



SELLADOR DE ESPUMA DE POLIURETANO

SAFETY DATA SHEET

Revision date: March, 2018

SECTION 1 - IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY

1.1 Product identifier

Product name: SELLADOR DE ESPUMA DE POLIURETANO

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

Relevant identified uses: Thermal and acoustic insulation, sealing, fixing and finishing.

1.3 Details of the supplier of the Safety Data Sheet

TECNOLOGÍA ARGENTINA EN CINTAS S.A. (TACSA)
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1.4 Emergency telephone number

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SECTION 2 – HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Classification according to the Globally Harmonized System

Aerosols (Category 1)
Acute toxicity, inhalation (Category 4)
Skin irritation (Category 2) - Eye irritation (Category 2A)
Respiratory sensitization (Category 1) - Skin sensitization (Category 1)
Specific target organ toxicity – single exposure (Category 3)
Specific target organ toxicity – repeated exposure (Category 2)
Short-term (acute) aquatic hazard (Category 3)

2.2 Label elements

Pictogram:



DANGER

Signal word:

Hazard statements:

H222 - Extremely flammable aerosol.
H229 - Pressurised container: May burst if heated.
H315 - Causes skin irritation.
H317 - May cause an allergic skin reaction.
H319 - Causes serious eye irritation.
H332 - Harmful if inhaled.

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H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled.

H335 - May cause respiratory irritation.

H373 - May cause damage to organs through prolonged or repeated exposure.

H402 - Harmful to aquatic life.

Precautionary statements:

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 mist, vapours and spray.

P273 - Avoid release to the environment.

P280 - Wear protective gloves, protective clothing, eye protection and face protection.

P302 + P352 - IF ON SKIN: Wash with plenty of water.

P304 + P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P333 + P313 - IF SKIN IRRITATION OR RASH OCCURS: Get medical advice/attention.

P410 + P412 - Protect from sunlight. Do not expose to temperatures exceeding 50°C/ 122°F.

2.3 Other hazards

None.

SECTION 3 - COMPOSITION / INFORMATION ON INGREDIENTS

3.1 Substance

Does not apply.

3.2 Mixtures

IDENTIFICATION NAME	CAS No.	Weight %	CLASSIFICATION
4,4'-methylenediphenyl diisocyanate (MDI)	101-68-8	40 - 60	Acute Tox. 4; Skin Irrit. 2; Eye Irrit. 2A; Resp. Sens. 1; Skin Sens. 1B; STOT SE 3; STOT RE 2
Polymethylene polyphenyl polyisocyanate (PMDI)	9016-87-9		Acute Tox. 4; Skin Irrit. 2; Eye Irrit. 2; Resp. Sens. 1; Skin Sens. 1; STOT SE 3R; STOT RE 2
Dimethyl ether	115-10-6	25 - 35	Flam. Gas 1; Press. Gas
n-Butane	106-97-8	15 - 25	Flam. Gas 1; Press. Gas; Aquatic Acute 2
Propane	74-98-6	5 - 15	Flam. Gas 1; Press. Gas

The product may contain hazardous components in proportions below the concentration limits established in the GHS and/or non-hazardous components not stated in this section. All known hazards of the product are reported in the SDS.

SECTION 4 - FIRST AID MEASURES

4.1 Description of first aid measures

General advice:	Avoid exposure to the product, taking appropriate protective measures. Get medical advice.
Inhalation:	For those providing assistance, avoid exposure. Keep calm. If not breathing, give artificial respiration. Get medical advice.
Skin contact:	Wash immediately after contact with water and soap for at least 15 minutes.
Eye contact:	In case of eye contact of aerosol, immediately flush with water for at least 5 minutes, holding eyelids apart to ensure that all eye and lid tissues rinsed. Washing eyes within several seconds is essential to achieve maximum effectiveness. If you have contact lenses, remove them after the first 5 minutes, then continue rinsing eye. Get medical advice.
Ingestion:	While the product is an aerosol and no significant exposure is expected by ingestion, it may be aspirated. DO NOT INDUCE VOMITING. Rinse mouth with water. Never give anything by mouth to an unconscious person. Get medical advice. If vomiting occurs spontaneously, place victim on side to reduce the risk of aspiration.

