



PRODUCT: TYTAN® PROFESSIONAL WINDOW AND DOOR PRO
EXPANDING POLYURETHANE FOAM SEALANT

Material Safety Data Sheet

1. Company and Product Identification

Product type: TYTAN® PROFESSIONAL WINDOW AND DOOR PRO
EXPANDING POLYURETHANE FOAM SEALANT

Product description: Liquid urethane prepolymer mixture (Polyurethane
Sealing Foam)

Manufacturer: SELENA USA, Inc.
21715 Beck Drive,
Elkhart, IN 46516
USA

Phone number: (574)-523-0400; (877)-735-3627(toll free)

Emergency phone number: CHEMTREC +1 (800) 424-9300

Website: www.SelenaUSA.com

2. Hazards Identification

Physical Hazards:

ATTENTION! Aerosol. Container is pressurized and storing temperature cannot exceed 122°F (+50°C). The foam easily adheres to skin and other surfaces. Information about hazards should be placed on the polyurethane foam container label.

Exposure Routes:

Inhalation: Vapors may irritate mucus membranes with tightness in chest, coughing, wheeziness or allergic asthma-like sensitivity. Extensive overexposure can lead to respiratory symptoms like bronchitis and pulmonary edema. These effects are usually reversible. Overexposure to gases may cause light headedness, headaches, or lethargy. Persons with cardiac arrhythmia may be at increased risk in severe exposure.

Skin contact: May cause localized skin irritation, reddening. Prolonged or repeated exposure may lead to sensitization blistering, and/or dermatitis.

Eye contact: May irritate eyes. For its adhesive feature, the foam contact with eyes may cause physical damage due to adhesive properties.

Ingestion: May cause harmful if swallowed. Ingestion may cause gastrointestinal irritation, nausea, and diarrhea.



PRODUCT: TYTAN® PROFESSIONAL WINDOW AND DOOR PRO
EXPANDING POLYURETHANE FOAM SEALANT

3. OSHA Hazard Components

<u>CAS Number</u>	<u>Wt [%]</u>	<u>Component name</u>
9016-87-9	< 26.0	Methylenediphenyl diisocyanate Isomers (Polymeric MDI)
101-68-8	< 20.0	4,4'-methylenediphenyl diisocyanate (MDI)
115-10-6	< 10.0	Dimethyl ether
74-98-6	< 5.0	Propane
106-97-8	< 5.0	Butane
75-28-5	< 5.0	Isobutane

The above components are hazardous as defined in 29 CFR 1910.1200.

4. First Aid Measures

Eye Contact: Flush eye immediately with a large amount of water for at least 15 minutes. See medical attention immediately.

Skin Contact: Remove the foam from skin using a cloth. Remove contaminated clothes immediately. Remove uncured foam from skin using delicate solvent like acetone or mineral spirit (avoid contact with eyes). Hardened foam may be removed by persistent washing with soap and large water quantity. If irritation develops, use a delicate cream. Get medical attention if irritation or other ill effects develop or persist.

Inhalation: If breathing difficulty is experienced, move to a fresh air place. If necessary, provide oxygen or artificial respiration by trained personnel and obtain medical attentions.

Oral: DO NOT INDUCE VOMITING! Do not give anything orally to an unconscious person. See medical attention immediately.

Comments: Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident. Do not give anything orally to an unconscious person.

5. Fire-Fighting Measures

Flammability Limits: Lower Explosive Limit: 1.5 Vol. %
Upper Explosive Limit: 11.0 Vol. %

Extinguishing Media: On large fires use dry chemical foam or water spray. On small fires use carbon dioxide (CO₂), dry chemical or water spray.



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Special Fire Fighting Procedure: Wear self-contained breathing apparatus (SCBA) to protect against inhalation of smoke and toxic decomposition by-products such as carbon monoxide, carbon dioxide, oxides of nitrogen, hydrogen cyanide. Hardened foam is an organic matter and will burn in the presence of sufficient heat, oxygen and ignition source.

6. Accidental Release Measures

Personal Precautions: Ensure adequate ventilation and wear recommended protective clothing (face protection, protective clothes and gloves). Vapors can accumulate in low areas. Do not smoke and avoid ignition from sparking.

Environmental Precautions: Before disposing of containers, relieve container of any remaining foam and pressure. Dispose of plastic waste material (foam plastic) in accordance with all applicable guidelines and regulations.

