

ITW Engineered Polymers

SAFETY DATA SHEET R-Flex Resin

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product name R-Flex Resin

1.2. Relevant identified uses of the substance or mixture and uses advised against

Identified uses Two-component, isocyanate-based sealant.

1.3. Details of the supplier of the safety data sheet

Supplier ITW Engineered Polymers
Bay 150
Shannon Industrial Estate
Shannon
Co. Clare

+353 (0)61 471 299

+353 (0)61 471 285

mail@itwep.com

1.4. Emergency telephone number

Emergency telephone +44(0)1235 239 670 (24h)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification

Physical hazards Not Classified

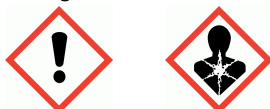
Health hazards Acute Tox. 4 - H332 Skin Irrit. 2 - H315 Eye Irrit. 2 - H319 Resp. Sens. 1 - H334 Skin Sens. 1
- H317 STOT SE 3 - H335

Environmental hazards Aquatic Chronic 3 - H412

Classification (67/548/EEC or 1999/45/EC) Xn;R20. R42/43. Xi;R36/37/38.

2.2. Label elements

Pictogram



Signal word

Danger

R-Flex Resin

Hazard statements	H317 May cause an allergic skin reaction. H319 Causes serious eye irritation. H412 Harmful to aquatic life with long lasting effects. H332 Harmful if inhaled. H335 May cause respiratory irritation. H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled. H315 Causes skin irritation.
Precautionary statements	P261 Avoid breathing vapour/spray. P280 Wear protective gloves/protective clothing/eye protection/face protection. P302+P352 IF ON SKIN: Wash with plenty of water. P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing. 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/doctor if you feel unwell.
Supplemental label information	EUH204 Contains isocyanates. May produce an allergic reaction.
Contains	4,4'-METHYLENEDI(CYCLOHEXYL ISOCYANATE), Polyurethane Prepolymer
Supplementary precautionary statements	P264 Wash contaminated skin thoroughly after handling. P271 Use only outdoors or in a well-ventilated area. P272 Contaminated work clothing should not be allowed out of the workplace. P273 Avoid release to the environment. P284 [In case of inadequate ventilation] wear respiratory protection. P321 Specific treatment (see medical advice on this label). P332+P313 If skin irritation occurs: Get medical advice/attention. P333+P313 If skin irritation or rash occurs: Get medical advice/attention. P337+P313 If eye irritation persists: Get medical advice/attention. P342+P311 If experiencing respiratory symptoms: Call a POISON CENTER/doctor. P362+P364 Take off contaminated clothing and wash it before reuse. P403+P233 Store in a well-ventilated place. Keep container tightly closed. P405 Store locked up. P501 Dispose of contents/container in accordance with national regulations.

2.3. Other hazards

SECTION 3: Composition/information on ingredients

3.2. Mixtures

ALPHA-HYDRO-OMEGA-HYDROXYPOLY(OXY-1,4-BUTANEDIYL)	10-30%
CAS number: 25190-06-1	
Classification	Classification (67/548/EEC or 1999/45/EC)
Aquatic Chronic 3 - H412	-

R-Flex Resin

4,4'-METHYLENEDI(CYCLOHEXYL ISOCYANATE)	10-30%
CAS number: 5124-30-1	EC number: 225-863-2
Classification Acute Tox. 3 - H331 Skin Irrit. 2 - H315 Eye Irrit. 2 - H319 Resp. Sens. 1 - H334 Skin Sens. 1 - H317 STOT SE 3 - H335	Classification (67/548/EEC or 1999/45/EC) T;R23 R42/43 Xi;R36/37/38
Polyurethane Prepolymer	10-30%
CAS number: 103837-45-2	
Classification Skin Sens. 1 - H317	Classification (67/548/EEC or 1999/45/EC) -
BUTANONE	5-10%
CAS number: 78-93-3	EC number: 201-159-0
Classification Flam. Liq. 2 - H225 Eye Irrit. 2 - H319 STOT SE 3 - H336	Classification (67/548/EEC or 1999/45/EC) F;R11 Xi;R36 R66 R67

