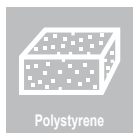


P321 POLYSTYRENE FOAM CONTACT ADHESIVE

DATA SHEET
TensorGrip



As part of our **INDUSTRIAL** range, **P321** is a web spray adhesive designed for use in applications using the substrates listed.

PRODUCT DESCRIPTION

TensorGrip P321 is a high performance contact adhesive that will not attack polystyrene used for laminating polystyrene foam to itself and other materials, and keeps the typical strength and permanency characteristic of the TensorGrip brand.

ADVANTAGES

- Bonds polystyrene to most substrates
- Will not attack polystyrene
- Very fast dry and long open time
- High heat resistance
- Excellent high coverage
- Moisture and weather resistant

DIRECTIONS FOR USE

- **TensorGrip P321** is designed as a portable, self-contained spray system for field or shop applications.
- Apply adhesive to both surfaces to be mated, at 80% to 100% coverage.
- Allow enough time (2-4 minutes or until dry to the touch) for the adhesive to become tacky before bonding.
- Parts should be mated with as much pressure as practical.
- Normal coverage required with web spray pattern is approximately 80%; however, porous surfaces may need a second coat. Initial bond is strong enough to allow cutting or trimming immediately, although ultimate strength is achieved in 1-3 days.
- Canister system will spray adequately above 60° F. Canister system should be kept in warm area. In the event that the canister gets abnormally chilled, freezes or gives poor or sputtering spray, it should be warmed up before continued usage. Warming canister by immersion in warm water is recommended.
- Notice!!! Do not store at temperatures over 120° F.

CANISTER STORAGE/CHANGE OVER

- If you choose to leave the hose and spray gun on the canister, leave the valve on the canister open. Do not disconnect the hose/gun from the canister. Close and lock the spray gun.
- To change or disconnect canister: turn canister valve to the off position, spray out remaining adhesive left in the hose, disconnect the spray hose and gun from the canister.
- Reconnect the spray hose to a new canister of adhesive. OR if you are NOT connecting to a new canister, connect hose to canister of cleaning solvent (sold separately) and spray out until liquid is clear which indicates that the hose and gun is clean.

QUIN GLOBAL US

5710 F ST. Omaha NE 68117

PH: +1 402 731 3636 | info.us@quin-global.com | www.quirglobal.com



P321 POLYSTYRENE FOAM CONTACT ADHESIVE

DATA SHEET
Tensorgrip

CHEMICAL TECHNICAL DATA

TYPICAL PROPERTIES

- Total Solids 26-32%
- VOC Content 568 g/L
- Color Blue, Clear
- System Flammability Flammable Adhesive, Flammable Propellant
- Solvent System Flammable
- Dry time 2-4 mins dependent on temp & humidity
- Open time Long
- Shelf Life 18 months from date of manufacture

PACKAGING

- 650ml Aerosol Cans
- 22L Disposable Canister
- 108L Returnable Canister
- 216L Returnable Canister

STORAGE

HANDLING & STORAGE

- Consult Material Safety Data Sheet prior to use.
- Do not store at temperatures over 120°F/50°C.
- Avoid exposure to direct sunlight.
- Do not store directly on concrete floor.
- Always store above 60°F/15°C
- When connected, keep valve open and hose pressurized at all times
- Always test our adhesives to determine suitability for your particular application prior to use in production

DISCLAIMER OF WARRANTY: Quin Global makes neither warranty of merchantability or fitness for any use nor any other warranty, express or implied, in the sales of its products. Buyer assumes all risk and liability for the results obtained by the use of its products, whether used singly or in combination with other products.

QUIN GLOBAL US

5710 F ST, Omaha NE 68117

PH: +1 402 731 3636 | info.us@quin-global.com | www.quinglobal.com

QUIN
GLOBAL

Tensorgrip



SAFETY DATA SHEET

Tensorgrip P321AA Polystyrene Foam Contact Adhesive

1. Identification

Product identifier

Product name Tensorgrip P321AA Polystyrene Foam Contact Adhesive

Product number USA

Recommended use of the chemical and restrictions on use

Application Aerosol Spray Adhesive

Details of the supplier of the safety data sheet

Supplier Tensorgrip
5710 F St
Omaha NE 68117
(402) 731 3636
(402) 731 1473
marketing.us@quin-global.com

Emergency telephone number

Emergency telephone Chemtrec: 1 800 424 9300

2. Hazard(s) identification

Classification of the substance or mixture

Physical hazards Flam. Aerosol 1 - H222 Press. Gas, Compressed - H280

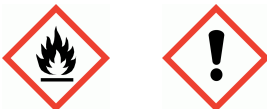
Health hazards Acute Tox. 4 - H332 Skin Irrit. 2 - H315 Eye Irrit. 2A - H319 STOT SE 3 - H335, H336

Environmental hazards Aquatic Chronic 2 - H411

Human health The liquid may be irritating to eyes, respiratory system and skin. Symptoms following overexposure may include the following: Headache. Dizziness. Nausea, vomiting.

