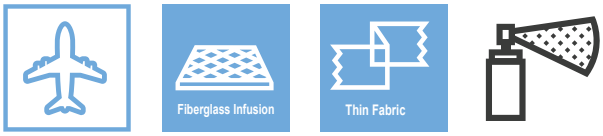
A70 INFUSION MOLDING ADHESIVE

DATA SHEET

Tensorgrip®



As part of our **AEROSPACE** range, **A70** is a mist spray adhesive designed for use on fiberglass airframes using the substrates listed.

PRODUCT DESCRIPTION

TensorGrip® A70 is a an exceptional adhesive is specifically designed to hold reinforcing fibres in place during the infusion process of the resin without affecting the surface finish or structural integrity. Most importantly, TensorGrip A70 does not interfere with the curing process of vinyl esters, polyesters or styrene resins and ultimately becomes part of the polymer matrix.

ADVANTAGES

- Safely fuses laminating materials to structural core surfaces
- Ultimately becomes part of the polymer matrix
- Very fast application
- Convenient, reliable, portable spray system
- Provides superior holding during forming process
- Allows resin to obtain maximum tensile strength
- Will not interfere with the curing process of vinyl esters, polyesters or styrene resin

DIRECTIONS FOR USE

- **TensorGrip® A70** is designed as a portable, self-contained spray system.
- Make sure surface is clean, dry and free of grease, oil, dirt and other contamination.
- Apply a sparing coat of TensorGrip M30 to the surface to be bonded.
- Do not wet the surface.
- Allow to dry and become slightly tacky.
- Apply fiberglass materials. Fiberglass material should hold in place.
- Build up composite material and allow to cure normally (preferably overnight).
- Continue with vacuum infusion process; the adhesive will aid the flow of resin through the materials and will become part of the composite.
- Remove the composite from the mold.
- Recommended operating temperatures range from 60°F to 100°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.quinglobal.com

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A70 INFUSION MOLDING ADHESIVE

DATA SHEET

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CHEMICAL TECHNICAL DATA

TYPICAL PROPERTIES

• Total Solids	23-29%
• VOC Content	340 g/L
• Color	Blue or Clear
• System Flammability	Flammable adhesive; Flammable propellant
• Solvent System	Methyl Acetate
• Dry time	2-4 mins dependent on temp & humidity
• Open time	Long
• Shelf Life	18 months from date of manufacture

PACKAGING

• 650ml	Aerosol Can
• 7L	Disposable Canister
• 22L	Disposable Canister
• 108 L	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

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Tensorgrip®

SAFETY DATA SHEET

Tensorgrip A70AA Infusion Molding Adhesive

1. Identification

Product identifier

Product name Tensorgrip A70AA Infusion Molding 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

Quin Global
5710 F St
(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

Aerosol 2 - H223, H229 Press. Gas, Compressed - H280

Health hazards

Acute Tox. 4 - H302 Skin Irrit. 2 - H315 Eye Irrit. 2A - H319 STOT SE 3 - H336 Asp. Tox. 1 - H304

Environmental hazards

Aquatic Chronic 3 - H412

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

H223 Flammable aerosol.
H229 Pressurized container: may burst if heated.
H280 Contains gas under pressure; may explode if heated.
H302 Harmful if swallowed.
H304 May be fatal if swallowed and enters airways.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H336 May cause drowsiness or dizziness.
H412 Harmful to aquatic life with long lasting effects.

Precautionary statements

P280 Wear protective gloves/protective clothing/eye protection/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.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P312 Call a POISON CENTER/doctor if you feel unwell.
P410+P412 Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F.

Supplemental label information

AT(o) % of the mixture consists of ingredient(s) of unknown acute oral toxicity.

Contains Methyl Acetate, NAPTHA (PETROLEUM), HYDROTREATED LIGHT, Isobutane, Propane

Other hazards

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

Other hazards

3. Composition/information on ingredients

Substances

Mixture Statement

Mixtures

Methyl Acetate **CAS number:** 79-20-9 **REACH registration number:** 01-2119459211-47-XXXX	**30-60%**
Classification Flam. Liq. 2 - H225 Acute Tox. 4 - H302 Acute Tox. 4 - H312 Acute Tox. 4 - H332 Eye Irrit. 2A - H319 STOT SE 3 - H336	
NAPTHA (PETROLEUM), HYDROTREATED LIGHT **CAS number:** 64742-49-0 **REACH registration number:** 01-2119475133-43-XXXX	**10-30%**
Classification Flam. Liq. 2 - H225 Skin Irrit. 2 - H315 STOT SE 3 - H336 Asp. Tox. 1 - H304 Aquatic Chronic 2 - H411	

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Propane **CAS number:** 74-98-6	**10-30%**
Classification Flam. Gas 1 - H220 Press. Gas, Liquefied - H280 Acute Tox. 4 - H332 Simple Asphyxiant - USH03	
Isobutane **CAS number:** 75-28-5	**10-30%**
Classification Flam. Gas 1 - H220 Press. Gas, Compressed - H280	

The Full Text for all Hazard Statements are 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. Wash skin thoroughly with soap and water. Get medical attention if any discomfort continues. Remove contaminated clothing.

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

General information

High concentrations may cause central nervous system depression resulting in headaches, dizziness and nausea. The severity of the symptoms described will vary dependent on the concentration and the length of exposure.

Inhalation

Prolonged or repeated exposure may cause the following adverse effects: Irritation of nose, throat and airway. Coughing. Headache.

Ingestion

Prolonged or repeated exposure may cause the following adverse effects: Gastrointestinal symptoms, including upset stomach. Nausea, vomiting. Diarrhea.

Skin contact

Prolonged contact may cause redness, irritation and dry skin.

