

# M55G

# HEAVY MAT INFUSION MOLDING ADHESIVE

DATA SHEET  
**TensorGrip**



As part of our **MARINE** range, **M55** is a web spray adhesive designed for fiberglass infusion molding using the substrates listed above.

## PRODUCT DESCRIPTION

**TensorGrip® M55** is designed specifically for marine infusion molding to overcome the problems normally associated with using other types of adhesives, such as bonding failure, resin blockage and surface defects in the finished product. Formulated for superior results when used with polyester, vinyl ester and styrene resins in the infusion molding process.

### ADVANTAGES

- Single sided glue application even on heavy fiberglass mats
- 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® M55** is designed as a portable, self-contained spray system.

1. Make sure surface is clean, dry and free of grease, oil, dirt and other contamination.
  2. Apply a sparing coat of adhesive to one or both surfaces to be mated, at 80% to 90% coverage. Spraying both surfaces will result in a stronger, more permanent bond. Do not wet the surface with adhesive.
  3. Allow enough time (2-4 minutes or until dry to the touch) for the adhesive to become slightly tacky before bonding.
  4. Apply fiberglass matting layers and mated with sufficient pressure.
- Canister or aerosol 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](mailto:info.us@quin-global.com) | [www.quin-global.com](http://www.quin-global.com)

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**TensorGrip**

ECR24-007-0124

# M55G HEAVY MAT INFUSION MOLDING ADHESIVE

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**Tensorgrip**

## CHEMICAL TECHNICAL DATA

### TYPICAL PROPERTIES

- Total Solids 25-31%
- VOC Content 552.55 g/L
- Color Green
- System Flammability Flammable adhesive; Flammable propellant
- Solvent System Acetone
- 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

## 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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### QUIN GLOBAL US

5710 F ST, Omaha NE 68117

PH: +1 402 731 3636 | [info.us@quin-global.com](mailto:info.us@quin-global.com) | [www.quinglobal.com](http://www.quinglobal.com)



ECR24-007-0124

# SAFETY DATA SHEET

## TensorGrip M55 TensorGrip Heavy Mat Infusion Molding Adhesive

### 1. Identification

#### Product identifier

**Product name** TensorGrip M55 TensorGrip Heavy Mat Infusion Molding Adhesive

**Product number** USA

#### Recommended use of the chemical and restrictions on use

**Application** Canister 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** Flam. Gas 2 - H221 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

H221 Flammable gas.  
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.

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<b>Precautionary statements</b>	<p>P261 Avoid breathing vapor/ spray.</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>P403+P233 Store in a well-ventilated place. Keep container tightly closed.</p> <p>P501 Dispose of contents/ container in accordance with national regulations.</p>
<b>Supplemental label information</b>	<p>AT(d) 31.4% of the mixture consists of ingredient(s) of unknown acute dermal toxicity.</p> <p>AT(o) 31.4% of the mixture consists of ingredient(s) of unknown acute oral toxicity.</p>
<b>Contains</b>	Dimethyl Ether, Pentane, Acetone

### Other hazards

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

### 3. Composition/information on ingredients

#### Mixtures

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

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

### 4. First-aid measures

#### Description of first aid measures

<b>General information</b>	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.
<b>Inhalation</b>	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.
<b>Ingestion</b>	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.
<b>Skin Contact</b>	Remove affected person from source of contamination. Remove contaminated clothing. Wash skin thoroughly with soap and water. Get medical attention if any discomfort continues.
<b>Eye contact</b>	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

<b>Inhalation</b>	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.
<b>Ingestion</b>	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.
<b>Skin contact</b>	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.
<b>Eye contact</b>	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

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

#### Special hazards arising from the substance or mixture

<b>Specific hazards</b>	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.
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#### Advice for firefighters

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**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/m<sup>3</sup>

Ceiling exposure limit: NIOSH: National Institute of Occupational Safety and Health 250 ppm 590 mg/m<sup>3</sup> vapour

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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. Red.
Odor	Organic solvents.
Initial boiling point and range	Not determined.
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	.7087
Solubility(ies)	Negligibly soluble in water
Volatile organic compound	This product contains a maximum VOC content of 552.55 g/l.

## 10. Stability and reactivity

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

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

**Hazardous decomposition products** Fire creates: Vapours/gases/fumes of: Carbon monoxide (CO). Carbon dioxide (CO<sub>2</sub>).  
Hydrogen chloride (HCl). Hydrocarbons. Aldehydes.

