Elastic Foam

Polyurethane monocomponent foam certified for airtightness
Riwega | eternitycomfort

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

1.1 Product identifier

TRADE NAME: *Elastic Foam*
CODE: *02040505 - 020405050*

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

Application of the substance / the mixture Polyurethane-sealant

1.3 Supplier

RIWEGA Srl
Via Isola di Sopra, 28
39044 Egna (BZ) - ITALY
Tel. 0471/827500

1.4 Emergency telephone number

Gamper Werner
Tel. **0471/827500**
e-mail: info@riwega.com

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

Aerosol 1	H222-H229	Extremely flammable aerosol. Pressurised container: May burst if heated.
Acute Tox. 4	H332	Harmful if inhaled.
Skin Irrit. 2	H315	Causes skin irritation.
Eye 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

Labelling according to Regulation (EC) No 1272/2008
The substance is classified and labelled according to the CLP regulation.

Hazard pictograms

GHS02 GHS07 GHS08

Signal word
Danger

Hazard-determining components of labelling:
diphenylmethanediisocyanate,isomeres and homologues

Hazard statements
H222-H229 Extremely flammable aerosol. Pressurised container: May burst if heated.
H332 Harmful if inhaled.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H317 May cause an allergic skin reaction.
H351 Suspected of causing cancer.
H335 May cause respiratory irritation.
H373 May cause damage to organs through prolonged or repeated exposure.

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Precautionary statements
P102 Keep out of reach of children.
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P211 Do not spray on an open flame or other ignition source.
P251 Do not pierce or burn, even after use.
P261 Avoid breathing vapours / spray.
P271 Use only outdoors or in a well-ventilated area.
P280 Wear protective gloves / eye protection.
P302+P352 IF ON SKIN: Wash with plenty of soap and water.
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P314 Get medical advice / attention if you feel unwell.
P405 Store locked up.
P410+P412 Protect from sunlight. Do not expose to temperatures exceeding 50 °C / 122 °F.
P501 Dispose of contents / container to hazardous or special waste collection point.

Additional safety phrases according to Annex XVII of the Commission Regulation No. 1907/2006 as well as No. 552/2009:
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 (i.e. type A1 according to standard EN 14387) is used.

2.3 Other hazards

Results of PBT and vPvB assessment
This mixture does not meet the PBT- or vPvB-criteria according to Regulation (EC) No 1907/2006

SECTION 3 : Composition/information on ingredients

3.2 Mixtures

Description: Mixture of substances listed below with nonhazardous additions.

Dangerous components:		
CAS: 9016-87-9	diphenylmethanediisocyanate,isomeres and homologues Resp. Sens. 1, H334; Carc. 2, H351; STOT RE 2, H373; Acute Tox. 4, H332; Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317; STOT SE 3, H335, EUH204 Specific concentration limits: Eye Irrit 2; H319: C ≥ 5 % Skin Irrit. 2; H315: C ≥ 5 % Resp. Sens. 1; H334: C ≥ 0,1 % STOT SE 3; H335: C ≥ 5 %	30 - 60%
CAS: 75-28-5 EINECS: 200-857-2 Index number: 601-004-00-0 Reg. No.: 01-2119485395-27	isobutane (< 0.1% butadiene) Flam. Gas 1A, H220; Press. Gas (Comp.), H280	5-10%
CAS: 115-10-6 EINECS: 204-065-8 Index number: 603-019-00-8 Reg. No.: 01-2119472128-37	dimethyl ether Flam. Gas 1A, H220; Press. Gas (Comp.), H280	5-10%
CAS: 108-32-7 EINECS: 203-572-1 Index number: 607-194-00-1	propylene carbonate Eye Irrit. 2, H319	3-5%
CAS: 74-98-6 EINECS: 200-827-9 Index number: 601-003-00-5 Reg. No.: 1-2119486944-21	propane Flam. Gas 1A, H220; Press. Gas (Comp.), H280	1-5%

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Additional information: For the wording of the listed hazard phrases refer to section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

General information:
In case of accident or if you feel unwell seek medical advice (show label where possible). In case of unconsciousness place patient stably in side position for transportation.

