



ISO 9001 Registered Quality System.
Burlington, Ontario, Canada QMI File # 004008

Threadlocker High Strength, Wicking 8704 Technical Data Sheet

8704-Liquid

Description

The 8704 *Threadlocker, High Strength, Wicking* has an anaerobic formulation designed to secure and seal fasteners. Due to its low viscosity and high capillary action, it easily penetrates porous metals, moulds, and castings. It prevents loosening caused by vibrations, shock, expansion and contraction. The threadlocker is resistant to heat, corrosion, water, gases, oils, hydrocarbons, and many chemicals.

Applications & Usages

The 8704 is used to secure and seal hydraulic line fittings, housing screws, machinery keys, and many types of nuts and bolts.

Benefits and Features

- **Meets MIL S-46163, Type III, Grade R**
- **Ideal for post application to pre-assembled fasteners**
- **Penetrates threads by capillary action**
- **One drop prevents loosening and ensures a secure hold**
- **Prevent corrosion, seal threads, improve torque control, and reduce galling**
- **Reduces friction allowing controlled torque during assembly**

Usage Parameters

<i>Properties</i>	<i>Value</i>
Fixture Time ^{a)}	10 to 30 min
Full Cure @22 °C [72 °F]	8 h
Bolt Range	For preassembled fasteners
Shelf Life	3 y

a) Time at which the fixture strength of bonded substrate is 0.1 N/mm².

Temperature Ranges

<i>Properties</i>	<i>Value</i>
Constant Service Temperature	-54 to 176 °C [-65 to 350 °F]
Storage Temperature Limits	8 to 28 °C [46 to 82 °F]

Principal Components

Name	CAS Number
polyglycol dimethacrylate	25852-47-5
aromatic dimethacrylate	24448-20-2
2-hydroxyethyl methacrylate	868-77-9
cumene hydroperoxide	80-15-9

Properties of Cured 8704

<i>Physical Properties</i>	<i>Method</i>	<i>Value</i>
Composition Color	Visual	Dimethacrylate ester Green
<i>Mechanical Property</i>		<i>Value</i>
Torque		17/31 N·m [150/275 lbf·in] ^{a)}
<i>Thermal Properties</i>		<i>Value</i>
Coefficient of Thermal Expansion (CTE) Thermal Conductivity Specific Heat	ASTM D696 ASTM C177	80 x 10 ⁻⁶ 1/K 0.1 W/(m·K) 0.3 J/(g·K)
<i>Environmental Resistance</i>		<i>Value</i>
Hot Strength % retrained strength @25 °C [77 °F] @100 °C [212 °F] @120 °C [248 °F] @150 °C [302 °F] Heat Aging ^{b)} % retrained strength @120 °C [248 °F] @150 °C [302 °F]	ISO 10964 (Modified) " " " " " "	100% 100% 85% 65% 45% 15%
<i>Chemical/Solvent Resistance ^{c)}</i>		<i>Value</i>
% Retained Strength 50/50 Water/Glycol @87 °C [187 °F] Unleaded gasoline @22 °C [72 °F] Motor oil @125 °C [257 °F] Brake fluid @22 °C [72 °F] Acetone @22 °C [72 °F]		90% 90% 50% 85% 85%

a) Breakaway/prevaling torque

b) Specimens aged for 2 000 hours and tested at room temperature

c) Specimens immersed for 1 000 hours and tested at room temperature

Properties of Uncured 8704

<i>Physical Properties</i>	<i>Value</i>
Viscosity	12 cP [11 mm ² /s]
Specific Gravity	1.08 g/mL
Flash Point	93 °C [200 °F]
Boiling Point	≥149 °C [≥300 °F]
Odor	Mild
VOC (Volatile Organic Compound)	13 g/L

Storage

Store between 8 to 28 °C [46 to 82 °F] in dry area. Store in well-ventilated area. Keep container tightly closed.

Health, Safety, and Environmental Awareness

Please see the 8704 **Safety Data Sheet** (SDS) for greater details on transportation, storage, handling and other security guidelines.

Environmental Impact: Avoid release to the environment.

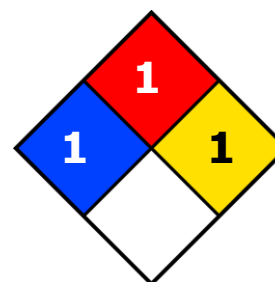
Health and Safety: The solvents in 8704 can cause respiratory track irritation, serious eye irritation, skin irritation, and an allergic skin reaction.

Do not breathe vapors. Wear safety glasses or goggles and disposable gloves to avoid exposures.

HMIS® RATING

HEALTH:	* 1
FLAMMABILITY:	1
PHYSICAL HAZARD:	1
PERSONAL PROTECTION:	

NFPA® 704 CODES



Approximate HMIS and NFPA Risk Ratings Legend:

0 (Low or none); 1 (Slight); 2 (Moderate); 3 (Serious); 4 (Severe)

Application Instructions

Follow the procedure below for best results.

To apply the threadlocker

1. Shake well before use.
2. Ensure the surface is clean of oil, dust, water, solvents, and other contaminants and let the surface dry fully.
3. Remove cap and cut nozzle tip.
4. Apply to thread and wipe off excess.
5. Fixture time is 10 to 30 minutes. Allow full cure in 8 hours.

ATTENTION! Not recommended for use on plastics. Compatibility check should be performed prior application.

NOTE: Optimal use on close fitting flanged parts gaps up to 0.05 mm. Flanges should be tightened as soon as possible after assembly to avoid shimming.



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Packaging and Supporting Products

<i>Cat. No.</i>	<i>Packaging</i>	<i>Net Volume</i>		<i>Net Weight</i>		<i>Packaging Weight</i>	
8704-10ML	Bottle	10 mL	0.33 fl oz	10.8 g	0.38 oz	0.04 kg	0.09 lb

Technical Support

Contact us regarding any questions, improvement suggestions, or problems with this product. Application notes, instructions, and FAQs are located at www.mgchemicals.com.

Email: support@mgchemicals.com

Phone: +(1) 800-340-0772 (Canada, Mexico & USA)

+ (1) 905-331-1396 (International)

Fax: +(1) 905-331-2862 or +(1) 800-340-0773

Mailing address:

Manufacturing & Support

1210 Corporate Drive
Burlington, Ontario, Canada
L7L 5R6

Head Office

9347-193rd Street
Surrey, British Columbia, Canada
V4N 4E7

Warranty

M.G. Chemicals Ltd. warrants this product for 12 months from the date of purchase by the end user. *M.G. Chemicals Ltd.* makes no claims as to shelf life of this product for the warranty. The liability of *M.G. Chemicals Ltd.* whether based on its warranty, contracts, or otherwise shall in no case include incidental or consequential damage.

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