### 11. Toxicological information

#### Information on toxicological effects

##### Acute toxicity - oral

ATE oral (mg/kg) 7,622.22

##### Acute toxicity - dermal

ATE dermal (mg/kg) 16,768.89

##### Acute toxicity - inhalation

ATE inhalation (gases ppm) 9,000.0

ATE inhalation (vapours mg/l) 244.44

#### Dimethyl Ether

##### Acute toxicity - inhalation

Acute toxicity inhalation (LC<sub>50</sub> 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

ATE oral (mg/kg) 100.0

##### Acute toxicity - dermal

ATE dermal (mg/kg) 1,100.0

##### Acute toxicity - inhalation

Acute toxicity inhalation (LC<sub>50</sub> vapours mg/l) 1,280.0



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

### Acetone

<b><u>Acute toxicity - oral</u></b>	
<b>Acute toxicity oral (LD<sub>50</sub> mg/kg)</b>	5,800.0
<b>Species</b>	Rat
<b>ATE oral (mg/kg)</b>	500.0
<b><u>Acute toxicity - dermal</u></b>	
<b>Acute toxicity dermal (LD<sub>50</sub> mg/kg)</b>	20,000.0
<b>Species</b>	Rabbit
<b>ATE dermal (mg/kg)</b>	1,100.0
<b><u>Acute toxicity - inhalation</u></b>	
<b>Acute toxicity inhalation (LC<sub>50</sub> dust/mist mg/l)</b>	76.0
<b>Species</b>	Rat
<b>ATE inhalation (vapours mg/l)</b>	11.0
<b><u>Specific target organ toxicity - single exposure</u></b>	
<b>STOT - single exposure</b>	May cause drowsiness or dizziness
<b><u>Inhalation</u></b>	
	Mucosal irritations. Absorption.

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<b>Ingestion</b>	Irritating. May cause nausea, stomach pain and vomiting. Aspiration hazard if swallowed. Entry into the lungs following ingestion or vomiting may cause chemical pneumonitis.
<b>Skin Contact</b>	This product is moderately irritating. May be absorbed through the skin. Repeated exposure may cause skin dryness or cracking.
<b>Eye contact</b>	This product is strongly irritating. Risk of corneal clouding.
<b>Route of entry</b>	Inhalation Skin and/or eye contact
<b>Target Organs</b>	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** Cargo aircraft only. <75kg

#### UN Number

**UN No. (TDG)** 3501

**UN No. (ICAO)** 3501

**UN No. (DOT)** 3501

#### UN proper shipping name

**Proper shipping name (TDG)** Chemical Under Pressure, Flammable, N.O.S.

**Proper shipping name (DOT)** Chemical Under Pressure, Flammable, N.O.S.

#### Transport hazard class(es)

**TDG class** 2

**TDG label(s)** 2.1

#### Transport labels



#### Packing group

Not applicable.

### 15. Regulatory information

#### US Federal Regulations

##### **SARA Section 302 Extremely Hazardous Substances Tier II Threshold Planning Quantities**

The following ingredients are listed or exempt:

*Pentane*

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

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*Acetone*

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

### **SARA 313 Emission Reporting**

The following ingredients are listed or exempt:

*Pentane*

### **SARA (311/312) Hazard Categories**

Present.

*Dimethyl Ether*

Acute  
Health hazard  
Pressure  
Fire  
Hazard

*Pentane*

All the ingredients are listed or exempt.

*Acetone*

Acute  
Chronic  
Health hazard  
Fire

### **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*

*Pentane*

*Acetone*

#### **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.

*Dimethyl Ether*

*Pentane*

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*Acetone*

### Inventories

#### Canada - DSL/NDSL

DSL

*Dimethyl Ether*

*Pentane*

*Acetone*

#### US - TSCA

Present.

*Dimethyl Ether*

*Pentane*

*Acetone*

### 16. Other information

<b>Revision date</b>	4/3/2017
<b>Revision</b>	1
<b>Supersedes date</b>	2/18/2016
<b>SDS No.</b>	22001
<b>Hazard statements in full</b>	<p>H220 Extremely flammable gas.  H221 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.</p>
<b>ACA HMIS Health rating.</b>	Moderate hazard. (2)
<b>ACA HMIS Flammability rating.</b>	Ignites easily. (3)
<b>ACA HMIS Physical hazard rating.</b>	Normally stable. (0)
<b>ACA HMIS Personal protection rating.</b>	B

## TensorGrip M55 TensorGrip Heavy Mat Infusion Molding Adhesive

The information in this Material Safety Data Sheet (MSDS) 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 manufacturer of this product is fit for a particular purpose and suitable for users' method of use or application. It is essential that the user evaluate this product, not the manufacturer, to determine whether it is fit for a particular purpose and suitable for users' method of use or application