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

No special

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

15/06/2022

SDS Version

1.0

1.4. Emergency telephone number

Contact The National Poisons Information Service (dial 111, 24 h service).
See section 4 “First aid measures”.

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Skin Corr. 1; H314, Causes severe skin burns and eye damage.

Eye Dam. 1; H318, Causes serious eye damage.

2.2. Label elements

Hazard pictogram(s)

Signal word

Danger

Hazard statement(s)

Causes severe skin burns and eye damage. (H314)

Safety 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 . (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 to an approved waste disposal plant. (P501)

Hazardous substances

1,3-Cyclohexanedimethanamine

2.3. Other hazards

Additional labelling

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

Additional warnings

This mixture/product does not contain any substances considered to meet the criteria classifying them as PBT and/or vPvB.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Product/substance	Identifiers	% w/w	Classification	Note
1,3-Cyclohexanedimethanamine	CAS No.: 2579-20-6 EC No.: 219-941-5 REACH: Index No.:	60-80%	Acute Tox. 4, H302 (ATE: 700.00 mg/kg) Acute Tox. 4, H312 (ATE: 1700.00 mg/kg) Skin Corr. 1, H314	
benzyl alcohol	CAS No.: 100-51-6 EC No.: 202-859-9 REACH: Index No.: 603-057-00-5	40-60%	Acute Tox. 4, H302 Acute Tox. 4, H332	[9]

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

Other information

[9] Identified by EU as one of 26 specific fragrance ingredients, known to cause allergic contact dermatitis (Regulation (EC) No 1223/2009 on cosmetic products)

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 person into fresh air and stay with him/her.

Skin contact

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

Upon irritation of the eye: Remove contact lenses. Flush eyes with plenty of water or salt water (20-30°C) for at least 15 minutes and continue until irritation stops. 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 returning 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.

6.2. Environmental precautions

Avoid discharge to lakes, streams, sewers, etc.

6.3. Methods and material for containment and cleaning up

Use sand, earth, vermiculite, diatomaceous earth to contain and collect non-combustible absorbent materials and place in container for disposal, according to local regulations.
To the extent possible cleaning is performed with normal cleaning agents. Avoid use of solvents.

6.4. Reference to other sections

See section 13 on “Disposal considerations” in regard of 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.
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.
Avoid direct contact with the product.
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 temperature

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	Dermal	47 mg/kg

effects - Workers		
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

Control is unnecessary if the product is used as intended.

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

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. Always wash 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)
Testing not relevant or not possible due to nature of the product.
Softening point/range (waxes and pastes) (°C)
Does not apply to liquids.
Boiling point (°C)
Testing not relevant or not possible due to nature of the product.
Vapour pressure
Testing not relevant or not possible due to nature of the product.
Relative vapour density
Testing not relevant or not possible due to nature of the product.
Decomposition temperature (°C)
Testing not relevant or not possible due to nature of the product.

Data on fire and explosion hazards

Flash point (°C)
>100
Ignition (°C)
Testing not relevant or not possible due to nature of the product.
Auto flammability (°C)
Testing not relevant or not possible due to nature of the product.
Lower and upper explosion limit (% v/v)
Testing not relevant or not possible due to nature of the product.

Solubility

Solubility in water

Insoluble

n-octanol/water coefficient

Testing not relevant or not possible due to nature of the product.

Solubility in fat (g/L)

Testing not relevant or not possible due to nature of the product.

9.2. Other information

Other physical and chemical parameters

No data available

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

No special

10.4. Conditions to avoid

Do not expose to any forms of heat (e.g. solar radiation). May lead to excess pressure.

10.5. Incompatible materials

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

10.6. Hazardous decomposition products

The product is not degraded when used as specified in section 1.

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
Test method	
Species	Rat
Route of exposure	Oral
Test	LD50
Result	700 mg/kg
Other information	
Product/substance	1,3-Cyclohexanedimethanamine
Test method	
Species	Rat
Route of exposure	Dermal
Test	LD50
Result	1700 mg/kg
Other information	
Product/substance	benzyl alcohol

Test method	
Species	Rat
Route of exposure	Oral
Test	LD50
Result	1620 mg/kg
Other information	
Product/substance	benzyl alcohol
Test method	
Species	Rat
Route of exposure	Inhalation
Test	LC50 (4 hours)
Result	> 4178 mg/m³
Other information	

Skin corrosion/irritation

Product/substance	1,3-Cyclohexanedimethanamine
Test method	
Species	
Duration	
Result	Adverse effect observed (Corrosive)
Other information	

Causes severe skin burns and eye damage.

Serious eye damage/irritation

Product/substance	1,3-Cyclohexanedimethanamine
Test method	
Species	
Duration	
Result	Adverse effect observed (Irritating)
Other information	
Product/substance	benzyl alcohol
Test method	
Species	
Duration	No data available.
Result	Adverse effect observed (Irritating)

Other information	

Causes serious eye damage.