Clean-up Methods: Uncured foam adheres easily to skin and surfaces. Remove from skin following first air treatment, See Section 4. Remove from surfaces by scraping up excess material and removing residual residue with cloth and solvent such as acetone or mineral spirit, paint thinner, etc. Hardened foam can only be removed physically or mechanically by scraping, buffing.

7. Handling and Storage

Handling: Warning Flammable Contents! Keep away from heat, open flame and all sources of ignition. Protect against electrostatic charges. Do not pierce or burn, even after use.

Storage: Store in cool, dry place. Recommended storage temperature is between 40°F to 78°F (4.4°C to 25.5°C). Do not store above 104°F (40°C) will shorten shelf life. Protect containers from heat. Contents are under pressure do not pierce the containers. Protect from freezing.

8. Exposure Control / Personal Protection

Read all product instruction before using. Adequate ventilation should also be employed so that vapor levels do not exceed recommended guidelines. If vapor levels are expected to exceed these guidelines, use NIOSH/MSHA approved, positive pressure supplied air respiratory apparatus (SCBA).

<u>Exposure Guidelines:</u>	<u>OSHA PEL</u>	<u>ACGIH TLV</u>
4,4'-methylenediphenyl diisocyanate	Ceiling: 0.02 ppm Ceiling: 0.20 mg/m ³	TWA: 0.005 ppm
Propane	1800 mg/m ³	TWA: 1000 ppm
Butane	N/A	TWA: 1000 ppm
Isobutane	N/A	TWA: 1000 ppm



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Engineering measures:

Local ventilation: recommended.
 General ventilation: recommended.

Personal protective equipment for usual handling:

Eyes: Use proper protection – safety glasses as a minimum.
Skin: Wash at mealtime and end of shift. Contaminated clothing and shoes should be removed as soon as practical and thoroughly cleaned before reuse. Chemical protective gloves are recommended.

Suitable

Gloves: PVC gloves, Rubber gloves

Inhalation: Use respiratory protection unless adequate local exhaust ventilation is provided or exposure assessment demonstrates that exposures are within recommended exposure guidelines. IH personnel can assist in judging the adequacy of existing engineering controls.

Personal protective equipment for spills

Eyes: Use proper protection – safety glasses as a minimum.
Skin: Wash at mealtime and end of shift. Contaminated clothing and shoes should be removed as soon as practical and thoroughly cleaned before reuse. Chemical protective gloves are recommended.

Inhalation/Suitable Respirator: Respiratory protection recommended. Follow OSHA Respirator Regulations (29 CFR 1910.134) and use NIOSH/MHSA approved respirators. Protection provided by air purifying respirators against exposure to any hazardous chemical is limited. Use a positive pressure air supplied respirator if there is any potential for uncontrolled release, exposure levels are unknown, or any other circumstance where air purifying respirators may not provide adequate protection.

Precautionary measures: Avoid eye contact. Avoid skin contact. Avoid breathing vapor. Keep container closed. Do not take internally. Use reasonable care.

9. Physical and Chemical Properties

Physical State: Aerosol
 Rapidly curing foam dispensed by gaseous propellant from an aerosol container

Color: Light yellow

Odor: Characteristic

Specific gravity@20°C (68°F): ≤ 1,3 g/cm³

Melting Point: Not determined

Boiling Point: Not determined

Flash point: 0°C (32°F) based for propellant

Auto igniting: Product is not self igniting

Solubility in Water: Insoluble; reacts with water

pH: Not determined

VOC content: 140 g/L

Note: The above information is not intended for use in preparing product specification.

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10. Stability and Reactivity

The product is stable in normal storing conditions. Avoid storing temperatures exceeding 104°F (40°C). Protect against mechanical shocks. Avoid heat and moisture. Strongly reacts with substances such as oxidizers, acids, base, amines, water, aluminum, copper, alcohols, metal compounds. Avoid contact with oxidizing agents, sparks, open flame, ignition sources.

11. Toxicological Information
Acute toxicity:

<u>Chemical name:</u>	<u>Oral LD50</u>	<u>Dermal LD50</u>	<u>Inhalation LC50/4h</u>
Methylenediphenyl diisocyanate Isomers	>5000 mg/kg(rat)	>5000 mg/kg(rabbit)	>1000 mg/L (fish)
4,4'-methylenediphenyl diisocyanate	>5000 mg/kg(rat)	>5000 mg/kg(rabbit)	0.178 mg/L (rat)

Primary irritant effect:

- **on the skin:** irritant to skin and mucous membranes
- **on the eye:** irritating effect

Sensitization:

Sensitization possible through inhalation. Sensitization possible through skin contact.