Label elements

Pictogram



Signal word Danger

Hazard statements H222 Extremely flammable aerosol.
H280 Contains gas under pressure; may explode if heated.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H332 Harmful if inhaled.
H335 May cause respiratory irritation.
H336 May cause drowsiness or dizziness.
H411 Toxic to aquatic life with long lasting effects.

Tensorgrip P321AA Polystyrene Foam Contact Adhesive

| | |
|---------------------------------------|---|
| Precautionary statements | <p>P210 Keep away from heat, sparks, open flames and hot surfaces. No smoking.</p> <p>P211 Do not spray on an open flame or other ignition source.</p> <p>P271 Use only outdoors or in a well-ventilated area.</p> <p>P304+P340 If inhaled: Remove person to fresh air and keep comfortable for breathing.</p> <p>P312 Call a poison center/ doctor if you feel unwell.</p> <p>P410+P412 Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F.</p> |
| Supplemental label information | <p>AT(d) 25.12% of the mixture consists of ingredient(s) of unknown acute dermal toxicity.</p> <p>AT(o) 25.12% of the mixture consists of ingredient(s) of unknown acute oral toxicity.</p> |
| Contains | Dimethyl Ether, Pentane, Acetone |

Other hazards

This product does not contain any substances classified as PBT or vPvB.

3. Composition/information on ingredients

Mixtures

| | |
|---|----------------|
| Dimethyl Ether CAS number: 115-10-6 | 60-100% |
| Classification Flam. Gas 1 - H220 Press. Gas, Liquefied - H280 Acute Tox. 4 - H332 Skin Irrit. 2 - H315 Eye Irrit. 2B - H320 STOT SE 3 - H335, H336 | |
| Pentane CAS number: 78-78-4 M factor (Acute) = 1 | 20-30% |
| Classification Flam. Liq. 1 - H224 Eye Irrit. 2A - H319 STOT SE 3 - H336 Asp. Tox. 1 - H304 Aquatic Chronic 2 - H411 | |
| Acetone CAS number: 67-64-1 | 1-5% |
| Classification Flam. Liq. 2 - H225 Acute Tox. 4 - H302 Acute Tox. 4 - H312 Acute Tox. 4 - H332 Skin Irrit. 2 - H315 Eye Irrit. 2A - H319 STOT SE 3 - H336 | |

Tensorgrip P321AA Polystyrene Foam Contact Adhesive

The full text for all hazard statements is displayed in Section 16.

4. First-aid measures

Description of first aid measures

| | |
|----------------------------|---|
| General information | Remove affected person from source of contamination. Place unconscious person on their side in the recovery position and ensure breathing can take place. Get medical attention if any discomfort continues. |
| Inhalation | Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. When breathing is difficult, properly trained personnel may assist affected person by administering oxygen. Get medical attention. |
| Ingestion | Get medical attention immediately. Never give anything by mouth to an unconscious person. Do not induce vomiting. Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. |
| Skin Contact | Remove affected person from source of contamination. Remove contaminated clothing. Wash skin thoroughly with soap and water. Get medical attention if any discomfort continues. |
| Eye contact | Remove any contact lenses and open eyelids wide apart. Only remove contact lenses if the person is conscious, coherent and they can remove them themselves. If adhesive bonding occurs, do not force eyelids apart. Continue to rinse for at least 15 minutes. If in doubt, get medical attention promptly. Show this Safety Data Sheet to the medical personnel. |

Most important symptoms and effects, both acute and delayed

| | |
|---------------------|--|
| Inhalation | May cause coughing and difficulties in breathing. May cause eye and respiratory system irritation. Overexposure may depress the central nervous system, causing dizziness and intoxication. |
| Ingestion | Aspiration hazard if swallowed. May be fatal if swallowed and enters airways. Ingestion may cause severe irritation of the mouth, the esophagus and the gastrointestinal tract. May Cause the following effects: Gastrointestinal symptoms, including upset stomach. Central nervous system depression. Nausea, vomiting. Entry into the lungs following ingestion or vomiting may cause chemical pneumonitis. |
| Skin contact | May be absorbed through the skin. Product has a defatting effect on skin. The liquid is irritating to eyes and skin. A single exposure may cause the following adverse effects: Dryness and/or cracking. |
| Eye contact | Causes serious eye irritation. Burns can occur. A single exposure may cause the following adverse effects: Pain. Conjunctivitis, irritation, tearing. Prolonged or repeated exposure may cause the following adverse effects: Irritation of eyes and mucous membranes. Prolonged contact causes serious eye and tissue damage. |

