



**7648**

7648 is a single component anaerobic retaining and locking adhesive, which develops extremely high strength. 7648 is used to bond cylindrical parts: it may be applied to retain pulleys, gears, rotors and shafts; as well as to secure bushings, bearings and housing plugs. 7648 will also augment shrink and press fit assemblies in high-heat and high-friction environments.

<b>Technology / Base</b>	Urethane Methacrylate
<b>Type of Product</b>	Retaining Adhesive
<b>Components</b>	One Component
<b>Curing</b>	Anaerobic
<b>Appearance / Color</b>	Green Liquid
<b>Consistency</b>	Liquid

**Technical Data**

Property	Value	Method/Condition
<b>Rheology</b>		
Viscosity	600 +/- 200 cps @ 0.50 rpm	Brookfield at 20°C to 25°C (68°F to 77°F)
<b>Density</b>		
Specific Gravity	1.10	
<b>Uncured Materials Characteristics</b>		
Flash Point	> 93°C (200°F)	
Gap Fill	0.010 inch	
Shelf Life	12 months unopened	
Storage Condition	20°C (68°F)	
<b>Cured Material Characteristics</b>		
Full Cure Conditions	24 hours at 25°C	
Cure Appearance	Green Solid	
RoHS Compliant	Yes	
<b>Cured Mechanical Properties</b>		
Locking Strength	High	
Breakaway Torque	50 to 150 in-lb	
Prevailing Torque	200 to no limit	
Pin/Collar Shear Strength	2000 psi	
Service Temperature	-55°C to 205°C (-65°F to 400°F)	

**General Instructions**

Surfaces to be bonded should be clean and dry and free of grease. Product should be applied in enough quantity to fill all engaged threads. The product performs best in thin bond gaps. Very large gaps may create gaps that will affect the cure speed and overall strength. Good contact is essential. An adequate bond develops in 15 to 45 minutes and maximum strength is attained in 24 hours. This product is not recommended for use in pure oxygen environments and/or oxygen-rich systems and should not be selected as a sealant for chlorine or other strong oxidizing materials. This product is not designed for plastics, particularly thermoplastics where stress cracking of the plastic could result. It is recommended to confirm compatibility of the product with all substrates prior to use.

**Specifications and Approvals**

Mil-R-46082B, Type II; ASTM-D5363 AN 0412

**Curing Performance**

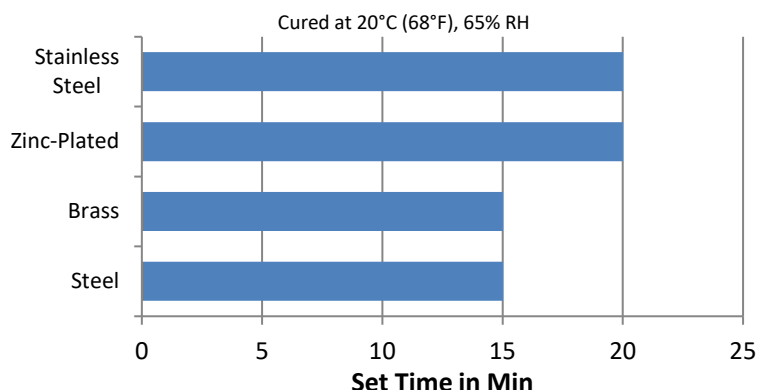
The rate of cure will depend on environmental conditions and the substrates used. The gap of the bond line will affect set speed. Smaller gaps tend to increase set speed. Activators may be applied to further improve set speed, but may also impair overall adhesive performance.

**Storage**

Products should be stored unopened in a cool, dry place out of direct sunlight. Products may be refrigerated for improved shelf life, but should be brought back to room temperature before use.