After inhalation:
Supply fresh air and as a precaution call for a doctor.
If respiratory activity is irregular or cessation of breathing appears give artificial respiration.

After skin contact:
Remove contaminated clothes. Wash affected skin thoroughly with water and soap. In case of irritation seek medical treatment.

After eye contact:
Remove contact lenses and rinse opened eyes for at least 15 minutes with plenty of water. If irritation persists seek medical advice.

After swallowing:
Seek medical advice immediately and show the container or label.

4.2 Most important symptoms and effects, both acute and delayed

MDI:
Inhalation: irritation of the respiratory tract, cough, dyspnea, breathing difficulties, asthma
Skin contact: irritation, erythema
Eye contact: pain or irritation, lacrimation, redness
Ingestion: irritation of the gastrointestinal tract

4.3 Indication of any immediate medical attention and special treatment needed

Symptomatic treatment

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing agents:
CO_2, sand, extinguishing powder.

For safety reasons unsuitable extinguishing agents:
Water

5.2 Special hazards arising from the substance or mixture

Product contains highly flammable vapours and liquids. Formation of smoke in case of fire; carbon oxides, soot, hydrocarbons and aldehydes can be released due to incomplete combustion and thermolysis.
Risk of bursting due to heat. Formation of explosive air/vapour mixtures are possible. Vapors are heavier than air. By distribution at ground level flash back to distant ignition sources is possible.

5.3 Advice for firefighters

Protective equipment:
In the case of fire wear self-contained respiratory equipment and full protective suit. Do not inhale explosion gases or combustion gases.

Additional information
Cool endangered receptacles with water spray. Contain runoff to prevent entry into water or drainage systems. Dispose of fire debris and contaminated fire fighting water according to the regulations.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Avoid inhalation and contact with skin and eyes. Keep unprotected persons away.
Keep away from ignition sources.

6.2 Environmental precautions

Do not allow to enter sewers, surface or ground water.
Advise water authority in case of seepage into water course or sewage system.

6.3 Methods and material for containment and cleaning up

Allow to solidify and remove mechanically.
Dispose contaminated material as waste according to item 13.
Remove residues using PU foam cleaner.
Additional information: Material automatically cures when exposed to air.

6.4 Reference to other sections

See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See section 13 for disposal information.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

While handling pay attention to the usually precaution for chemicals. Comply with instructions for use. Avoid any contact with skin, eyes and clothes. Do not breathe gas/vapours/spray. Provide good ventilation/exhaustion at the workplace. Wash hands before break and at the end of work.

Information about fire - and explosion protection:

Keep ignition sources away - Do not smoke.

Protect against electrostatic charges. Pressurised container: protect from sunlight and do not expose to temperatures exceeding 50 °C, i.e. electric lights. Do not pierce or burn, even after use. Do not spray on a naked flame or any incandescent material.

7.2 Conditions for safe storage, including any incompatibilities

Requirements to be met by storerooms and receptacles:
Store in cool, dry place in tightly closed original containers.
Storage regulations for pressurized gas receptacles must be observed.

Information about storage in one common storage facility:
Do not store food, beverages and animal feeding stuffs in the storage area.

Further information about storage conditions:
Keep out of the reach of children and domestic animals. Protect from heat and direct sunlight.

7.3 Specific end use(s)

Sealant

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Ingredients with limit values that require monitoring at the workplace:	
CAS: 9016-87-9 diphenylmethanediisocyanate,isomeres and homologues	
MAK (Austria) AGW (Germany)	Short-term value: 0.1 mg/m³, 0.01 ppm; Long-term value: 0.05 mg/m³, 0.005 ppm Gruppeneintrag Diphenylmethan-diisocyanat AGW (Germany) Long-term value: 0.05 E mg/m³; 1;=2=(I);DFG, H, Sah, Y, 12

