

Safety data sheet

Safety data sheet according to Regulation (EC) No 1907/2006

Product name: **RELEST® Hardener PUR 2**
30KGProduct code : **I385-0002 2300**

Printing date : 28.01.2016

Revision date : 02.01.2015

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version no. 7

EUREN 0000000003

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01 Section 1: Identification of the substance/mixture and of the company/undertaking**1.1. Product identifier**RELEST® Hardener PUR 2
30KG
I385-0002 2300
50214354**1.2. Relevant identified uses of the substance or mixture and uses advised against****Recommended use**

Industrial coatings

1.3. Details of the supplier of the safety data sheetGlasurit GmbH
Postfach 6123
48136 Muenster
Deutschland
E-mail address:
Product-Safety-Coatings@basf.com
Contact for further information:
+49/2501/143688**1.4. Emergency telephone number**

+49 180 2273 112

02 Section 2: Hazards Identification**2.1. Classification of the substance or mixture**According to Regulation (EC) No 1272/2008 [CLP]

- Skin Corr./Irrit. 2, H315 Causes skin irritation.
- Eye Dam./Irrit. 2, H319 Causes serious eye irritation.
- Resp. Sens. 1, H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
- Skin Sens. 1, H317 May cause an allergic skin reaction.
- Carc. 2, H351 Suspected of causing cancer.
- STOT SE 3, H335 May cause respiratory irritation.
- STOT RE 2, H373 May cause damage to organs through prolonged or repeated exposure.

2.2. Label elements

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2According to Regulation (EC) No 1272/2008 [CLP]

Hazard pictogram:

Signal word:
Danger

Hazard statements:

H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335 May cause respiratory irritation.
H351 Suspected of causing cancer.
H373 May cause damage to organs through prolonged or repeated exposure.

Precautionary Statements (Prevention):

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
P280 Wear protective gloves/protective clothing/eye protection/face protection.

Precautionary Statements (Response):

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P312 Call a POISON CENTER or doctor/physician if you feel unwell.

Precautionary Statements (Storage):

P403 + P233 Store in a well-ventilated place. Keep container tightly closed.

Precautionary Statements (Disposal):

P501 Dispose of contents/container to hazardous or special waste collection point.

Hazard determining component(s) for labelling:

o-(p-Isocyanatobenzyl)phenylisocyanate
aromatic polyisocyanate prepolymer

Labeling of special preparations:

EUH204 Contains isocyanates. May produce an allergic reaction.

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3**2.3. Other hazards**

The product may be a skin and respiratory sensitizer. It is also a skin irritant and repeated contact may increase this effect.

03 Section 3: Composition/Information on Ingredients**3.1. Substances**

not applicable

3.2. Mixtures

Chemical nature

polyisocyanate

Hazardous ingredients
according to Regulation (EC) No 1272/2008

CAS No.	EC No.	Registration No.	INDEX No.
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% (weight)

Class, Category, Hazard Statement

aromatic polyisocyanate prepolymer

39420-98-9

75,0 - 100,0

Resp. Sens. 1, H334

Skin Sens. 1, H317

o-(p-Isocyanatobenzyl)phenylisocyanate

5873-54-1 227-534-9 01-2119480143-45-XXXX 615-005-00-9

10,0 - < 12,5

Acute Tox. 4, H332

Skin Corr./Irrit. 2, H315

Eye Dam./Irrit. 2, H319

Resp. Sens. 1, H334

Skin Sens. 1, H317

Carc. 2, H351

STOT SE 3, H335

STOT RE 2, H373

4,4'-methylenediphenyl diisocyanate

101-68-8 202-966-0 01-2119457014-47-XXXX 615-005-00-9

10,0 - < 12,5

Acute Tox. 4, H332

Skin Corr./Irrit. 2, H315

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Eye Dam./Irrit. 2, H319
Resp. Sens. 1, H334
Skin Sens. 1, H317
Carc. 2, H351
STOT SE 3, H335
STOT RE 2, H373

For the classifications not written out in full in this section the full text can be found in section 16.

