SAFETY DATA SHEET

RESION PUR Foam Hard 40 Hardener

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

1.1. Product identifier

Trade name
RESION PUR Foam Hard 40 Hardener

Product no.
PU-HF40-i

Other means of identification
EC No.: 618-498-9
CAS No.: 9016-87-9

Unique formula identifier (UFI)
7V90-Y0R9-100M-RES2

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

Relevant identified uses of the substance or mixture
Curing agent for resins

Use descriptors (REACH)

Sectors of use	**Description**
SU 19	Building and construction work
LCS "IS"	Industrial uses: Uses of substances as such or in preparations at industrial sites
Product category	**Description**
PC 9a	Coatings and Paints, Fillers, Putties, Thinners
PC 32	Polymer Preparations and Compounds
Process category	**Description**
PROC 19	Hand-mixing with intimate contact and only PPE available
Article category	**Description**
AC 13	Plastic articles
Environmental release category	**Description**
ERC 5	Industrial use resulting in inclusion into or onto a matrix
ERC 8c	Wide dispersive indoor use resulting in inclusion into or onto a matrix
ERC 8f	Wide dispersive outdoor use resulting in inclusion into or onto a matrix

▼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
14/12/2023

SDS Version
2.0

Date of previous version
16/06/2022 (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 Irrit. 2; H315, Causes skin irritation.
Skin Sens. 1; H317, May cause an allergic skin reaction.
Eye Irrit. 2; H319, Causes serious eye irritation.
Acute Tox. 4; H332, Harmful if inhaled.
Resp. Sens. 1; H334, May cause allergy or asthma symptoms or breathing difficulties if inhaled.
STOT SE 3; H335, May cause respiratory irritation.
Carc. 2; H351, Suspected of causing cancer.
STOT RE 2; H373, May cause damage to organs through prolonged or repeated exposure.

2.2. Label elements
Hazard pictogram(s)

Signal word
Danger

Hazard statement(s)
Causes skin irritation. (H315)
May cause an allergic skin reaction. (H317)
Causes serious eye irritation. (H319)
Harmful if inhaled. (H332)
May cause allergy or asthma symptoms or breathing difficulties if inhaled. (H334)
May cause respiratory irritation. (H335)
Suspected of causing cancer. (H351)
May cause damage to organs through prolonged or repeated exposure. (H373)

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
Obtain special instructions before use. (P201)
Do not breathe vapour/mist. (P260)

Response
IF exposed or concerned: Get medical advice/attention. (P308+P313)
Get medical advice/attention if you feel unwell. (P314)

Storage
Store locked up. (P405)

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

Hazardous substances

Isocyanic acid, polymethylenepolyphenylene ester

▼Additional labelling

EUH204, Contains isocyanates. May produce an allergic reaction.
As from 24 August 2023 adequate training is required before industrial or professional use.
UFI: 7V90-Y0R9-100M-RES2

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) 2018/605.

SECTION 3: Composition/information on ingredients

3.1. ▼Substances

Product/substance	Identifiers	% w/w	Classification	Note
Isocyanic acid, polymethylenepolyphenylene ester	CAS No.: 9016-87-9 EC No.: 618-498-9 UK-REACH: Index No.:	95-100%	EUH204 Skin Irrit. 2, H315 Skin Sens. 1, H317 Eye Irrit. 2, H319 Acute Tox. 4, H332 Resp. Sens. 1, H334 STOT SE 3, H335 Carc. 2, H351 STOT RE 2, H373	[3]

3.2. ▼Mixtures

Not applicable. This product is a substance.

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

▼Other information

[3] According to UK REACH, Annex XVII, the substance is subject to restrictions.

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

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 immediately with plenty of water or isotonic water (20-30 °C) for at least 5 minutes and continue until irritation stops. Remove contact lenses. Make sure to flush under upper and lower eyelids. If irritation continues, contact a doctor. Continue flushing during transport.

