

SAFETY DATA SHEET

RESION Flexible Epoxy Hardener

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

1.1. Product identifier

Trade name

RESION Flexible Epoxy Hardener

Product no.

EP511

Unique formula identifier (UFI)

ER40-M0AF-N00W-2XT6

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

Relevant identified uses of the substance or mixture

Epoxy binder

▼ Uses advised against

None known.

1.3. Details of the supplier of the safety data sheet

Company and address

Polyestershoppen BV

Oostbaan 680
2841 ML Moordrecht
Netherlands
+31 85 0220090

Contact person

-

E-mail

info@polyestershoppen.nl

Revision

22/01/2025

SDS Version

2.0

Date of previous version

15/06/2022 (1.0)

1.4. ▼ Emergency telephone number

Healthcare professionals: Dial 0344 892 0111 to reach The National Poisons Information Service (NPIS) (24 hour service)

General public:

England - Dial 111 to reach NHS 111 (24 hour service)

Scotland - Dial 112 to reach NHS 24 (24 hour service)

Wales - Dial 111 or 0845 4647 to reach NHS Direct (24 hour service)

See section 4 "First aid measures".

SECTION 2: Hazards identification

Classified according to Regulation (EC) No. 1272/2008 (CLP) as retained and amended in UK law.

2.1. ▼ Classification of the substance or mixture

Acute Tox. 4; H302, Harmful if swallowed.

Skin Corr. 1; H314, Causes severe skin burns and eye damage.
Eye Dam. 1; H318, Causes serious eye damage.
Acute Tox. 4; H332, Harmful if inhaled.

2.2. Label elements

▼ Hazard pictogram(s)



Signal word

Danger

▼ Hazard statement(s)

Harmful if swallowed or if inhaled. (H302+H332)
Causes severe skin burns and eye damage. (H314)

Precautionary statement(s)

General

If medical advice is needed, have product container or label at hand. (P101)
Keep out of reach of children. (P102)

Prevention

Do not breathe vapour/mist. (P260)
Wear eye protection/protective gloves. (P280)

▼ Response

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
(P303+P361+P353)
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.
Continue rinsing. (P305+P351+P338)

Storage

Store locked up. (P405)

▼ Disposal

Dispose of contents/container in accordance with local regulation
(P501)

▼ Hazardous substances

1,3-Cyclohexanedimethanamine
benzyl alcohol

▼ Additional labelling

60.00 % of the mixture consists of ingredients of unknown toxicity.

UFI: ER40-M0AF-N00W-2XT6

2.3. Other hazards

▼ Additional warnings

This mixture/product does not contain any substances known to fulfil the criteria for PBT and vPvB classification.
This product does not contain any substances considered to be endocrine disruptors in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2023/707.

SECTION 3: Composition/information on ingredients

3.1. ▼ Substances

Not applicable. This product is a mixture.

3.2. ▼ Mixtures

Product/substance	Identifiers	% w/w	Classification	Note
1,3-Cyclohexanedimethanamine	CAS No.: 2579-20-6 EC No.: 219-941-5 UK-REACH:	60-80%	Acute Tox. 4, H302 (ATE: 700.00 mg/kg) Acute Tox. 4, H312 (ATE: 1700.00 mg/kg)	

	Index No.:		Skin Corr. 1, H314
benzyl alcohol	CAS No.: 100-51-6 EC No.: 202-859-9 UK-REACH: Index No.: 603-057-00-5	40-60%	Acute Tox. 4, H302 Acute Tox. 4, H332

See full text of H-phrases in section 16. Occupational exposure limits are listed in section 8, if these are available.

▼ Other information

-

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

In the case of accident: Contact a doctor or casualty department – take the label or this safety data sheet. Contact a doctor if in doubt about the injured person's condition or if the symptoms persist. Never give an unconscious person water or other drink.

▼ Inhalation

Upon breathing difficulties or irritation of the respiratory tract: Bring the injured person into fresh air. Make sure the injured person is continuously monitored. Prevent shock by keeping the injured person warm and calm. If breathing ceases, give mouth-to-mouth resuscitation. If unconscious, roll the injured person into recovery position. Call an ambulance.

▼ Skin contact

Flush exposed area with water for a long time - at least 30 minutes. It may be necessary to flush for several hours. Use a comfortable water temperature (20-30 °C). Contact Poison Information/doctor/hospital for further advice on follow-up and treatment.

Remove contaminated clothing and shoes immediately. Ensure to wash exposed skin thoroughly with water and soap. Skin cleanser can be used. DO NOT use solvents or thinners.
If skin irritation occurs: Get medical advice/attention.