04 Section 4: First Aid Measures**4.1. Description of first aid measures**

In all cases of doubt, or when symptoms persist, seek medical attention. Never give anything by mouth to an unconscious person.

If inhaled

Remove patient to fresh air and seek medical assistance. Keep patient warm and at rest. If breathing is irregular or stopped, administer artificial respiration. If unconscious place in recovery position.

On skin contact

Remove contaminated clothing. Wash skin with soap and water, rinse abundantly. Do NOT use solvents or thinners.

On contact with eyes

Contact lenses should be removed. Hold eyelids open and flush with copious amounts of clean, fresh water or a special eyewash solution and seek medical advice.

On ingestion

If swallowed, rinse mouth with plenty of water (only if the person is conscious) and seek medical advice immediately. Keep the injured person at rest. Do not induce vomiting.

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

The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11.

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

No data available.

05 Section 5: Fire-Fighting Measures

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5**5.1. Extinguishing media**

Suitable extinguishing media

Foam (alcohol resistant), carbon dioxide, powders, water spray.

Do not allow run-off from fire fighting to enter drains or water courses.

Unsuitable extinguishing media for safety reasons

Water jet

5.2. Special hazards arising from the substance or mixture

Fire will produce dense black smoke. Inhalation of dangerous decomposition products may cause serious damage to health.

5.3. Advice for firefighters

Special protective equipment

Appropriate breathing apparatus may be required.

Additional information

Cool closed containers in the vicinity of the source of fire.

06 Section 6: Accidental Release Measures**6.1. Personal precautions, protective equipment and emergency procedures****6.2. Environmental precautions**

Do not allow to enter drains or watercourses. If the product enters drains or sewers, the local water company should be contacted immediately; in the case of contamination of streams, rivers or lakes, the Environment Agency.

6.3. Methods and material for containment and cleaning up

Contain and collect spillage with non-combustible absorbent materials, e.g. sand, earth, vermiculite, diatomaceous earth. Place in a suitable container. The contaminated area should be cleaned up immediately with a suitable decontaminant. One possible (flammable) decontaminant comprises (by volume):

ethanol or isopropyl alcohol (50 parts); water (45 parts);
concentrated (d:0,880) ammonia solution (5 parts)

A non-flammable alternative is:

sodium carbonate (5 parts); water (95 parts)

Add the same decontaminant to the remnants and let stand for several days until no further reaction in non-sealed container. Once this stage is reached, close container and dispose according to the waste regulations (see section 13).

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6**6.4. Reference to other sections**

Information regarding exposure controls/personal protection and disposal considerations can be found in section 8 and 13.

07 Section 7: Handling and Storage**7.1. Precautions for safe handling**Instructions for Safe Handling

Avoid skin and eye contact. Avoid inhalation of vapour and spray mist.

Avoid inhalation of dust from sanding.

Smoking, eating and drinking are forbidden in application area. For personal protection see section 8. Comply with the health and safety at work laws.

Care should be taken when reopening partly used containers (pressurization!).

Information on Fire and Explosion Protection

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

Avoid heating to more than 50 °C. Provide adequate ventilation, if necessary by means of local exhaust ventilation at the work place. Exhaust ventilation required during spray application.

7.2. Conditions for safe storage, including any incompatibilitiesRequirements for Storage Areas and Containers

Keep container tightly closed. Never use pressure to empty; container is not a pressure vessel. Close containers carefully once opened and store upright in order to prevent any leakage. No smoking. Prevent unauthorized access.

Information on Combined Storage

Keep away from strongly acid and strongly alkaline materials, from oxidizing agents, amines, alcohols and water.

Additional Information on Storage Conditions

Always keep in containers of same material as the original one. Observe label precautions. Store in a dry, well ventilated place away from sources of heat and direct sunlight. Keep away from sources of ignition.

Storage temperature : n.d.a.