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CAS: 75-28-5 isobutane (< 0.1% butadiene)	
MAK (Austria) AGW (Germany)	Short-term value: 3800 mg/m³, 1600 ppm; Long-term value: 1900 mg/m³, 800 ppm Long-term value: 2400 mg/m³, 1000 ppm; 4(II);DFG
CAS: 115-10-6 dimethyl ether	
IOELV (EU) MAK (Austria) AGW (Germany)	Long-term value: 1920 mg/m³, 1000 ppm Short-term value: 3820 mg/m³, 2000 ppm; Long-term value: 1910 mg/m³, 1000 ppm Long-term value: 1900 mg/m³, 1000 ppm; 8(II);DFG, EU
CAS: 74-98-6 propane	
MAK (Austria) AGW (Germany)	Short-term value: 3600 mg/m³, 2000 ppm; Long-term value: 1800 mg/m³, 1000 ppm Long-term value: 1800 mg/m³, 1000 ppm; 4(II);DFG
CAS: 108-32-7 propylene carbonate	
AGW (Germany)	Long-term value: 8.5 mg/m³, 2 ppm; 1(I);DFG, Y, 11

Regulatory information
IOELV (EU): (EU) 2019/1831
MAK (Austria): GKV 2018, 254. Verordnung, 24.9.2018, Teil II
AGW (Germany): TRGS 900

DNELs:
methylenediphenyl diisocyanate (CAS 101-68-8)
worker, short-term exposure - local and systemic effects, inhalation 0.1 mg/m³
worker, long-term exposure - local and systemic effects, inhalation 0.05 mg/m³
worker, short-term exposure - local effects, dermal 28.7 mg/cm³
worker, short-term exposure - systemic effects, dermal 50 mg/kg bw/day
consumer, short-term exposure - systemic effects, oral 20 mg/kg bw/day
consumer, short-term exposure - local and systemic effects, inhalation 0.05 mg/m³
consumer, long-term exposure - local and systemic effects, inhalation 0.025 mg/m³
consumer, short-term exposure - local effects, dermal 17.2 mg/cm²
consumer, short-term exposure - systemic effects, dermal 25 mg/kg bw/day

PNECs:
methylenediphenyl diisocyanate (CAS: 101-68-8)
freshwater 1 mg/l, marine water 0.1 mg/l;
intermittent releases 10 mg/l; STP 1 mg/l; soil 1 mg/kg

Ingredients with biological limit values:
Additional information: Based on actual legally binding lists.

8.2 Exposure controls

Appropriate engineering controls Provide good ventilation or exhaust at work.

Individual protection measures, such as personal protective equipment
General protective and hygienic measures:
Avoid unnecessary contact with the product. Do not eat, drink or smoke at workplace and keep it tidy.
Avoid inhalation and contact with skin and eyes.
Remove contaminated clothing immediately and wash carefully before reuse.

Respiratory protection:
Use protective mask with an appropriate gas filter (i.e. type A1 according to standard EN 14387) in case of insufficient ventilation.

Hand protection

Chemical resistant gloves (EN 374)

Dispose of when contaminated inside, when perforated or when contamination outside cannot be removed.

Material of gloves
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation.

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Butyl rubber (thickness ≥ 0.5 mm), fluorinated elastomer (thickness ≥ 0.4 mm), chlorinated polyethylene, ethylene vinyl alcohol (EVOH), neoprene (thickness ≥ 0.5 mm), nitrile/butadiene rubber (NBR, thickness ≥ 0.35 mm), polyvinyl chloride (PVC). Rate of permeability: ≥ 480 minutes

Penetration time of glove material
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

Eye protection:

Safety glasses (EN 166)

Body protection:
Protective work clothing

Environmental exposure controls
Do not allow to enter sewers or surface water. Advise water authority if spillage has entered water course or drainage system.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance:
Form: Foam aerosols
Colour: According to product specification
Odour: Characteristic
Odour threshold: Not determined
Melting point/freezing point: < 0 °C (MDI, ISO 3016)
Boiling point or initial boiling point and boiling range: Not applicable, as aerosol
Flammability: Extremely flammable.
Lower and upper explosion limit:
Lower: 1.5 Vol % (propellant)
Upper: 16 Vol % (propellant)
Flash point: > 200 °C (MDI, DIN 53171)
Auto-ignition temperature: No data available
Decomposition temperature: To avoid thermal decomposition do not overheat.
pH: No data available
Viscosity dynamic: ≥ 200 mPas (MDI, DIN 53019, 20 °C)
Solubility water: Insoluble; reacts with water
organic solvents: Soluble before curing
Partition coefficient, n-octanol/water: No data available.
Vapour pressure: < 0.7 mPa (propellant, 20 °C)
Vapour pressure: < 0.00001 hPa (MDI)
Density at 20 °C: 1.0 g/cm³