4.2 Most important symptoms and effects, both acute and delayed

Inhalation may produce mild irritation in the respiratory system. May cause allergy or asthma symptoms or breathing difficulties if inhaled. Exposure to low concentrations of isocyanates may cause asthma-like symptoms such as chest tightness, coughing, wheezing and shortness of breath.

Skin contact: may cause irritation, redness, rash and dermatitis. It may cause an allergic skin reaction.

Eye contact: May cause mild irritation and tearing in prolonged contact with the eyes. Possible redness and pain.

Ingestion: May be irritating to mucous membranes of the gastrointestinal system.

4.3 Indication of any immediate medical attention and special treatment needed

Medical advice: Provide symptomatic treatment. May cause allergic reactions. For more information, contact a Poison Control Center.

SECTION 5 – FIREFIGHTING MEASURES

5.1 Extinguishing media

Use dry chemical, foam, sand or CO₂. DO NOT USE straight streams.

For small fire extinguish with dry powder and then apply water to prevent reignition.

5.2 Special hazards arising from the substance or mixture

The container subjected to heat may explode unexpectedly and project dangerous fragments. It can react violently and without notice in case of overheating or contamination.

5.3 Advice for firefighters

5.3.1 Firefighting instructions

Spray with water to cool containers. Cool containers with flooding quantities of water until well after the fire is out. Fight fire from maximum distance or use unmanned hose holders or monitor.

Prevent run-off from fire control or dilution from entering streams, sewers or drinking water supply. Hot product may cause violent when in contact with water, hot material can be projected and cause serious burns eruptions.

5.3.2 Protective clothing

Use SCBA and structural protection clothing for firefighters.

5.3.3 Hazardous combustion products

In case of fire may release irritating fumes and gases and/or toxic gases, such as carbon monoxide, phosgens, nitrogen oxides, cyanates and cyanides, and other substances derived from incomplete combustion.

SECTION 6 – ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

6.1.1 For non-emergency personnel

Eliminate all ignition sources (no smoking, flares, sparks or flames in immediate area). Evacuate personnel to a ventilated area.

6.1.2 For emergency responders

In large spills wear protective clothing against chemicals. It may provide no thermal protection. Eliminate all ignition sources (no smoking, flares, sparks or flames in immediate area). Stop leak if you can do so without risk. All equipment used when handling the product must be grounded. Do not touch or walk through spilled material. A vapour-suppressing foam may be used to reduce vapour. Do not allow reuse of spilled product.

6.2 Environmental precautions

Contain spilled liquid with a dam. Prevent entry into waterways, sewers, basements or confined areas.

6.3 Methods and material for containment and cleaning up

Ventilate properly, especially in low areas. Ensure an adequate level of oxygen before re-enter. Collect the liquid product through sand, vermiculite, or inert absorbent and completely clean or wash the contaminated area. Discard containers properly. Dispose of the water and collected waste in marked containers for disposal as chemical waste.

6.4 Reference to other sections

See Section 8 - Exposure Controls and Personal Protection, and Section 13 – Disposal considerations.

SECTION 7 – HANDLING AND STORAGE

7.1 Precautions for safe handling

Observe label precautions. Keep away from heat, sparks, flame, static discharge and other sources of ignition. VAPORS MAY IGNITE EXPLOSIVELY. Vapors may spread long distances. Prevent buildup of vapors. Do not spray near flames, and keep away from sources of ignition until all vapors are gone. Close container after each use. Ground containers when pouring. Wash thoroughly after handling and before eating or smoking. Forbidden to eat, drink or smoke during handling. People with a history of skin sensitization problems or asthma, allergies or chronic or recurrent respiratory diseases, should not work in any process in which this product is used. Avoid contact with eyes, skin and clothing. Wash arms, hands, and nails after handling this product. The use of gloves is recommended. Facilitate access to safety showers and emergency eyewash. Keep decontaminant readily available.