5. Fire-fighting measures

Extinguishing media

| | |
|---------------------------------------|--|
| Suitable extinguishing media | Extinguish with alcohol-resistant foam, carbon dioxide or dry powder. |
| Unsuitable extinguishing media | Do not use water jet as an extinguisher, as this will spread the fire. |

Special hazards arising from the substance or mixture

| | |
|-------------------------|--|
| Specific hazards | Pressurized container: Must not be exposed to temperatures above 50°C/120°F Containers can burst violently or explode when heated, due to excessive pressure build-up. Vapors are heavier than air and may spread near ground and travel a considerable distance to a source of ignition and flash back. |
|-------------------------|--|

Advice for firefighters

Tensorgrip P321AA Polystyrene Foam Contact Adhesive

Special protective equipment for firefighters Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Personal precautions For personal protection, see Section 8. No smoking, sparks, flames or other sources of ignition near spillage.

Environmental precautions

Environmental precautions Avoid discharge into drains. Contain spillage with sand, earth or other suitable non-combustible material.

Methods and material for containment and cleaning up

Methods for cleaning up Stop leak if possible without risk. Eliminate all sources of ignition. No smoking, sparks, flames or other sources of ignition near spillage. Provide adequate ventilation. Avoid the spillage or runoff entering drains, sewers or watercourses. Absorb in vermiculite, dry sand or earth and place into containers. Wash thoroughly after dealing with a spillage.

7. Handling and storage

Precautions for safe handling

Usage precautions Avoid contact with skin and eyes. Keep away from heat, sparks and open flame. Provide adequate ventilation. Avoid inhalation of vapors. Use approved respirator if air contamination is above an acceptable level. Container must be kept tightly closed when not in use. Use explosion proof electric equipment. Avoid discharge into drains or watercourses or onto the ground.

Advice on general occupational hygiene Do not eat, drink or smoke when using this product.

Conditions for safe storage, including any incompatibilities

Storage precautions Keep away from heat, sparks and open flame. Keep container tightly closed. Keep only in the original container. Pressurized container: Must not be exposed to temperatures above 50°C/120°F

Specific end uses(s)

Specific end use(s) The identified uses for this product are detailed in Section 1.

8. Exposure Controls/personal protection

Control parameters

Occupational exposure limits

Dimethyl Ether

Long-term exposure limit (8-hour TWA): WEEL:US.AIHA = Workplace Environmental Exposure Level Guides 1000 ppm

Pentane

Long-term exposure limit (8-hour TWA): ACGIH 600 ppm

Acetone

Long-term exposure limit (8-hour TWA): ACGIH 500 ppm

Short-term exposure limit (15-minute): ACGIH 750 ppm

A4

Long-term exposure limit (8-hour TWA): OSHA 1000 ppm 2400 mg/m³

Ceiling exposure limit: NIOSH: National Institute of Occupational Safety and Health 250 ppm 590 mg/m³ vapour

Tensorgrip P321AA Polystyrene Foam Contact Adhesive

ACGIH = American Conference of Governmental Industrial Hygienists.
 A4 = Not Classifiable as a Human Carcinogen.
 OSHA = Occupational Safety and Health Administration.

Exposure controls

Protective equipment



Appropriate engineering controls

This product must not be handled in a confined space without adequate ventilation. Avoid inhalation of vapors and spray/mists. As this product contains ingredients with exposure limits, process enclosures, local exhaust ventilation or other engineering controls should be used to keep worker exposure below any statutory or recommended limits, if use generates dust, fumes, gas, vapor or mist.

Eye/face protection

Wear chemical splash goggles.

Hand protection

Use protective gloves.

Other skin and body protection

Wear appropriate clothing to prevent any possibility of liquid contact and repeated or prolonged vapor contact.

Hygiene measures

DO NOT SMOKE IN WORK AREA! Wash at the end of each work shift and before eating, smoking and using the toilet. Wash promptly with soap and water if skin becomes contaminated. Promptly remove any clothing that becomes contaminated. When using do not eat, drink or smoke.