9.2 Other information

Ignition temperature: > 350 °C (propellant)
Ignition temperature: > 500 °C (MDI, DIN 51794)
Explosive properties: Product is not explosive. However, formation of explosive air/vapour mixtures are possible.
VOC (EC): ≈ 0.2 kg/kg
Oxidising properties: No data available.

Information with regard to physical hazard classes
Explosives: Void
Flammable gases: Void
Aerosols
Extremely flammable aerosol. Pressurised container: May burst if heated.
Oxidising gases: Void
Gases under pressure: Void
Flammable liquids: Void
Flammable solids: Void

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Self-reactive substances and mixtures: Void
Pyrophoric liquids: Void
Pyrophoric solids: Void
Self-heating substances and mixtures: Void
Substances and mixtures, which emit flammable gases in contact with water: Void
Oxidising liquids: Void
Oxidising solids: Void
Organic peroxides: Void
Corrosive to metals: Void
Desensitised explosives: Void

SECTION 10: Stability and reactivity

10.1	**Reactivity**	Stable in standard stocking and use conditions
10.2	**Chemical stability**	Stable under recommended storage conditions.
10.3	**Possibility of hazardous reactions**	Danger of polymerisation.
10.4	**Conditions to avoid**	Heat, open flames, ignition sources, electrostatic charge. Heating causes rise in pressure with risk of bursting.
10.5	**Incompatible materials**	Strong oxidizing agents, strong acids, water
10.6	**Hazardous decomposition products**	None under normal conditions of storage and use. In the case of fire can be formed: carbon oxides, nitrogen oxides hydrogen cyanide, toxic pyrolysis products

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity
Harmful if inhaled.

LD/LC50 values relevant for classification: There are no product specific data on toxicology available.

Skin corrosion/irritation
Causes skin irritation.
Serious eye damage/irritation
Causes serious eye irritation.
Respiratory or skin sensitisation
May cause allergy or asthma symptoms or breathing difficulties if inhaled.
May cause an allergic skin reaction.

Germ cell mutagenicity
Based on available data, the classification criteria are not met.
Carcinogenicity
Suspected of causing cancer.
Reproductive toxicity Based on available data, the classification criteria are not met.

STOT-single exposure
May cause respiratory irritation.
STOT-repeated exposure
May cause damage to organs through prolonged or repeated exposure.

Aspiration hazard
Based on available data, the classification criteria are not met.

Additional toxicological information
pMDI:
In case of exposure to high levels, danger of irritating effects on eyes, nose, throat and respiratory tract irrespective of the concentration arises.

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Symptoms (breathing difficulties, cough, asthma) may even occur after several hours; Persons already sensitised to diisocyanates may develop allergic reactions even at very low concentrations of the substance. Long-term exposure may cause skin dryness or skin degreasing.

11.2 Information on other hazards

Endocrine disrupting properties The product does not contain substances with endocrine disrupting properties.

SECTION 12: Ecological information

12.1 Toxicity

Aquatic toxicity: For the product there are no ecotoxicological data available.

CAS: 9016-87-9 diphenylmethanediisocyanate,isomeres and homologues	
LC50/96h (static)	> 1,000 mg/l (zebrafish, Danio rerio) (OECD 203)
EC50/24h (static)	> 1,000 mg/l (water flea, Daphnia magna) (OECD 202)
EC50/72h (static)	> 1,640 mg/l (algae) (OECD 201)
NOEC/21d	≥ 10 mg/l (water flea, Daphnia magna) (OECD 211)

Additional information: Insoluble in water, the PU foam spreads on the water surface.