Respiratory sensitisation

Product/substance	1,3-Cyclohexanedimethanamine
Test method	
Species	
Result	No adverse effect observed (not sensitising)
Other information	

Skin sensitisation

Product/substance	1,3-Cyclohexanedimethanamine
Test method	
Species	
Result	No adverse effect observed (not sensitising)
Other information	

Germ cell mutagenicity

Product/substance	1,3-Cyclohexanedimethanamine
Test method	
Species	
Conclusion	No adverse effect observed
Other information	
Product/substance	benzyl alcohol
Test method	OECD 476
Species	Bacteria
Conclusion	Adverse effect observed
Other information	
Product/substance	benzyl alcohol
Test method	OECD 474
Species	Bacteria
Conclusion	No adverse effect observed
Other information	

Carcinogenicity

Product/substance	1,3-Cyclohexanedimethanamine

Test method	
Species	
Route of exposure	
Target organ	
Duration	
Test	
Result	
Conclusion	No adverse effect observed
Other information	

Reproductive toxicity

Product/substance	1,3-Cyclohexanedimethanamine
Test method	
Species	
Duration	
Test	
Result	
Conclusion	No adverse effect observed
Other information	
Product/substance	benzyl alcohol
Test method	
Species	Mouse
Duration	
Test	
Result	Oral - Positive 750 mg/kg - Notes: 192h
Conclusion	
Other information	
Product/substance	benzyl alcohol
Test method	
Species	Mouse
Duration	
Test	
Result	Oral - Negative 550 mg/kg - Notes: 240h
Conclusion	

Other information	

STOT-single exposure

Product/substance	1,3-Cyclohexanedimethanamine
Test method	
Species	
Route of exposure	
Target organ	
Duration	
Test	
Result	
Conclusion	No adverse effect observed
Other information	

STOT-repeated exposure

Product/substance	1,3-Cyclohexanedimethanamine
Test method	
Species	
Route of exposure	
Target organ	
Duration	
Test	
Result	
Conclusion	No adverse effect observed
Other information	

Aspiration hazard

Product/substance	1,3-Cyclohexanedimethanamine
Kin. viscocity (mm²/s)	
Test	
Conclusion	Aspiration hazard not applicable
Other information	

11.2. Information on other hazards

Long term effects

Irritation effects: This product contains substances, which may cause irritation upon exposure to skin, eyes or lungs. Exposure may result in an increased absorption potential of other hazardous substances at the area of exposure.

Endocrine disrupting properties

No special

Other information

No special

SECTION 12: Ecological information

12.1. Toxicity

Product/substance	1,3-Cyclohexanedimethanamine
Test method	OECD 201
Species	Algae, Pseudokirchneriella subcapitata
Compartment	
Duration	72 hours
Test	EC50
Result	56,7 mg/L
Other information	
Product/substance	1,3-Cyclohexanedimethanamine
Test method	OECD 203
Species	Fish
Compartment	
Duration	96 hours
Test	LC50
Result	130 mg/L
Other information	
Product/substance	1,3-Cyclohexanedimethanamine
Test method	OECD 202
Species	Daphnia, Daphnia magna
Compartment	
Duration	48 hours
Test	EC50
Result	33,1 mg/L
Other information	
Product/substance	benzyl alcohol
Test method	
Species	Daphnia
Compartment	
Duration	48 hours

Test	EC50
Result	230 mg/L
Other information	
Product/substance	benzyl alcohol
Test method	
Species	Algae
Compartment	
Duration	72 hours
Test	
Result	700 mg/L
Other information	
Product/substance	benzyl alcohol
Test method	
Species	Fish
Compartment	
Duration	96 hours
Test	LC50
Result	460 mg/L
Other information	
Product/substance	benzyl alcohol
Test method	
Species	Bacteria
Compartment	
Duration	24 hours
Test	EC50
Result	390 mg/L
Other information	

12.2. Persistence and degradability

Product/substance	benzyl alcohol
Biodegradable	Yes
Test method	
Result	

12.3. Bioaccumulative potential

Product/substance	benzyl alcohol
Test method	
Potential bioaccumulation	Yes
LogPow	No data available
BCF	1.37
Other information	

12.4. Mobility in soil

No data available

12.5. Results of PBT and vPvB assessment

This mixture/product does not contain any substances considered to meet the criteria classifying them as PBT and/or vPvB.

12.6. Endocrine disrupting properties

No special

12.7. Other adverse effects

No special

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

Specific labelling

Not applicable

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)	14.4 PG*	14.5 Env**	Other information
ADR	2735	AMINES, LIQUID, CORROSIVE, N.O.S. (1,3-cyclohexanedimethanamine)	Class: 8 Labels: 8 Classification code: C7	II	No	Limited quantities: 1 L Tunnel restriction code: 2 (E) See below for additional information.
IMDG	2735	AMINES, LIQUID, CORROSIVE, N.O.S. (1,3-cyclohexanedimethanamine)	Class: 8 Labels: 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)	Class: 8 Labels: 8	II	No	See below for additional

	14.1 UN / ID	14.2 UN proper shipping name	14.3 Hazard class(es)	14.4 PG*	14.5 Env**	Other information
			Classification code: C7			information.

* Packing group
** Environmental hazards

Additional information

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 the Dangerous Goods List, 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.
This product is within scope of the regulations of transport of dangerous goods.

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
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
EWC = European Waste Catalogue
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
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 blue 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