Precautions should be taken to minimise exposure to atmospheric humidity or water: carbon dioxide will be formed which in closed containers can result in pressurisation.

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7**7.3. Specific end use(s)**

For the relevant identified use(s) listed in section 1 the advice mentioned in this section 7 is to be observed.

08 Section 8: Exposure Controls/personal protection

Persons with a history of allergies, asthma, chronic or recurrent respiratory disease must not be employed in any process in which preparations of this type are used.

People who process this product should undergo lung function tests at regular intervals.

8.1. Control parameters**Occupational Exposure Limits**

n.a.

In addition to the indicative occupational exposure limit values according to Directive 2000/39/EC, the country-specific occupational exposure limits applicable to the substances specified in chapter 3 must be taken into account.

Components with DNEL

5873-54-1: o-(p-Isocyanatobenzyl)phenylisocyanate

Application area: worker(Inhalation)

Potential health effect: Long-term exposure - local effects: 0,05 mg/m3

Application area: worker(Inhalation)

Potential health effect: Long-term exposure - systemic effects: 0,05 mg/m3

Application area: worker(Inhalation)

Potential health effect: Short-term exposure - local effects: 0,1 mg/m3

Application area: worker(Inhalation)

Potential health effect: Short-term exposure - systemic effects: 0,1 mg/m3

Application area: worker(dermal)

Potential health effect: Short-term exposure - local effects: 28,7 mg/cm2

Application area: worker(dermal)

Potential health effect: Short-term exposure - systemic effects: 50 mg/kg bw/d

101-68-8: 4,4'-methylenediphenyl diisocyanate

Application area: worker(Inhalation)

Potential health effect: Long-term exposure - local effects: 0,05 mg/m3

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Application area: worker(Inhalation)

Potential health effect: Long-term exposure - systemic effects: 0,05 mg/m3

Application area: worker(Inhalation)

Potential health effect: Short-term exposure - local effects: 0,1 mg/m3

Application area: worker(dermal)

Potential health effect: Short-term exposure - local effects: 28,7 mg/cm2

Components with PNEC5873-54-1: o-(p-Isocyanatobenzyl)phenylisocyanate
water: 1 mg/l101-68-8: 4,4'-methylenediphenyl diisocyanate
water: 1 mg/l**8.2. Exposure controls****Appropriate engineering controls**

Provide adequate ventilation. Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction. Spraying of sensitizer containing products should only be carried out in suitable spray booths or enclosures equipped with effective exhaust ventilation to prevent spray mist escaping into the work areas outside the spray booth. Respiratory protective equipment should be worn by spray booth operatives (see "Personal protection" below).

Under cool dry conditions, it is possible for the isocyanate to remain unreacted in the paint film for up to 30 hours after application.

Personal protective equipmentRespiratory Protection

Dry sanding, flame cutting and/or welding of the dry paint film will give rise to dust and/or hazardous fumes. Wet (sanding/ flatting) should be used wherever possible. If exposure cannot be avoided by the provision of local exhaust ventilation, suitable respiratory protective equipment should be used.

Suitable respiratory protection: e.g. half-mask with A2P2 class combination filter

Hand Protection

Wear protective gloves.

Any chemical protection glove certified according to EN 374 is suitable: e.g. butyl rubber gloves

Material thickness: = 0,5 mm

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Further information on penetration time is available from the manufacturer of the glove.

Data are based on information from the glove manufacturer, the raw material manufacturer or according to specifics of the product components.

The protection glove should be tested for its specific suitability (e.g. mechanical strength, product compatibility, anti-static properties).

Follow manufacturer's advice on use, storage, maintenance and replacement of gloves.

The gloves should be replaced immediately in case of damage or signs of wear. It is recommended to use preventative skin protection (skin cream).

Eye Protection

Required when there is a risk of eye contact.