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions:	Store in a clean, dry, well-ventilated area, preferably outdoors. Protect from the sun. Avoid temperatures above 50°C (120°F). Contact with water or ambient humidity can cause the release of carbon dioxide which may be pressurized containers. Open them carefully as the content may be under pressure. Recommended storage temperature: 18°C to 25°C. Storage above 40°C will shorten the service life. Storage below 10°C may affect the quality of the foam if the chemicals are not heated before use.
Packaging materials:	Supplied by the manufacturer. Not suitable: copper, copper alloys and galvanized surfaces.
Incompatibilities:	Keep away from Avoid contact with strong oxidizing agents, acids and bases. The product reacts with any product that contains chemically reactive hydrogens, such as water, alcohols, acids, amines.

7.3 Specific end use(s)

Thermal and acoustic insulation, sealing, fixing and finishing.

SECTION 8 – EXPOSURE CONTROLS / PERSONAL PROTECTION**8.1 Control parameters**

CMP (Res. MTESS 295/03):	0,005 ppm; 4,4'-Metilendifenil diisocianato 800 ppm; n-Butano 2500 ppm; Propano
CMP-CPT (Res. MTESS 295/03):	N/D
CMP-C (Res. MTESS 295/03):	N/D
TLV-TWA (ACGIH):	0,005 ppm; 4,4'-Methylenediphenyl diisocyanate 1000 ppm; Aliphatic hydrocarbon gases C1-C4.
TLV-STEL (ACGIH):	0,001 ppm; 4,4'-Methylenediphenyl diisocyanate
PEL (OSHA 29 CFR 1910.1000):	1000 ppm; Propane
PEL-C (OSHA 29 CFR 1910.1000):	0,2 mg/m ³ (0,02 ppm); 4,4'-Methylenediphenyl diisocyanate
IDLH (NIOSH):	75 mg/m ³ ; 4,4'-Methylenediphenyl diisocyanate 2100 ppm; Propane
REL-TWA:	0,005 ppm; 4,4'-Methylenediphenyl diisocyanate 800 ppm; n-Butane 1000 ppm; Propane
REL-C:	0,02 ppm; 4,4'-Methylenediphenyl diisocyanate

8.2 Exposure controls

8.2.1 Appropriate engineering controls

Keep workplace ventilated. The normal routine ventilation is usually adequate. Local hoods should be used for operations that produce or release large amounts of product. In low or confined areas should be provided mechanical ventilation. Provide showers and eyewash stations.

8.2.2. Individual protection measures, such as personal protective equipment

Eye and face protection: Should wear safety glasses, chemical splash-proof (complying with EN 166).

Skin protection: When handling this product should wear impermeable protective butyl, Viton® or nitrile gloves (complying with standards EN 374), clothes and safety footwear resistant to chemicals.

Respiratory protection: Where necessary, use an organic vapours (A) and dust respirator. Special attention to oxygen levels in the air should be paid.
If large releases occur, wear self-contained breathing apparatus (SCBA).

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Appearance:	Aerosolized viscous liquid that comes out of the container in the form of foam
Colour:	Whitish to yellowish [foam] Appearance may differ with the introduction of a dye or colorant
Odour:	Mild during the curing stage
Odour threshold:	N/D
pH:	N/A
Melting point:	N/A
Boiling point:	N/D
Evaporation rate:	N/D
Flammability:	The product is flammable.
Flash point:	Aprox. 426°C (798,8°F) [condensed phase]
Explosive limits:	N/D
Auto-ignition temperature:	N/D
Decomposition temperature:	N/D
Vapour pressure (40°C):	> 50 psig/345 kPa [into the container under pressure] After the release of the container, the vapor pressure is very low (not determined)
Vapour density (air=1):	N/D
Relative density (25°C):	Approx. 1,2 g/cm ³ [condensed phase]
Solubility (20°C):	Insoluble in water. Reacts with water during curing releasing traces of CO ₂ .
Partition coefficient (logKo/w):	N/D

Viscosity (cSt, 25°C):	N/D
Henry constant (20°C):	N/D
Explosive properties:	Not explosive. According to column 2 of Annex VII of REACH, this study is not required because: in the molecule no chemical groups are associated with explosive properties.
Oxidizing properties:	According to column 2 of Annex XVII of REACH, this study is not necessary because: the substance, its chemical structure is incapable of reacting exothermically with combustible materials.