Respiratory protection

Respiratory protection must be used if the airborne contamination exceeds the recommended occupational exposure limit. If exposure levels are likely to be exceeded, use a half face mask fitted with an organic vapor filter for short term low level exposures. For long term or high level exposures, a supplied air respirator should be used.

9. Physical and Chemical Properties

Information on basic physical and chemical properties

| | |
|--|--|
| Appearance | Aerosol. |
| Color | Clear. Green. |
| Odor | Organic solvents. |
| Initial boiling point and range | -25°C/-13°F @ 1013.25 mbar |
| Flash point | -41°C/-42°F Not specified. |
| Upper/lower flammability or explosive limits | Lower flammable/explosive limit: 3.4 g/100 g Upper flammable/explosive limit: 18 g/100 g |
| Vapor pressure | Not determined. |
| Vapor density | Not determined. |
| Relative density | .708 |
| Solubility(ies) | Negligibly soluble in water |
| Volatile organic compound | This product contains a maximum VOC content of 574.04 g/l. |

10. Stability and reactivity

Stability Stable at normal ambient temperatures and when used as recommended.

Tensorgrip P321AA Polystyrene Foam Contact Adhesive

| | |
|---|---|
| Possibility of hazardous reactions | Will not polymerize. |
| Conditions to avoid | Avoid heat, flames and other sources of ignition. Avoid contact with the following materials: Oxidizing agents. Reducing agents. |
| Materials to avoid | None known. |
| Hazardous decomposition products | Fire creates: Vapours/gases/fumes of: Carbon monoxide (CO). Carbon dioxide (CO ₂). |

11. Toxicological information

Information on toxicological effects

Acute toxicity - oral

ATE oral (mg/kg) 10,400.0

Acute toxicity - dermal

ATE dermal (mg/kg) 22,880.0

Acute toxicity - inhalation

ATE inhalation (gases ppm) 7,500.0

ATE inhalation (vapours mg/l) 305.56

Carcinogenicity

Carcinogenicity Does not contain any substances known to be carcinogenic.

Toxicological information on ingredients.

Dimethyl Ether

Acute toxicity - inhalation

Acute toxicity inhalation (LC₅₀ gases ppmV) 308.5

Species Rat

ATE inhalation (gases ppm) 4,500.0

Carcinogenicity

Carcinogenicity Does not contain any substances known to be carcinogenic.

Specific target organ toxicity - single exposure

STOT - single exposure May cause respiratory irritation. Central nervous system depression. Skin and eye irritation.

Aspiration hazard

Aspiration hazard No data available.

Medical Symptoms

Central nervous system depression. Frostbite. Respiratory system irritation. Skin irritation. Eye irritation.

Pentane

Acute toxicity - oral

Tensorgrip P321AA Polystyrene Foam Contact Adhesive

| | |
|---|--|
| ATE oral (mg/kg) | 100.0 |
| <u>Acute toxicity - dermal</u> | |
| ATE dermal (mg/kg) | 1,100.0 |
| <u>Acute toxicity - inhalation</u> | |
| Acute toxicity inhalation (LC ₅₀ vapours mg/l) | 1,280.0 |
| Species | Rat |
| ATE inhalation (vapours mg/l) | 11.0 |
| <u>Serious eye damage/irritation</u> | |
| Serious eye damage/irritation | Irritation of eyes is assumed. |
| <u>Germ cell mutagenicity</u> | |
| Genotoxicity - in vitro | Ames Test Results: Negative. |
| <u>Specific target organ toxicity - single exposure</u> | |
| STOT - single exposure | May cause drowsiness or dizziness |
| <u>Specific target organ toxicity - repeated exposure</u> | |
| STOT - repeated exposure | Not classified as a specific target organ toxicant after repeated exposure. |
| <u>Aspiration hazard</u> | |
| Aspiration hazard | Entry into the lungs following ingestion or vomiting may cause chemical pneumonitis. |
| <u>General information</u> | |
| General information | Absorbtion of large quantities may cause: Dizziness. Euphoria. Agitation. Convulsions. Narcosis. |

Acetone

| | |
|---|----------|
| <u>Acute toxicity - oral</u> | |
| Acute toxicity oral (LD ₅₀ mg/kg) | 5,800.0 |
| Species | Rat |
| ATE oral (mg/kg) | 500.0 |
| <u>Acute toxicity - dermal</u> | |
| Acute toxicity dermal (LD ₅₀ mg/kg) | 20,000.0 |
| Species | Rabbit |
| ATE dermal (mg/kg) | 1,100.0 |
| <u>Acute toxicity - inhalation</u> | |
| Acute toxicity inhalation (LC ₅₀ dust/mist mg/l) | 76.0 |
| Species | Rat |

Tensorgrip P321AA Polystyrene Foam Contact Adhesive

ATE inhalation (vapours 11.0
mg/l)

Specific target organ toxicity - single exposure

STOT - single exposure May cause drowsiness or dizziness

Inhalation Mucosal irritations. Absorption.