Skin Protection

Wear protective clothing. Protective clothing required: disposable coveralls

Environmental exposure controls

See section 7 and 12

09 Section 9: Physical and Chemical Properties**9.1. Information on basic physical and chemical properties**

Physical state	: liquid
Colour	: yellow
Odour	: specific
pH	: n.a.
Change in physical state	
Boiling temperature/range	: 115 °C
Melting point/range	: -13 °C
Flash point	: +200 °C ISO 3679
Ignition temperature	: > 400 °C
Explosion limits, lower	: n.d.a.
upper	: n.d.a.

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10Vapour pressure : < 0,1 hPa at 20°C
Density : 1,090 g/cm³ at 20°C
Solubility in water : immiscible
Viscosity : 691,3 mm²/s**9.2. Other information**

Flow time : >100/6 s at 20°C ISO 2431

10 Section 10: Stability and Reactivity**10.1. Reactivity**

Stable under recommended storage and handling conditions (see section 7).

10.2. Chemical stability

The product is stable if stored and handled as prescribed/indicated.

10.3. Possibility of hazardous reactions

No hazardous reactions if stored and handled as prescribed/indicated.

10.4. Conditions to avoid

Avoid all sources of ignition: heat, sparks, open flame.

10.5. Incompatible materials

Keep away from oxidising agents, strongly alkaline and strongly acidic materials, amines, alcohols and water. Uncontrolled exothermic reactions occur with amines and alcohols. The product reacts slowly with water resulting in evolution of carbon dioxide. In closed containers, pressure build up could result in distortion, blowing and in extreme cases bursting of the container.

10.6. Hazardous decomposition products

When exposed to high temperatures hazardous decomposition products such as smoke, carbon monoxide, carbon dioxide, oxides of nitrogen, hydrogen cyanide, monomeric isocyanates may be produced.

11 Section 11: Toxicological Information

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11**11.1. Information on toxicological effects**

The mixture has been assessed following regulation (EC) No 1272/2008. See sections 2 and 3 for details.

Acute toxicity

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

Skin corrosion/irritation

Causes skin irritation.

Serious eye damage/eye irritation

Causes serious eye irritation.

Respiratory sensitization/skin

May cause an allergic skin reaction.

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

Germ cell mutagenicity

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

Carcinogenicity

Suspected of causing cancer.

Toxicity for reproduction

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

Specific target organ toxicity - single exposure

May cause respiratory irritation.

Specific target organ toxicity - repeated exposure

May cause damage to organs through prolonged or repeated exposure.

Aspiration hazard

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

Other information

Based on the properties of the isocyanate components and considering toxicological data on similar product, this product may cause acute irritation and/or sensitization of the respiratory system leading to an asthmatic condition, wheeziness and tightness of the chest. Sensitized persons may subsequently show asthmatic symptoms when exposed to atmospheric concentrations well below the occupational exposure limit. Repeated inhalation may lead to a permanent respiratory disability.

12 Section 12: Ecological Information

There are no test results available for this product.

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12**12.1. Toxicity**

The mixture has been assessed following regulation (EC) No 1272/2008 and is not classified as dangerous for the environment.

12.2. Persistence and degradability

n.d.a.

12.3. Bioaccumulative potential

n.d.a.

12.4. Mobility in soil

n.d.a.

12.5. Results of PBT and vPvB assessment

According to Annex XIII of Regulation (EC) No.1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH): The product does not contain a substance fulfilling the PBT (persistent/bioaccumulative/toxic) criteria or the vPvB (very persistent/very bioaccumulative) criteria.

12.6. Other adverse effects

The product should not be allowed to enter water courses or the soil.

13 Section 13: Disposal Considerations**13.1. Waste treatment methods**

Observe national and local legal requirements.

European list of wastes

Commission Decision 2000/532/EC dated 3rd May, 2000

08 05 01*

Wastes not otherwise specified in 08;
waste isocyanates

Any waste marked with an asterisk (*) is considered as a hazardous waste pursuant to Directive 91/689/EEC on hazardous waste.

Contaminated packaging

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13Recommendation

Containers which are not properly emptied must be disposed pursuant to Directive 91/689/EEC

Residues in empty containers should be neutralised with decontaminant (see section 6).