▼Ingestion

If the person is conscious, rinse the mouth with water and stay with the person. Never give the person anything to drink.
In case of malaise, seek medical advice immediately and bring the safety data sheet or label from the product. Do not induce vomiting, unless recommended by the doctor. Have the person lean forward with head down to avoid inhalation of or choking on vomited material.

▼Burns

Not applicable.

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

Sensitisation: This product contains substances, which may trigger allergic reaction upon dermal contact.
Manifestation of allergic reactions typically takes place within 12-72 hours after exposure.

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.

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. In the event of leakage to the surroundings, contact local environmental authorities.

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

Avoid direct contact with the product.
Avoid contact during pregnancy and while nursing.
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

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

Recommended storage material
Always store in containers of the same material as the original container.

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
No data available.

▼PNEC
No data available.

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
Do not recirculate outlet air that contain the substances.
Apply standard precautions during use of the product. Avoid inhalation of vapours.

Hygiene measures
Take off contaminated clothing and wash it before reuse.

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
Persons already sensitised to diisocyanates may develop allergic reactions when using this product. Persons suffering from asthma, eczema or skin problems should avoid contact, including dermal contact, with this product.
This product should not be used under conditions of poor ventilation unless a protective mask with an appropriate gas filter (e.g. type A1 according to standard EN 14387) is used.
Use only UKCA marked protective equipment.

Respiratory Equipment

Type	Class	Colour	Standards	
A	Class 1 (low capacity)	Brown	EN14387	

Skin protection

Recommended	Type/Category	Standards	
Dedicated work clothing should be worn. Wear a protective suit in the event of prolonged	-	-	

Recommended	Type/Category	Standards
periods of work with the product.		

Hand protection

Material	Glove thickness (mm)	Breakthrough time (min.)	Standards	
Nitrile	0.4	> 480	EN374-2, EN374-3, EN388	
Vinyl/PVC	0.6	-	-	

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
Brown

Odour / Odour threshold
Characteristic

pH
Not applicable

Density (g/cm³)
1.24 (20 °C)

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

Particle characteristics
Does not apply to liquids.

Phase changes

Melting point/Freezing point (°C)
<10

Softening point/range (waxes and pastes) (°C)
Does not apply to liquids.

Boiling point (°C)
330

Vapour pressure
0.0002 hPa (25 °C)

▼Relative vapour density
Testing not relevant or not possible due to the nature of the product.

Decomposition temperature (°C)
230

Data on fire and explosion hazards

Flash point (°C)
>204

▼Flammability (°C)
Testing not relevant or not possible due to the nature of the product.

▼Auto-ignition temperature (°C)
>600

▼Lower and upper explosion limit (% v/v)
Testing not relevant or not possible due to the nature of the product.

Solubility

▼Solubility in water
Testing not relevant or not possible due to the nature of the product.

▼n-octanol/water coefficient (LogKow)
Testing not relevant or not possible due to the nature of the product.

▼Solubility in fat (g/L)
Testing not relevant or not possible due to the nature of the product.

9.2. Other information

▼Other physical and chemical parameters
No data available.

▼Oxidizing properties
Testing not relevant or not possible 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
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	Isocyanic acid, polymethylenepolyphenylene ester
Species:	Rat
Route of exposure:	Oral
Test:	LD50
Result:	10000 mg/kg

Product/substance	Isocyanic acid, polymethylenepolyphenylene ester
Species:	Rabbit
Route of exposure:	Dermal
Test:	LD50
Result:	9400 mg/kg

Product/substance	Isocyanic acid, polymethylenepolyphenylene ester
Species:	Rat

Route of exposure:	Inhalation
Test:	LC50 (4 hours)
Result:	490 mg/L

Harmful if inhaled.

▼Skin corrosion/irritation

Product/substance	Isocyanic acid, polymethylenepolyphenylene ester
Result:	Adverse effect observed (Irritating)

Causes skin irritation.

▼Serious eye damage/irritation

Product/substance	Isocyanic acid, polymethylenepolyphenylene ester
Result:	Adverse effect observed (Highly irritating)

Causes serious eye irritation.