9.2 Other information

Other properties: None.

SECTION 10 – STABILITY AND REACTIVITY

10.1. Reactivity

It is not expected that product reactions or decomposition may occur under normal storage conditions. It does not contain organic peroxides. It is not corrosive to metals. Reacts with water.

10.2. Chemical stability

The product is chemically stable in the presence of stabilizers.

10.3. Possibility of hazardous reactions

No hazardous polymerization is expected under normal conditions of storage and use. However, in case of contact with water, contamination or heating, may polymerize.

10.4. Conditions to avoid

Avoid high temperatures and contamination with water or substances that contain -H reactive, such as alcohols, amines, etc. At less than 50°C the reaction with water is slow.

10.5. Incompatible materials

Keep away from Avoid contact with strong oxidizing agents, acids and bases. The product reacts with any product that contains chemically reactive hydrogens, such as water, alcohols, acids, amines.

10.6. Hazardous decomposition products

When heated, it may release toxic and irritating vapors. In case of fire, see section 5.

SECTION 11 – TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity: There is no information on the toxicity of the product, but estimates of acute toxicity are presented.
ATE-LD50 oral (rat, calc.): > 2000 mg / kg
ATE-LD50 der (rabbit, calc.): > 5000 mg/kg
ATE-LC50 inh. (rat, 4hs., calc.): > 0,98 mg/l

Skin corrosion / irritation:	Skin irr. (rabbit, estim.): irritant
Serious eye damage / irritation:	Eye irr. (rabbit, estim.): irritant
Respiratory or skin sensitization:	Skin sens (Guinea pig, estim.): sensitising Resp. sens (Guinea pig, estim.): sensitizing

Carcinogenicity, mutagenicity and reproductive toxicity:

No information is available on any component of this product, which has levels greater than or equal to 0.1%, classified as a probable, possible or confirmed human carcinogen by the International Agency for Research on Carcinogens.

Human data are not conclusive to judge the carcinogenic potential of PMDI / MDI. The limited test data, carried out in laboratory animals, suggest a higher incidence of pulmonary adenomas in male and female rats exposed by inhalation to PMDI. However, although there are tests that raise concerns about its effects, its potential as a carcinogen could not be determined.

Mutagenicity: No specific or relevant data available for evaluation.

Tox. Repr. : No specific or relevant data are available for evaluation.

Teratogenicity: No specific or relevant data available for evaluation.

Acute effects:

Routes of exposure: Inhalation, skin and eye contact, and ingestion.

Inhalation may produce mild irritation in the respiratory system. May cause allergy or asthma symptoms or breathing difficulties if inhaled. Exposure to low concentrations of isocyanates may cause asthma-like symptoms such as chest tightness, coughing, wheezing and shortness of breath.

Skin contact: may cause irritation, redness, rash and dermatitis. It may cause an allergic skin reaction.

Eye contact: May cause mild irritation and tearing in prolonged contact with the eyes. Possible redness and pain.

Ingestion: May be irritating to mucous membranes of the gastrointestinal system.

STOT-SE: May cause irritation of the respiratory tract.

STOT-RE: May cause effects on organs through prolonged or repeated exposure. It can damage the respiratory system, cause irritation of the respiratory tract and damage of lung tissue.

SECTION 12 – ECOLOGICAL INFORMATION**12.1. Toxicity**

No information on the ecotoxicity of the product but ecotoxicity estimate calculations are presented.