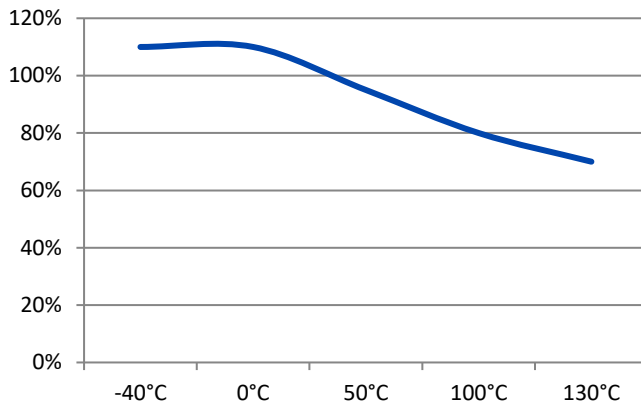


**Set Time on Various Substrates**

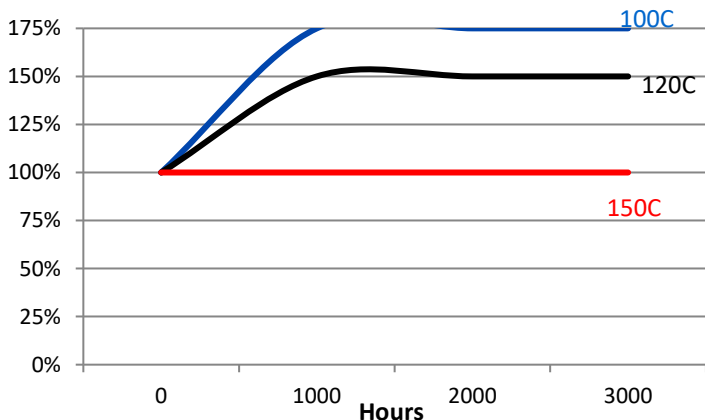


Test Conditions: 68°F / 20°C, 65% RH

**Hot Strength (%RT strength, tested at temperature)**



**Heat Aging (aged at temp. indicated and tested @ 22°C)**



**Solvent Resistance**

Solvent	Example	Resistance
Alcohol	Ethanol, Methanol	+++
Ester (aromatic)	Ethylacetate	---
Ketone (aromatic)	Acetone, Benzophenone	---
Aliphatic hydrocarbon (alkanes)	Petrol, Heptanes, Hexane	++-
Aromatic hydrocarbons	Benzyl, Toluol, Xylol	++-
Halogenated hydrocarbons	Methylenchloride, Chloroform, Chlorobenzol	---
Weak aqueous acid	Nitrite, muriatic acid, sulphuric acid, phosphoric acid	+++ (--- if concentrated)
Weak aqueous base	sodium hydroxide solution, caustic potash	+++ (--- if concentrated)

**Safety and Disposal Advice**

For safe handling information on this product, consult the Safety Data Sheet (SDS)

H.B. Fuller Company  
 9001 W. Fey Drive  
 Frankfort, IL 60423  
 +1.630.761.8900

[www.hbfuller.com](http://www.hbfuller.com)

Date Modified: 01 January 2018

[www.hbfullerengineering.com](http://www.hbfullerengineering.com)

Connecting what matters.™

IMPORTANT: Information, specifications, procedures and recommendations provided ("information") are based on our experience, and we believe this information to be accurate. No representation, guarantee or warranty is made as to the accuracy or completeness of the information or that use of the product will avoid losses or damages or give desired results. It is purchaser's sole responsibility to test and determine the suitability of any product for the intended use. Tests should be repeated if materials or conditions change in any way. No employee, distributor or agent has any right to change these facts and offer a guarantee of performance.

© and ™ are trademarks of H.B. Fuller Company or one of its affiliated entities.

**NOTE TO USER:** by ordering/receiving product you accept the H.B. Fuller General Terms and Conditions of Sale applicable in the region. Please request a copy if you have not received these. These Terms and Conditions contain disclaimers of implied warranties (including but not limited to disclaiming warranties of fitness for a particular purpose) and limits of liability. All other terms are rejected. In any event, the total aggregate liability of H.B. Fuller for any claim or series of related claims however arising, in contract, tort (including negligence), breach of statutory duty, misrepresentation, strict liability or otherwise, is limited to replacement of affected products or refund of the purchase price for affected products. H.B. Fuller shall not be liable for loss of profit, loss of margin, loss of contract, loss of business, loss of goodwill or any indirect or consequential losses arising out of or in connection with product supply.



H.B. Fuller  
[www.hbfuller.com](http://www.hbfuller.com)