▼Respiratory sensitisation

Product/substance	Isocyanic acid, polymethylenepolyphenylene ester
Result:	Adverse effect observed (sensitising)

▼Skin sensitisation

Product/substance	Isocyanic acid, polymethylenepolyphenylene ester
Result:	Adverse effect observed (sensitising)

▼Germ cell mutagenicity

Product/substance	Isocyanic acid, polymethylenepolyphenylene ester
Conclusion:	No adverse effect observed

Carcinogenicity

Suspected of causing cancer.

▼Reproductive toxicity

Product/substance	Isocyanic acid, polymethylenepolyphenylene ester
Conclusion:	No adverse effect observed

▼STOT-single exposure

Product/substance	Isocyanic acid, polymethylenepolyphenylene ester
Target organ:	Lung
Conclusion:	Adverse effect observed

May cause respiratory irritation.

▼STOT-repeated exposure

Product/substance	Isocyanic acid, polymethylenepolyphenylene ester
Conclusion:	Adverse effect observed

May cause damage to organs through prolonged or repeated exposure.

▼Aspiration hazard

Product/substance	Isocyanic acid, polymethylenepolyphenylene ester
Conclusion:	Aspiration hazard not applicable

11.2. Information on other hazards

Long term effects

Carcinogenic effects: This product contains substances considered or proven to be carcinogenic. The carcinogenic effects may be triggered subsequent to exposure through inhalation, skin contact or ingestion.
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

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

Other information

Isocyanic acid, polymethylenepolyphenylene ester has been classified by IARC as a group 3 carcinogen.

SECTION 12: Ecological information

12.1. ▼Toxicity
No data available.

12.2. ▼Persistence and degradability
No data available.

12.3. ▼Bioaccumulative potential
No data available.

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 covered by the regulations on hazardous waste. (*)
HP 4 - Irritant (skin irritation and eye damage)
HP 5 - Specific Target Organ Toxicity (STOT)/Aspiration Toxicity
HP 6 - Acute toxicity
HP 7 – Carcinogenic
HP 13 – Sensitising
Dispose of contents/container to an approved waste disposal plant.
Regulation (EU) No 1357/2014 of 18 December 2014 on waste as retained and amended in UK law.

▼EWC code
08 05 01* Waste isocyanates

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	-	-	-	-	-	-
IMDG	-	-	-	-	-	-
IATA	-	-	-	-	-	-

* Packing group
** Environmental hazards

Additional information
Not dangerous goods according to ADR, IATA and IMDG.

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.
Pregnant women and women breastfeeding must not be exposed to this product. The risk, and possible technical precautions or design of the workplace needed to eliminate exposure, must be considered.

Demands for specific education

Use of this product requires dedicated training in work with polyurethane and epoxy products.

▼SEVESO - Categories / dangerous substances

Not applicable.

▼REACH, Annex XVII

RESION PUR Foam Hard 40 Hardener is subject to UK-REACH restrictions, UK-REACH annex XVII (entry 3).
Isocyanic acid, polymethylenepolyphenylene ester is subject to restrictions, UK-REACH annex XVII (entry 74).

Additional information

Tactile warning.

▼Sources

The Management of Health and Safety at Work Regulations 1999.
The Health and Safety at Work etc. Act 1974 Regulations 2013.
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

EUH204, Contains isocyanates. May produce an allergic reaction.
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.
H351, Suspected of causing cancer.
H373, May cause damage to organs through prolonged or repeated exposure.

The full text of identified uses as mentioned in section 1

SU 19 = Building and construction work
LCS "IS" = Industrial uses: Uses of substances as such or in preparations at industrial sites
PROC 19 = Hand-mixing with intimate contact and only PPE available
PC 9a = Coatings and Paints, Fillers, Putties, Thinners
PC 32 = Polymer Preparations and Compounds
AC 13 = Plastic articles
ERC 5 = Industrial use resulting in inclusion into or onto a matrix
ERC 8c = Wide dispersive indoor use resulting in inclusion into or onto a matrix
ERC 8f = Wide dispersive outdoor use resulting in inclusion into or onto a matrix

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
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