ATE-EC50 (O. mykiss, calc., 96 h): > 100 mg/l

ATE-EC50 (D. magna, calc., 48 h): 10 - 100 mg/l

ATE-EC50 (P. subcapitata, calc., 48 h): 10 - 100 mg/l

ATE-EC50 (T. pyriformis, calc., 48 h): > 100 mg/l

ATE-NOEC (D. rerio, calc., 14 d): > 1 mg/l

ATE-NOEC (D. magna, calc., 14 d): > 1 mg/l

PNEC (water): N/D

PNEC (sea): N/D

PNEC-STP: N/D

12.2. Persistence and degradability

BIODEGRADABILITY (estimated): No test data, but it is not expected that the product is biodegradable.

12.3. Bioaccumulative potential

Log K_{ow}: N/D

BIOCONCENTRATION FACTOR - BCF (OCDE 305): N/D

12.4. Mobility in soil

HENRY CONSTANT (20°C): N/D
LogKoc: N/D.

12.5. Results of PBT and vPvB assessment

This substance / mixture does not meet the PBT criteria of Annex XIII of REACH.
This substance / mixture does not meet the vPvB criteria in Annex XIII of REACH.

12.6. Other adverse effects

AOX and metal containing: Does not contain organic halogens nor metals.

SECTION 13 – DISPOSAL CONSIDERATIONS

Both the excess product and empty containers should be disposed of in accordance with current legislation regarding the Protection of Environment and particularly of hazardous waste. It should classify the waste and dispose of it by an authorized company.

Empty containers may contain residue and thus be dangerous. Do not attempt to refill or clean containers without possessing the appropriate instructions.

SECTION 14 – TRANSPORT INFORMATION

14.1 Transport by land

Proper Shipping Name:	AEROSOLS
UN/ID Number:	1950
Hazard class:	2.1
Packing group:	-
Hazard identification number:	23
Excepted and limited quantity:	1L / E0




14.2 Air transport (ICAO/IATA)

Proper Shipping Name:	AEROSOLS
UN/ID Number:	1950
Hazard class:	2.1
Packing group:	-
PAX and Cargo Packing instructions:	Y203, 30KgG / 203, 75Kg
Cargo Packing instructions:	203, 150Kg
ERC:	10L
Special provisions:	A167 - A802



14.3 Sea transport (IMO)**IMDG Code**

Proper Shipping Name:	AEROSOLS	
UN/ID N°:	1950	
Hazard class:	2.1	
Packing group:	-	
EMS:	F-D; S-U	
Stowage and manipulation:	Category A SW1 Protected from heat sources.	
Segregation:	SG69 Segregation as class 9. Store "separate from" class 1 except for division 1.4.	
Marine pollutant:	NO	
Proper Shipping Name:	UN1950; AEROSOLS; Class 2.1	

SECTION 15 – REGULATORY INFORMATION

Not dangerous for the ozone layer (1005/2009/EC).
Volatile organic compounds (VOC's) (1999/13/EC): N/D

Regulation

Globally Harmonized System of Classification and Labeling of Chemicals, Fifth Revised Edition, 2015 (SGA 2015 - "ST / SG / AC 10/30 / Rev.5"). The fifth edition is taken into consideration because it is the one valid for Argentina according to Resolution 801/2015 of the SRT. In any case, the information is contrasted with Revision 6 ("ST / SG / AC 10/30 / Rev.6) and clarification is made as necessary.

European Agreement on the International Carriage of Dangerous Goods by Road (ADR 2017) and amendments.

Regulations concerning the International Carriage of Dangerous Goods by Rail (RID 2017) and amendments.

International Maritime Dangerous Goods Code (IMDG 2016 - Amendment 38-16), International Maritime Organization (IMO).

IBC Code 2016, IMO, Resolution MSC.369 (93).

Regulations of the International Air Transport Association (IATA 58 ed., 2017) concerning the transport of dangerous goods by air.

