
- Correct technical name: AEROSOLS (BUTANE, PROPANE)

Air transport ICAO-TI and IATA-DGR:



- ICAO/IATA Class: 2.1
- UN/ID Number: 1950
- Label 2.1
- Packaging group: -
- Correct technical name: AEROSOLS, flammable (BUTANE, PROPANE)

15 Regulatory information

Designation according to EC guidelines:

The product has been classified and labelled in accordance with EC Directives and the Ordinance on Hazardous Materials (GefStoffV).

Code letter and hazard designation of product:



Xi Irritant
F+ Extremely flammable
N Dangerous for the environment

Risk phrases:

- 12 Extremely flammable.
- 38 Irritating to skin.
- 51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

(Contd. on page 7)



EU Material Safety Data Sheet

According to 91/155 EEC& 93/112 EWG

Printing date 13.05.2005

V - 2

Reviewed on 13.05.2005

Trade name: URETHAN transparent

(Contd. of page 6)

67 Vapours may cause drowsiness and dizziness.

• Safety phrases:

- 16 Keep away from sources of ignition - No smoking.
- 23 Do not breathe fumes/aerosol.
- 33 Take precautionary measures against static discharges.
- 37 Wear suitable gloves.
- 43 In case of fire, use sand, carbon dioxide or powdered extinguishing agent. Never use water.
- 51 Use only in well-ventilated areas.
- 57 Use appropriate container to avoid environmental contamination.
- 60 This material and its container must be disposed of as hazardous waste.

• Special designation of certain preparations:

- Contains 2-butanone oxime. May produce an allergic reaction.
- Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50°C.
- Do not pierce or burn, even after use.
- Do not spray on a naked flame or any incandescent material. Keep away from sources of ignition - No smoking.
- Buildup of explosive mixtures possible without sufficient ventilation.
- Keep out of the reach of children

• National regulations

- Water hazard class:** Water hazard class 2 (Self-assessment): hazardous for water.

16 Other information:

Information is based on our current knowledge but does not establish a promise of product characteristics and does not substantiate any contractual legal relationship. Drawing of back-up data file for:

MSDS - Service - Center gmbH.
Materiel-Safety-Data-Sheet
Alemanenstrasse 49
6830 Rankweil
AUSTRIA

Tel.: +43-(0)5522-60067
Fax.: +43-(0)5522-41031
E-Mail: office@msds.at
www.msds.at

• Relevant R-phrases

- 10 Flammable.
- 11 Highly flammable.
- 12 Extremely flammable.
- 21 Harmful in contact with skin.
- 37 Irritating to respiratory system.
- 38 Irritating to skin.
- 40 Limited evidence of a carcinogenic effect.
- 41 Risk of serious damage to eyes.
- 43 May cause sensitisation by skin contact.
- 51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
- 65 Harmful: may cause lung damage if swallowed.
- 67 Vapours may cause drowsiness and dizziness.

- Contact:** ITW Chemische Produkte GmbH, D-75417 Mühlacker

- * Data compared to the previous version altered. .**