▼ Eye contact

If in eyes: Flush eyes with plenty of water or salt water (20-30 °C) for at least 30 minutes and continue until irritation stops. Remove contact lenses. Make sure you flush under the upper and lower eyelids. Seek medical assistance immediately and continue flushing during transport.

▼ Ingestion

In the case of ingestion, contact a doctor immediately. If the person is conscious, give them water. DO NOT try to induce vomiting unless this is recommended by a doctor. Hold head facing down to prevent vomit from returning to the mouth and throat. Prevent shock by keeping the injured person warm and calm. Initiate immediate resuscitation if breathing stops. If unconscious, roll the injured person into recovery position. Call an ambulance.

▼ Burns

Not applicable.

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

Tissue-damaging effects: This product contains substances with skin corrosive properties. Inhaled vapour or aerosols may produce adverse effects to lungs, irritations and burns in the respiratory organs as well as coughing. Dermal contact and contact with the eye cause irreversible effects.

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

IF exposed or concerned:
Get immediate medical advice/attention.

Information to medics

Bring this safety data sheet or the label from this product.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media: Alcohol-resistant foam, carbon dioxide, powder, water mist.

Unsuitable extinguishing media: Waterjets should not be used, since they can spread the fire.

5.2. ▼ Special hazards arising from the substance or mixture

Fire will result in dense smoke. Exposure to combustion products may harm your health. Closed containers, which are exposed to fire, should be cooled with water. Do not allow fire-extinguishing water to enter the sewage system and nearby surface waters.

If the product is exposed to high temperatures, e.g. in the event of fire, dangerous decomposition compounds are produced. These are:

Nitrogen oxides (NO_x)

Carbon oxides (CO / CO₂)

5.3. Advice for firefighters

Wear self-contained breathing apparatus and protective clothing to prevent contact. Upon direct exposure contact The National Poisons Information Service (dial 111, 24 h service) in order to obtain further advice.

SECTION 6: Accidental release measures

6.1. ▼ Personal precautions, protective equipment and emergency procedures

Avoid direct contact with spilled substances.

Ensure adequate ventilation, especially in confined areas.

Avoid inhalation of vapours from spilled material.

Contaminated areas may be slippery.

6.2. Environmental precautions

Avoid discharge to lakes, streams, sewers, etc.

Keep unauthorized persons away from the spill

6.3. ▼ Methods and material for containment and cleaning up

Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations.

Wherever possible cleaning should be performed with normal cleaning agents. Avoid use of solvents.

6.4. ▼ Reference to other sections

See section 13 "Disposal considerations" on handling of waste.

See section 8 "Exposure controls/personal protection" for protective measures.

SECTION 7: Handling and storage

7.1. ▼ Precautions for safe handling

The product should be tested for peroxides before distillation or evaporation and tested for peroxide formation or discarded after 1 year.

Avoid direct contact with the product.

Peroxide formation may be present anywhere in the container, including the sides, bottom, exterior and threaded cap. Peroxide formation in ppm concentrations may not be visually observable and must be identified through the use of appropriate testing procedures. If any of the following conditions exist, the material may be explosively unstable and will require stabilization prior to use:

1. Material appears to be degraded and or contaminated.

2. Material appears to be discolored.

3. Deterioration or distortion of storage container.

4. Thermal shock (sunlight).

5. Age of material exceeds recommended storage time.

Smoking, drinking and consumption of food is not allowed in the work area.

See section 8 "Exposure controls/personal protection" for information on personal protection.

7.2. Conditions for safe storage, including any incompatibilities

Store in tightly closed containers and store protected from moisture and light. Containers should be dated when opened and tested periodically for the presence of peroxides. Do not exceed storage time limits.

Containers that have been opened must be carefully resealed and kept upright to prevent leakage.

Recommended storage material

Keep only in original packaging.

Storage conditions

Dry, cool and well ventilated

Incompatible materials

Strong acids, strong bases, strong oxidizing agents, and strong reducing agents.

7.3. ▼ Specific end use(s)

This product should only be used for applications quoted in section 1.2.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

No substances are listed in the national list of substances with an occupational exposure limit.