Ingestion Irritating. May cause nausea, stomach pain and vomiting. Aspiration hazard if swallowed. Entry into the lungs following ingestion or vomiting may cause chemical pneumonitis.

Skin Contact This product is moderately irritating. May be absorbed through the skin. Repeated exposure may cause skin dryness or cracking.

Eye contact This product is strongly irritating. Risk of corneal clouding.

Route of exposure Inhalation Skin and/or eye contact

Target Organs Eyes

12. Ecological Information

13. Disposal considerations

Waste treatment methods

Disposal methods Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

14. Transport information

Air transport notes 1. <75kg, 2. <150kg

UN Number

UN No. (ICAO) 1950

UN No. (DOT) Limited Quantity <1L, Aerosol

UN proper shipping name

Proper shipping name (TDG) Aerosols, Flammable

Proper shipping name (DOT) Aerosols, Flammable

Transport hazard class(es)

Transport labels



Packing group

Not applicable.

15. Regulatory information

US Federal Regulations

SARA Section 302 Extremely Hazardous Substances Tier II Threshold Planning Quantities
Present.

Tensorgrip P321AA Polystyrene Foam Contact Adhesive

Pentane

CERCLA/Superfund, Hazardous Substances/Reportable Quantities (EPA)

Acetone

Final CERCLA RQ: 5000(2270) pounds (Kilograms)

SARA 313 Emission Reporting

Present.

Pentane

SARA (311/312) Hazard Categories

Present.

Dimethyl Ether

Acute
Health hazard
Pressure
Fire
Hazard

Acetone

Acute
Chronic
Health hazard
Fire

Pentane

All the ingredients are listed or exempt.

US State Regulations

California Proposition 65 Carcinogens and Reproductive Toxins

This product does not contain any chemicals known to the State of California to cause cancer, birth or any other reproductive harm.

Massachusetts "Right To Know" List

Present.

Dimethyl Ether

Acetone

Pentane

Rhode Island "Right To Know" List

Acetone

Present.

Minnesota "Right To Know" List

Present.

Dimethyl Ether

Acetone

New Jersey "Right To Know" List

Present.

Dimethyl Ether

Acetone

Pennsylvania "Right To Know" List

Present.

Tensorgrip P321AA Polystyrene Foam Contact Adhesive

Dimethyl Ether

Acetone

Pentane

Inventories

Canada - DSL/NDSL

DSL

Dimethyl Ether

Acetone

Pentane

US - TSCA

Present.

Dimethyl Ether

Present.

Acetone

Present.

Pentane

Present.

16. Other information

| | |
|---|---|
| Revision date | 11/15/2017 |
| Revision | 7 |
| Supersedes date | 4/4/2017 |
| SDS No. | 20539 |
| Hazard statements in full | H220 Extremely flammable gas. H222 Extremely flammable aerosol. H224 Extremely flammable liquid and vapor. H225 Highly flammable liquid and vapor. H280 Contains gas under pressure; may explode if heated. H302 Harmful if swallowed. H304 May be fatal if swallowed and enters airways. H312 Harmful in contact with skin. H315 Causes skin irritation. H319 Causes serious eye irritation. H320 Causes eye irritation. H332 Harmful if inhaled. H335 May cause respiratory irritation. H336 May cause drowsiness or dizziness. H411 Toxic to aquatic life with long lasting effects. |
| ACA HMIS Health rating. | Moderate hazard. (2) |
| ACA HMIS Flammability rating. | Extremely flammable. (4) |
| ACA HMIS Physical hazard rating. | Normally stable. (0) |
| ACA HMIS Personal protection rating. | B |

Tensorgrip P321AA Polystyrene Foam Contact Adhesive

The information in this Safety Data Sheet (SDS) is believed to be correct as of the date issued. The manufacturer MAKES NO WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR COURSE OF PERFORMANCE OR USAGE OF TRADE. Given the variety of factors that can affect the use and application of this product, many of which are solely within the user's knowledge and control, the user is responsible for determining whether the usage of this product is fit for a particular purpose and suitable for the user's method of use or application. It is essential that the user, not the manufacturer, evaluates this product to determine whether it is fit for a particular purpose and suitable for the user's method of use or application.