Eye contact

Prolonged or repeated exposure may cause the following adverse effects: Irritation and redness, followed by blurred vision.

Tensorgrip A70AA Infusion Molding Adhesive

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.

Hazardous combustion products

Thermal decomposition or combustion products may include the following substances: Hydrocarbons Aldehydes. Carbon monoxide (CO). Carbon dioxide (CO2).

Advice for firefighters

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. No smoking, sparks, flames or other sources of ignition near spillage. Avoid the spillage or runoff entering drains, sewers or watercourses. Eliminate all sources of ignition. Provide adequate ventilation. 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 1.2.

8. Exposure Controls/personal protection

Tensorgrip A70AA Infusion Molding Adhesive

Control parameters

Occupational exposure limits

Methyl Acetate

Long-term exposure limit (8-hour TWA): ACGIH 200 ppm
Short-term exposure limit (15-minute): ACGIH 250 ppm
Long-term exposure limit (8-hour TWA): OSHA 200 ppm 610 mg/m³

Propane

Long-term exposure limit (8-hour TWA): NIOSH: National Institute of Occupational Safety and Health 1800 mg/m³ 1000 ppm
Long-term exposure limit (8-hour TWA): OSHA 1800 ppm 1000 mg/m³

Isobutane

Long-term exposure limit (8-hour TWA): ACGIH 1000 ppm
Long-term exposure limit (8-hour TWA): NIOSH: National Institute of Occupational Safety and Health 800 ppm 1900 mg/m3

ACGIH = American Conference of Governmental Industrial Hygienists.
OSHA = Occupational Safety and Health Administration.

Methyl Acetate (CAS: 79-20-9)

Immediate danger to life and health

3100 ppm

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

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 full face mask fitted with an organic AXP3 filter for short term low level exposures. For long term or high level exposures, compressed airline breathing apparatus should be used.

9. Physical and Chemical Properties

Information on basic physical and chemical properties

Appearance

Aerosol.

Color

Red.

Tensorgrip A70AA Infusion Molding Adhesive

Odor

Strong.

Flash point

~ -104°C/-156°F

Upper/lower flammability or explosive limits

Lower flammable/explosive limit: 1.8 g/100 g Upper flammable/explosive limit: 18 g/100 g

Vapour density

> 1

Relative density

~ .852

Solubility(ies)

Negligibly soluble in water

Volatile organic compound

This product contains a maximum VOC content of 340 g/l.

10. Stability and reactivity

Stability

Stable at normal ambient temperatures and when used as recommended.

Conditions to avoid

Avoid heat, flames and other sources of ignition. Reducing agents. Oxidizing agents. Avoid contact with the following materials:

Hazardous decomposition products

Fire creates: Vapours/gases/fumes of: Carbon monoxide (CO). Carbon dioxide (CO2). Hydrocarbons.

11. Toxicological information

Information on toxicological effects

Acute toxicity - oral

ATE oral (mg/kg)

1,414.26242055

Acute toxicity - dermal

ATE dermal (mg/kg)

3660.44391202

Acute toxicity - inhalation

ATE inhalation (gases ppm)

30000.0

ATE inhalation (vapours mg/l)

24.4167721

Toxicological information on ingredients.

Tensorgrip A70AA Infusion Molding Adhesive

Methyl Acetate

Acute toxicity - oral

Acute toxicity oral (LD_{50} mg/kg)

5,000.0

Species

Rat

ATE oral (mg/kg)

500.0

Acute toxicity - dermal

Acute toxicity dermal (LD_{50} mg/kg)

2000.0

Species

Rat

ATE dermal (mg/kg)

1100

Acute toxicity - inhalation

Acute toxicity inhalation (LC_{50} vapours mg/l)

49.28

Species

Rat

ATE inhalation (vapours mg/l)

11.0

Propane

Acute toxicity - inhalation

Acute toxicity inhalation (LC_{50} gases ppmV)

1442.0

Species

Rat

Acute toxicity inhalation (LC_{50} vapours mg/l)

1442.0

Species

Rat

ATE inhalation (gases ppm)

4500

ATE inhalation (vapours mg/l)

11.0

Tensorgrip A70AA Infusion Molding Adhesive

Isobutane

Toxicological effects

No information available.

Carcinogenicity

Does not contain any substances known to be carcinogenic.

Inhalation

Suffocation (asphyxiant) hazard

Skin Contact

Spray will evaporate and cool rapidly and may cause frostbite or cold burns if in contact with skin.

Eye contact

Spray will evaporate and cool quickly and may cause frostbite or cold burns if in contact with skin.

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. (DOT)	Limited Quantity <1L, Aerosol
UN No. (ICAO)	1950

UN proper shipping name

Proper shipping name (DOT)	Aerosols, Flammable (Methyl Acetate, Hexane)

Transport hazard class(es)

DOT hazard class	2.1

Transport labels

Packing group

Not applicable.

15. Regulatory information

Inventories

US - TSCA

Present

16. Other information

Revision date	3/9/2015
Revision	3
Supersedes date	2/10/2015
SDS No.	20689

Hazard statements in full

Tensorgrip A70AA Infusion Molding Adhesive

H223 Flammable aerosol.
H225 Highly flammable liquid and vapor.
H229 Pressurized container: may burst if heated.
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.
H332 Harmful if inhaled.
H336 May cause drowsiness or dizziness.
H411 Toxic to aquatic life with long lasting effects.
H412 Harmful to aquatic life with long lasting effects.
USH03 May displace oxygen and cause rapid suffocation

ACA HMIS Health rating.	Slight hazard. (1)
ACA HMIS Physical hazard rating.	Normally stable. (0)
ACA HMIS Personal protection rating.	B
ACA HMIS Flammability rating.	Ignites easily. (3)