▼ DNEL

benzyl alcohol

Duration:	Route of exposure:	DNEL:
Long term – Systemic effects - Workers	Dermal	9.5 mg/kg
Short term – Systemic effects - Workers	Dermal	47 mg/kg
Long term – Systemic effects - General population	Oral	5 mg/kg
Short term – Systemic effects - General population	Oral	25 mg/kg

▼ PNEC

benzyl alcohol

Route of exposure:	Duration of Exposure:	PNEC:
Freshwater		1 mg/l
Freshwater sediment		5.27 mg/kg
Marine water		0.1 mg/l
Marine water sediment		0.527 mg/kg
Soil		0.456 mg/kg

8.2. ▼ Exposure controls

Apply general control to prevent unnecessary exposure

General recommendations

Smoking, drinking and consumption of food is not allowed in the work area.

Exposure scenarios

There are no exposure scenarios implemented for this product.

Exposure limits

Occupational exposure limits have not been defined for the substances in this product.

Appropriate technical measures

Ensure that eyewash stations and safety showers are located within easy reach.

Apply standard precautions during use of the product. Avoid inhalation of vapours.

▼ Hygiene measures

In between use of the product and at the end of the working day all exposed areas of the body must be washed thoroughly. Pay special attention to hands, forearms and face.

Measures to avoid environmental exposure

Keep damming materials near the workplace. If possible, collect spillage during work.

Individual protection measures, such as personal protective equipment

Generally

Wash contaminated clothing before reuse.

Use only UKCA marked protective equipment.

Respiratory Equipment

Type	Class	Colour	Standards
Respiratory protection is not needed in the event of adequate ventilation	-	-	-

Skin protection

Recommended	Type/Category	Standards
No special when used as intended	-	-

Hand protection

Material	Glove thickness (mm)	Breakthrough time (min.)	Standards
Nitrile	0.4	> 480	EN374-2, EN374-3, EN388



Eye protection

Type	Standards
Safety glasses with side shields.	EN166



SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state

Liquid

Colour

Colourless

Odour / Odour threshold

Characteristic

pH

Not applicable

Density (g/cm³)

1 (20 °C)

Kinematic viscosity

300 mPa.s (20 °C)

Particle characteristics

Does not apply to liquids.

Phase changes

▼ Melting point/Freezing point (°C)

No relevant or available data due to the nature of the product.

Softening point/range (°C)

Does not apply to liquids.

▼ Boiling point (°C)

No relevant or available data due to the nature of the product.

▼ Vapour pressure

No relevant or available data due to the nature of the product.

▼ Relative vapour density

No relevant or available data due to the nature of the product.

▼ Decomposition temperature (°C)

No relevant or available data due to the nature of the product.

Data on fire and explosion hazards

Flash point (°C)

>100

▼ Flammability (°C)

No relevant or available data due to the nature of the product.

▼ Auto-ignition temperature (°C)

No relevant or available data due to the nature of the product.

▼ Lower and upper explosion limit (% v/v)

No relevant or available data due to the nature of the product.

Solubility

Solubility in water

Insoluble

▼ n-octanol/water coefficient (LogKow)

No relevant or available data due to the nature of the product.

▼ Solubility in fat (g/L)

No relevant or available data due to the nature of the product.

9.2. Other information

▼ Other physical and chemical parameters

No data available.

▼ Oxidizing properties

No relevant or available data due to the nature of the product.

SECTION 10: Stability and reactivity

10.1. ▼ Reactivity

No data available.

10.2. Chemical stability

The product is stable under the conditions, noted in section 7 "Handling and storage".

10.3. ▼ Possibility of hazardous reactions

None known.

10.4. ▼ Conditions to avoid

None known.

10.5. Incompatible materials

Strong acids, strong bases, strong oxidizing agents, and strong reducing agents.

10.6. ▼ Hazardous decomposition products

Thermal decomposition may produce corrosive vapours.

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

▼ Acute toxicity

Product/substance	1,3-Cyclohexanedimethanamine
Species:	Rat
Route of exposure:	Oral
Test:	LD50
Result:	700 mg/kg

Product/substance	1,3-Cyclohexanedimethanamine
Species:	Rat
Route of exposure:	Dermal

Test: LD50
Result: 1700 mg/kg

Product/substance: benzyl alcohol
Species: Rat
Route of exposure: Oral
Test: LD50
Result: 1620 mg/kg

Product/substance: benzyl alcohol
Species: Rat
Route of exposure: Inhalation
Test: LC50 (4 hours)
Result: > 4178 mg/m³

Harmful if swallowed.
Harmful if inhaled.

▼ Skin corrosion/irritation

Product/substance: 1,3-Cyclohexanedimethanamine
Result: Adverse effect observed (Corrosive)

Causes severe skin burns and eye damage.