The Full Text for all R-Phrases and Hazard Statements are Displayed in Section 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

General information	Persons allergic to isocyanates, and particularly those suffering from asthma or other respiratory conditions, should not work with isocyanates. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). Persons with impaired lung function should not handle this product.. Persons susceptible to allergic reactions should not handle this product.
Inhalation	Move affected person to fresh air at once. Get medical attention if any discomfort continues.
Ingestion	Rinse mouth thoroughly with water. Do not induce vomiting. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention.
Skin contact	Remove contaminated clothing immediately and wash skin with soap and water. Get medical attention if irritation persists after washing.
Eye contact	Remove any contact lenses and open eyelids wide apart. Continue to rinse for at least 15 minutes and get medical attention.

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

General information	The severity of the symptoms described will vary dependent on the concentration and the length of exposure.
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4.3. Indication of any immediate medical attention and special treatment needed

Notes for the doctor	No specific recommendations. If in doubt, get medical attention promptly. May cause sensitisation by inhalation.
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R-Flex Resin

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media Extinguish with foam, carbon dioxide or dry powder.

5.2. Special hazards arising from the substance or mixture

Specific hazards Avoid breathing fire gases or vapours.

5.3. Advice for firefighters

Protective actions during firefighting Cool containers exposed to flames with water until well after the fire is out. Keep up-wind to avoid fumes. Control run-off water by containing and keeping it out of sewers and watercourses.

Special protective equipment for firefighters Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions Provide adequate ventilation. Wear protective clothing as described in Section 8 of this safety data sheet.

6.2. Environmental precautions

Environmental precautions Do not discharge into drains or watercourses or onto the ground. Spillages or uncontrolled discharges into watercourses must be reported immediately to the Environmental Agency or other appropriate regulatory body.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up Absorb spillage with non-combustible, absorbent material. Collect and place in suitable waste disposal containers and seal securely. Containers with collected spillage must be properly labelled with correct contents and hazard symbol.

6.4. Reference to other sections

Reference to other sections Wear protective clothing as described in Section 8 of this safety data sheet.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Usage precautions Handle and open container with care. Provide adequate ventilation. Avoid inhalation of vapours. Use approved respirator if air contamination is above an acceptable level. Do not eat, drink or smoke when using the product. Good personal hygiene procedures should be implemented.

7.2. Conditions for safe storage, including any incompatibilities

Storage precautions Store in tightly-closed, original container in a dry, cool and well-ventilated place.

7.3. Specific end use(s)

Specific end use(s) The identified uses for this product are detailed in Section 1.2.

SECTION 8: Exposure Controls/personal protection

8.1. Control parameters

Occupational exposure limits

4,4'-METHYLENEDI(CYCLOHEXYL ISOCYANATE)

R-Flex Resin

Long-term exposure limit (8-hour TWA): WEL 0.02 mg/m³(Sen)

Short-term exposure limit (15-minute): WEL 0.07 mg/m³(Sen)

BUTANONE

Long-term exposure limit (8-hour TWA): WEL 200 ppm(Sk) 600 mg/m³(Sk)

Short-term exposure limit (15-minute): WEL 300 ppm(Sk) 899 mg/m³(Sk)

WEL = Workplace Exposure Limit

Ingredient comments WEL = Workplace Exposure Limits

8.2. Exposure controls

Protective equipment



Appropriate engineering controls

Provide adequate general and local exhaust ventilation. Observe any occupational exposure limits for the product or ingredients.

Eye/face protection

The following protection should be worn: Chemical splash goggles or face shield.

Hand protection

Wear protective gloves made of the following material: Rubber (natural, latex). Neoprene. Polyvinyl chloride (PVC).

Other skin and body protection

Wear chemical protective suit.

Hygiene measures

Keep away from food, drink and animal feeding stuffs. Good personal hygiene procedures should be implemented. Wash hands and any other contaminated areas of the body with soap and water before leaving the work site. Do not eat, drink or smoke when using the product.

Respiratory protection

If ventilation is inadequate, suitable respiratory protection must be worn. Wear a respirator fitted with the following cartridge: Gas filter, type A2.