SECTION 16 – OTHER INFORMATION**16.1 Abbreviations and acronyms**

ACGIH: American Conference of Governmental Industrial Hygienists.	N/D: no information available at the time of making the SDS.
AOX: Halogenated organic components	NIOSH: National Institute for Occupational Safety and Health
BCF: Bioconcentration factor	OECD: Organization for Economic Cooperation and Development
CAS: Chemical Abstract Service	PEL: Permissible Exposure Limit.
EC50: Mean effective concentration	PNEC: Predicted no-effect concentration
IC50: Mean inhibitory concentration.	REACH: Registration, Evaluation, Authorization and Restriction of chemical substances and
LC50: Mean lethal concentration.	
LD50: Mean lethal dose	
ATE: Acute toxicity estimation	

IARC: International Agency for Research on Cancer.
IDLH: Concentration immediately dangerous to life or health.
INSHT: National Institute for Safety and Hygiene at Work.
N/A: the property is not applicable due to the physical, chemical and toxicological characteristics of the product.

mixtures of the European Union
REL: Recommended Exposure Limit.
GHS: Globally Harmonized System of Classification and Labeling of Chemical Products.
STEL: Short-term Exposure Limit
TLV: Threshold Limit Value
TWA: Time-weighted average
|: Changes with respect to the previous revision.

DENOMINATION OF GHS CLASSES

Aer.: aerosols
Oxid. Gas: oxidizing gas
Compressed gas: compressed gas
Dissolved gas: dissolved gas
Flam. Gas: flammable gas.
Liquefied Refr. Gas: refrigerated liquefied gas
Liquefied gas: liquefied gas
Oxid. Liquid: oxidizing liquid
Flam. Liquid: flammable liquid
Pyr. Liq.: pyrophoric liquid
Met. Corr.: corrosive for metals
Org. Perox.: organic peroxide
Water React. Flam. Gas: substance reactive with water, which emits flammable gases
Oxid. Solid: oxidizing solid
Flam. Solid: flammable solid
Asp Tox.: aspiration toxicity
Carc.: carcinogenicity

Skin Corr./Irrit.: Corrosion / skin irritation
Eye Damage/Irrit.: Serious eye damage / eye irritation
Lac.: toxic for reproduction - lactation
Muta.: mutagenicity
Repr.: toxic for reproduction
Sens skin: skin sensitizer
Resp. Sens.: respiratory sensitizer
STOT Rep. Exp.: Specific target organ toxicity - repeated exposure
STOT Single Exp.: Specific target organ toxicity - single exposure
Acute Tox.: Acute toxicity
Aquatic Acute: Hazardous to the aquatic environment - acute hazard
Aquatic Chronic: Hazardous to the aquatic environment - chronic danger
Ozo.: Dangerous for the ozone layer.

16.2 Key literature references and sources for data

International Agency for Research on Cancer (IARC), carcinogen classification.
European Regulation 1272/2008, Classification, labeling and packing (CLP)
European Agreement on the International Carriage of Dangerous Goods by Road (ADR 2017) and amendments.
Regulations concerning the International Carriage of Dangerous Goods by Rail (RID 2017) and amendments.
International Maritime Dangerous Goods Code (IMDG 2016 - Amendment 38-16), International Maritime Organization (IMO).
IBC Code 2016, IMO, Resolution MSC.369 (93).
Regulations of the International Air Transport Association (IATA 58 ed., 2017) concerning the transport of dangerous goods by air.

16.3 Classification and procedure used to derive the classification for mixtures

The classification was performed based on chemical analogues and product information.
SECTION 2: classification by analogy with other products, and based on product data.
SECTION 9: product data.
SECTION 11 and 12: analogy with other products.
Acute toxicity: calculation method for estimating acute toxicity.

16.4 Disclaimer

This information only concerns the above mentioned product and is not to be valid for other (s) product (s) or in any process. This safety data sheet provides health and safety information. The information is to our best knowledge, correct and complete. It is given in good faith but without

warranty. The product should be used in applications consistent with our product literature. Individuals handling this product should be in-formed of the recommended safety precautions and should have access to this information. For any other use, exposure should be evaluated so that they can implement appropriate handling practices and training programs to ensure safe operations in the workplace.

It remains the user's own responsibility that this information is appropriate and complete for the special use of this product.

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