▼ Serious eye damage/irritation

Product/substance: 1,3-Cyclohexanedimethanamine
Result: Adverse effect observed (Irritating)

Product/substance: benzyl alcohol
Duration: No data available.
Result: Adverse effect observed (Irritating)

Causes serious eye damage.

▼ Respiratory sensitisation

Product/substance: 1,3-Cyclohexanedimethanamine
Result: No adverse effect observed (not sensitising)

▼ Skin sensitisation

Product/substance: 1,3-Cyclohexanedimethanamine
Result: No adverse effect observed (not sensitising)

▼ Germ cell mutagenicity

Product/substance: 1,3-Cyclohexanedimethanamine
Conclusion: No adverse effect observed

Product/substance: benzyl alcohol
Test method: OECD 476
Species: Bacteria
Description: Positive
Conclusion: Adverse effect observed

Product/substance: benzyl alcohol
Test method: OECD 474
Species: Bacteria
Description: Negative
Conclusion: No adverse effect observed

▼ Carcinogenicity

Product/substance: 1,3-Cyclohexanedimethanamine
Conclusion: No adverse effect observed

▼ Reproductive toxicity

Product/substance: 1,3-Cyclohexanedimethanamine

Conclusion: No adverse effect observed

Product/substance: benzyl alcohol
Species: Mouse
Result: Oral - Positive 750 mg/kg - Notes: 192h

Product/substance: benzyl alcohol
Species: Mouse
Result: Oral - Negative 550 mg/kg - Notes: 240h

▼ STOT-single exposure

Product/substance: 1,3-Cyclohexanedimethanamine
Conclusion: No adverse effect observed

▼ STOT-repeated exposure

Product/substance: 1,3-Cyclohexanedimethanamine
Conclusion: No adverse effect observed

▼ Aspiration hazard

Product/substance: 1,3-Cyclohexanedimethanamine
Conclusion: Aspiration hazard not applicable

11.2. Information on other hazards

▼ Long term effects

Tissue-damaging effects: This product contains substances with skin corrosive properties. Inhaled vapour or aerosols may produce adverse effects to lungs, irritations and burns in the respiratory organs as well as coughing. Dermal contact and contact with the eye cause irreversible effects.

▼ Endocrine disrupting properties

This mixture/product does not contain any substances known to have hormone-disrupting properties in relation to health.

▼ Other information

None known.

SECTION 12: Ecological information

12.1. ▼ Toxicity

Product/substance: 1,3-Cyclohexanedimethanamine
Test method: OECD 201
Species: Algae, Pseudokirchneriella subcapitata
Duration: 72 hours
Test: EC50
Result: 56,7 mg/L

Product/substance: 1,3-Cyclohexanedimethanamine
Test method: OECD 203
Species: Fish
Duration: 96 hours
Test: LC50
Result: 130 mg/L

Product/substance: 1,3-Cyclohexanedimethanamine
Test method: OECD 202
Species: Daphnia, Daphnia magna
Duration: 48 hours
Test: EC50
Result: 33,1 mg/L

Product/substance: benzyl alcohol
Species: Daphnia
Duration: 48 hours

Test: EC50
Result: 230 mg/L

Product/substance: benzyl alcohol
Species: Algae
Duration: 72 hours
Result: 700 mg/L

Product/substance: benzyl alcohol
Species: Fish
Duration: 96 hours
Test: LC50
Result: 460 mg/L

Product/substance: benzyl alcohol
Species: Bacteria
Duration: 24 hours
Test: EC50
Result: 390 mg/L

12.2. ▼ Persistence and degradability

Product/substance: benzyl alcohol
Conclusion: Readily biodegradable

12.3. ▼ Bioaccumulative potential

Product/substance: benzyl alcohol
BCF: 1.37
Conclusion: Potential for bioaccumulation

12.4. ▼ Mobility in soil

No data available.

12.5. ▼ Results of PBT and vPvB assessment

This mixture/product does not contain any substances known to fulfil the criteria for PBT and vPvB classification.

12.6. ▼ Endocrine disrupting properties

This mixture/product does not contain any substances considered to have endocrine-disrupting properties in relation to the environment.

12.7. ▼ Other adverse effects

None known.

SECTION 13: Disposal considerations

13.1. ▼ Waste treatment methods

Product is not covered by regulations on dangerous waste.
Regulation (EU) No 1357/2014 of 18 December 2014 on waste as retained and amended in UK law.

▼ EWC code

07 02 99 Wastes not otherwise specified

Contaminated packing

Packaging containing residues of the product must be disposed of similarly to the product.