12.2 Persistence and degradability

pMDI: not readily biodegradable.
test: aerobic, inoculum: activated sludge
degradability: 0 %, 28 days (OECD Guideline 302 C)

12.3 Bioaccumulative potential

pMDI:
bioconcentration factor (BCF): <14 (OECD Guideline 305)
(Cyprinus carpio, exposure time 42 d, concentration 0.2 mg/l)
No significant accumulation in organisms, the substance hydrolyses violently in water.

12.4 Mobility in soil

Very limited due to chemical reaction with water to form an insoluble product (PU foam).

12.5 Results of PBT and vPvB assessment

Not applicable.

12.6 Endocrine disrupting properties

For information on endocrine disrupting properties see section 11.

12.7 Other adverse effects

Isocyanate reacts with water at the interface forming CO2 and a solid insoluble product with high melting point (polyurea). This reaction is accelerated by surfactants (e.g. detergents) or by water-soluble solvents. Previous experience shows that polyurea is inert and non- degradable.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Recommendation
Do not dispose waste or remains together with domestic waste, do not empty into sink or toilet, hand over to hazardous waste disposers.

European waste catalogue
15 01 10: Packaging containing residues of or contaminated by dangerous substances
15 01 04: metallic packaging
17 02 03: plastic

Uncleaned packaging:
Recommendation:
Cans should be emptied completely and should preferably be recycled or reused in compliance with the local / national regulations. Cans not emptied completely or remains have to be disposed as hazardous waste.

SECTION 14: Transport information

14.1	**UN number or ID number**	**ADR, IMDG, IATA** UN1950
14.2	**UN proper shipping name**	**ADR** 1950 AEROSOLS **IMDG** AEROSOLS **IATA** AEROSOLS, flammable
14.3	**Transport hazard class(es)**	**ADR**  **Class** 2 5F Gases. **Label** 2.1 **IMDG, IATA**  **Class** 2.1 **Label** 2.1
14.4	**Packing group**	**ADR, IMDG, IATA** Void
14.5	**Environmental hazards**	Not applicable
14.6	**Special precautions for user**	Warning: Gases **Hazard identification number (Kemler code):** -
14.7	**Maritime transport in bulk according to IMO instruments**	Not applicable
	UN "Model Regulation":	UN 1950 AEROSOLS, 2.1

SECTION 15: Regulatory information

15.1	**Safety, health and environmental regulations, legislation specific for the substance or mixture**	**Regulation (EC) No 1907/2006 Annex XVII** Conditions of restriction: 3 **National regulations:** - **VOC (EC):** ≈ 0.2 kg/kg
15.2	**Chemical safety assessment**	A Chemical Safety Assessment has not been carried out

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

Relevant phrases
H220 Extremely flammable gas.
H280 Contains gas under pressure; may explode if heated.
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.
EUH204 Contains isocyanates. May produce an allergic reaction

Further information:
Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008: Calculation method

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Abbreviations and acronyms:
CLP: REGULATION (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures
CAS: Chemical Abstracts Service (division of the American Chemical Society)
EINECS: European Inventory of Existing Commercial Chemical Substances
GHS: Globally Harmonized System of Classification and Labelling of Chemicals
WEL: Workplace Exposure Limit
MAK: maximum concentration of a chemical substance in the workplace
IOELV: indicative occupational exposure limit values (EU)
AGW: occupational exposure limit
DNEL: Derived No-Effect Level
PNEC: Predicted No-Effect Concentration
LC50: lethal concentration, 50 percent
EC50: maximal effective concentration, 50 percent
NOEL/NOEC: No Observed Effect Concentration
log Pow, Kow: partition coefficient (n-octanol/water)
OECD: Organisation for Economic Co-operation and Development
PBT: persistent, bioaccumulative and toxic properties
vPvB: very persistent and very bioaccumulative properties
ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
Flam. Gas 1: Flammable gases – Category 1
Aerosol 1: Aerosols – Category 1
Press. Gas (Comp.): Gases under pressure – Compressed gas
Acute Tox. 4: Acute toxicity – Category 4
Skin Irrit. 2: Skin corrosion/irritation – Category 2
Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
Resp. Sens. 1: Respiratory sensitisation – Category 1
Skin Sens. 1: Skin sensitisation – Category 1
Carc. 2: Carcinogenicity – Category 2
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3
STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2

Data compared to the previous version altered: -