SECTION 9: Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

Appearance	Liquid.
Colour	Clear liquid.
pH	pH (concentrated solution): 7 @ 25 °C
Melting point	n/d°C
Initial boiling point and range	>149.°C @
Flash point	>204.4°C TCC (Tag closed cup).
Vapour pressure	Not determined.
Relative density	1.03 @ 25 °C°C
Viscosity	3.2-8.5 Pa s @ °C

9.2. Other information

Other information Not available.

SECTION 10: Stability and reactivity

10.1. Reactivity

R-Flex Resin

Reactivity Alcohols, glycols. Amines. Alkalis.

10.2. Chemical stability

Stability Stable at normal ambient temperatures and when used as recommended.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions Not available.

10.4. Conditions to avoid

Conditions to avoid Avoid heat, flames and other sources of ignition.

10.5. Incompatible materials

Materials to avoid Avoid contact with the following materials: Water, moisture. Alcohols, glycols. Amines. Alkalis.

10.6. Hazardous decomposition products

Hazardous decomposition products Fire or high temperatures create: Nitrous gases (NO_x). Oxides of the following substances: Carbon monoxide (CO). Carbon dioxide (CO₂). Vapours/gases/fumes of: Ammonia or amines.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity - inhalation

ATE inhalation (gases ppm) 2,800.0

ATE inhalation (vapours mg/l) 12.0

ATE inhalation (dusts/mists mg/l) 2.0

Inhalation Irritating to respiratory system. May cause sensitisation by inhalation.

Skin contact Irritating to skin. May cause sensitisation or allergic reactions in sensitive individuals.

Acute and chronic health hazards Persons allergic to isocyanates, and particularly those suffering from asthma or other respiratory conditions, should not work with isocyanates. Persons with impaired lung function should not handle this product.. Persons susceptible to allergic reactions should not handle this product. The product contains small quantities of isocyanate. May cause respiratory allergy. May cause respiratory system irritation.

SECTION 12: Ecological Information

Ecotoxicity There are no data on the ecotoxicity of this product.

12.1. Toxicity

Acute toxicity - fish LC₅₀, 96 hours: 1.2mg/l mg/l, Fish

Acute toxicity - aquatic invertebrates EC₅₀, 48 hours: >500mg/l mg/l, Daphnia magna

12.2. Persistence and degradability

Persistence and degradability Assessment of biological degradability (Closed-Bottle Test) 60 %.

12.3. Bioaccumulative potential

Bioaccumulative potential No data available on bioaccumulation.

R-Flex Resin

12.4. Mobility in soil

Mobility Do not discharge into drains or watercourses or onto the ground.

12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB assessment This product does not contain any substances classified as PBT or vPvB.

12.6. Other adverse effects

Other adverse effects Not available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

General information When handling waste, the safety precautions applying to handling of the product should be considered.

Disposal methods Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

Waste class 08 04 99

SECTION 14: Transport information

General The product is not covered by international regulations on the transport of dangerous goods (IMDG, IATA, ADR/RID).

14.1. UN number

No information required.

UN No. (IMDG)

UN No. (ICAO)

14.2. UN proper shipping name

No information required.

14.3. Transport hazard class(es)

No information required.

14.4. Packing group

No information required.

14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant

No.

14.6. Special precautions for user

No information required.

14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code No information required.

SECTION 15: Regulatory information

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

R-Flex Resin

EU legislation Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures (as amended).

Water hazard classification WGK 2

15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

SECTION 16: Other information

Revision date 28/05/2015

Revision 2

Supersedes date 06/12/2014

Risk phrases in full
R11 Highly flammable.
R20 Harmful by inhalation.
R23 Toxic by inhalation.
R36 Irritating to eyes.
R36/37/38 Irritating to eyes, respiratory system and skin.
R42/43 May cause sensitisation by inhalation and skin contact.
R66 Repeated exposure may cause skin dryness or cracking.
R67 Vapours may cause drowsiness and dizziness.

Hazard statements in full
H225 Highly flammable liquid and vapour.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H331 Toxic if inhaled.
H332 Harmful if inhaled.
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335 May cause respiratory irritation.
H336 May cause drowsiness or dizziness.
H412 Harmful to aquatic life with long lasting effects.

This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty, guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.