SECTION 14: Transport information

	14.1 UN / ID	14.2 UN proper shipping name	14.3 Hazard class(es) Label: 8	14.4 PG*	14.5 Env**	Other information:
ADR	2735	AMINES, LIQUID, CORROSIVE, N.O.S. (1,3-cyclohexanedimethanamine)	Transport hazard class: 8 Label: 8	II	No	Limited quantities: 1

	14.1 UN / ID	14.2 UN proper shipping name	14.3 Hazard class(es)	14.4 PG*	14.5 Env**	Other informatio n:
			Classification code: C7			L Tunnel restriction code: 2 (E) See below for additional information.
IMDG	2735	AMINES, LIQUID, CORROSIVE, N.O.S. (1,3-cyclohexanedimethanamine)	Transport hazard class: 8 Label: 8 Classification code: C7	II	No	Limited quantities: 1 L EmS: F-A S-B See below for additional information.
IATA	2735	AMINES, LIQUID, CORROSIVE, N.O.S. (1,3-cyclohexanedimethanamine)	Transport hazard class: 8 Label: 8 Classification code: C7	II	No	See below for additional information.

* Packing group

** Environmental hazards

▼ Additional information

This product is within scope of the regulations of transport of dangerous goods.

ADR / See Table A, section 3.2.1 for any information on special provisions, requirements, or warnings in connection with transport. See section 5.4.3, for instructions in writing regarding mitigation of damages in relation to incidents or accidents during transport.

IMDG / See section 3.2.1, for any information on special provisions, requirements, or warnings in connection with transport.

IATA / See Table 4.2 for any information on special provisions, requirements, or warnings in connection with transport.

14.6. ▼ Special precautions for user

Not applicable.

14.7. ▼ Maritime transport in bulk according to IMO instruments

No data available.

SECTION 15: Regulatory information

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

Restrictions for application

People under the age of 18 shall not be exposed to this product.

▼ Demands for specific education

No specific requirements.

▼ SEVESO - Categories / dangerous substances

Not applicable.

Additional information

Tactile warning.

If this product is sold in retail, it must be delivered with child-resistant fastening.

▼ Sources

The Management of Health and Safety at Work Regulations 1999.
Regulation (EU) No 1357/2014 of 18 December 2014 on waste as retained and amended in UK law.
Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures (CLP) as retained and amended in UK law.
Regulation (EC) No 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) as retained and amended in UK law.

15.2. Chemical safety assessment

No

SECTION 16: Other information

Full text of H-phrases as mentioned in section 3

H302, Harmful if swallowed.
H312, Harmful in contact with skin.
H314, Causes severe skin burns and eye damage.
H332, Harmful if inhaled.

▼ Abbreviations and acronyms

ADN = European Provisions concerning the International Carriage of Dangerous Goods by Inland Waterway
ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
CAS = Chemical Abstracts Service
CE = Conformité Européenne (European conformity)
CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]
CSA = Chemical Safety Assessment
CSR = Chemical Safety Report
DMEL = Derived Minimal Effect Level
DNEL = Derived No Effect Level
EINECS = European Inventory of Existing Commercial chemical Substances
ES = Exposure Scenario
EUH statement = CLP-specific Hazard statement
EuPCS = European Product Categorisation System
EWC = European Waste Catalogue
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
GWP = Global warming potential
IARC = International Agency for Research on Cancer (IARC)
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient
MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
OECD = Organisation for Economic Co-operation and Development
PBT = Persistent, Bioaccumulative and Toxic
PNEC = Predicted No Effect Concentration
RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail
RRN = REACH Registration Number
SCL = A specific concentration limit
SVHC = Substances of Very High Concern
STOT-RE = Specific Target Organ Toxicity - Repeated Exposure
STOT-SE = Specific Target Organ Toxicity - Single Exposure
TWA = Time weighted average
UN = United Nations
UVBC = Unknown or variable composition, complex reaction products or of biological materials
VOC = Volatile Organic Compound
vPvB = Very Persistent and Very Bioaccumulative

Additional information

The classification of the substance/mixture in regard of health hazards are in accordance with the calculation

methods given by Regulation (EC) No. 1272/2008 (CLP) as retained and amended in UK law.

The safety data sheet is validated by

H.A.B.

▼ Other

A change (in proportion to the last essential change (first cipher in SDS version, see section 1)) is marked with a triangle.

The information in this safety data sheet applies only to this specific product (mentioned in section 1) and is not necessarily correct for use with other chemicals/products.

It is recommended to hand over this safety data sheet to the actual user of the product. Information in this safety data sheet cannot be used as a product specification.

Country-language: GB-en