14 Section 14: Transport Information**14.1. UN number**Transport by Road or Rail (ADR/RID):

The preparation is not classified as hazardous for transport

Sea Transport (IMDG):

The preparation is not classified as hazardous for transport

Air Transport (IATA/ICAO):

The preparation is not classified as hazardous for transport

Inland waterway transport (ADN):

not evaluated

14.2. UN proper shipping nameTransport by Road or Rail (ADR/RID):

The preparation is not classified as hazardous for transport

Sea Transport (IMDG):

The preparation is not classified as hazardous for transport

Air Transport (IATA/ICAO):

The preparation is not classified as hazardous for transport

Inland waterway transport (ADN):

not evaluated

14.3. Transport hazard class(es)Transport by Road or Rail (ADR/RID):

The preparation is not classified as hazardous for transport

Sea Transport (IMDG):

The preparation is not classified as hazardous for transport

Air Transport (IATA/ICAO):

The preparation is not classified as hazardous for transport

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14Inland waterway transport (ADN):
not evaluated**14.4. Packing group**Transport by Road or Rail (ADR/RID):
The preparation is not classified as hazardous for transportSea Transport (IMDG):
The preparation is not classified as hazardous for transportAir Transport (IATA/ICAO):
The preparation is not classified as hazardous for transportInland waterway transport (ADN):
not evaluated**14.5. Environmental hazards**Transport by Road or Rail (ADR/RID):
noneSea Transport (IMDG):
noneInland waterway transport (ADN):
not evaluated**14.6. Special precautions for user**

none

**14.7. Transport in bulk according to Annex II of MARPOL 73/78
and the IBC Code**

not evaluated

15 Section 15: Regulatory Information**15.1. Safety, health and environmental regulations/legislation
specific for the substance or mixture****Information pursuant to VOC Directive 1999/13/EC (for product as supplied)**
Volatile organic solvents: n.a.
VOC : n.a.
Volatile CMR substances : n.a.

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15**National Regulations****15.2. Chemical safety assessment**

Chemical Safety Assessment not required

16 Section 16: Other Information

Restricted to professional users.

This safety data sheet is prepared in accordance with Regulation (EC) No 1907/2006, Annex II, as amended by Regulation (EU) No 453/2010.

The information contained in this safety data sheet does not relieve users from the obligation to carry out their own risk assessment according to Directive 98/24/EC.

Full text of hazard statements for components listed in section 2 and 3

Acute Tox.

Acute toxicity

Carc.

Carcinogenicity

Eye Dam./Irrit.

Serious eye damage/eye irritation

Resp. Sens.

Respiratory sensitization

STOT RE

Specific target organ toxicity - repeated exposure

STOT SE

Specific target organ toxicity - single exposure

Skin Corr./Irrit.

Skin corrosion/irritation

Skin Sens.

Skin sensitization

H315

Causes skin irritation.

H317

May cause an allergic skin reaction.

H319

Causes serious eye irritation.

H332

Harmful if inhaled.

H334

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

H335

May cause respiratory irritation.

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16**H351**

Suspected of causing cancer.

H373

May cause damage to organs through prolonged or repeated exposure.

For multi-pack systems observe material safety data sheets of all components.

Explanation of abbreviations:

n.d.a. no data available**n.a.** not applicable**EU-L** Indicative occupational exposure limit value according to Directive 98/24/EC - 8 hours**EU-S** Indicative occupational exposure limit value according to Directive 98/24/EC - short-term**EUCLV** Indicative occupational exposure limit value according to Directive 98/24/EC - Ceiling Limit Value

The data contained in this safety data sheet are based on our current knowledge and experience and describe the product only with regard to safety requirements. The data do not describe the product's properties (product specification). Neither should any agreed property nor the suitability of the product for any specific purpose be deduced from the data contained in the safety data sheet. It is the responsibility of the recipient of the product to ensure any proprietary rights and existing laws and legislation are observed.