Additional toxicological information:

The product shows the following dangers according to internally approved calculation methods for preparations: harmful; irritant.

12. Ecological Information

Information about elimination (persistence and degradability): Not biodegradable

Mobility and bioaccumulation potential: Does not accumulate in organisms

Ecotoxicity:

<u>Chemical name:</u>	<u>Toxicity EC 50:</u>
Methylenediphenyl diisocyanate Isomers	>1000 mg/kg (daphnia)
4,4'-methylenediphenyl diisocyanate	>1000 mg/kg (daphnia)

Note: Water hazard class 1 (self-assessment): slightly hazardous for water.

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

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EXPANDING POLYURETHANE FOAM SEALANT

13. Disposal Consideration

Before disposing of containers, relieve container of any remaining foam and pressure.
Do not dump into any sewers, on the ground, or into water.
Disposal methods must be compliant with all Federal, State/ Providential and local laws and regulations.

14. Transport Information
DOT Road Shipment Information (49 CFR 172.101)

· Hazard class:	2.1
· Identification number:	1950
· Packing group:	-
· Proper shipping name (technical name):	AEROSOLS, mixture
· Label:	2.1

· ADR/RID Class:	2 5F Gases
· UN Number:	1950
· Packing group:	-
· Proper shipping name (technical name):	1950 AEROSOLS, mixture
· Label:	2.1
· Danger code (Kemler):	-

Ocean Shipment (IMDG)

· IMDG Class:	2.1
· UN Number:	1950
· Packing group:	-
· EMS Number:	F-D, S-U
· Label	2.1
· Marine Pollutant:	No
· Proper shipping name (technical name):	AEROSOLS, mixture

Air Shipment (IATA)

· ICAO/IATA Class:	2.1
· UN Number:	1950
· Label	2.1
· Proper shipping name (technical name):	AEROSOLS, mixture
· Packing group:	-

Transport/Additional information:

According to Chapter 3.4 of ADR the provisions of other Chapters of ADR DO NOT apply to the carriage of the substance.



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15. Regulatory Information

Contents of this MSDS comply with the OSHA Hazard Communication Standard 29 CFR 1910.1200.

TSCA Status: All chemical substances in this material are included on or exempted from listing on the TSCA Inventory of Chemical Substances.

EPA SARA Title III Chemical Listings:

Section 302 Extremely Hazardous Substances (40 CFR 355):

None.

Section 311/312 Hazard Class (40 CFR 370):

Acute: Yes

Chronic: Yes

Fire: Yes

Pressure: Yes

Reactive: No

Section 313 Toxic Chemicals (40 CFR 372):

CAS #:

9016-87-9

101-68-8

Chemical name:

Methylenediphenyl diisocyanate Isomers

4,4'-methylenediphenyl diisocyanate

Supplemental State Compliance Information

California

Warning: This product contains the following chemical(s) listed by the State of California under the Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65) as being known to cause cancer, birth defects or other reproductive harm.

None known.

Massachusetts

CAS#:

9016-87-9

115-10-6

74-98-6

75-28-5

Chemical Name:

Polymethylene polyphenyl polyisocyanate

Dimethyl ether

Propane

Isobutane

New Jersey

CAS#:

9016-87-9

115-10-6

74-98-6

75-28-5

Chemical Name:

Polymethylene polyphenyl polyisocyanate

Dimethyl ether

Propane

Isobutane

Pennsylvania

CAS#:

9016-87-9

115-10-6

74-98-6

75-28-5

Chemical Name:

Polymethylene polyphenyl polyisocyanate

Dimethyl ether

Propane

Isobutane



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Additional information:

· **Product related hazard information:**

The product has been classified and marked in accordance with directives on hazardous materials.

· **Special labeling of certain preparations:**

Contains isocyanates. See information supplied by the manufacturer.

Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50°C (122°F), i.e. electric lights. Do not pierce or burn, even after use.

Keep out of the reach of children.

16. Other information

All information, recommendation or advice contained in this document or given by Selena Co. SA or any of its subsidiaries, affiliates or authorized representatives, whether written or oral, is given in good faith, to the best of its knowledge and based on current procedure in effect. Each user of the product shall convince himself, through all available sources (including finished product testing in its appropriate environment) of the suitability of the product supplied for its own particular purpose. Selena Co. SA, its subsidiaries and affiliates cannot be held responsible for any loss incurred through incorrect or faulty use of the product. The Material Safety Data Sheet related excessively to the described product. In case of applying it as a component of the other product, the MSDS is no more valid.