



LOCTITE[®] 340[™]

September 2005

PRODUCT DESCRIPTION

LOCTITE[®] 340[™] provides the following product characteristics:

Technology	Acrylic
Chemical Type	Elastomer/methacrylate
Appearance (uncured)	Clear, yellow
Components	One component - requires no mixing
Viscosity	High
Cure	Activator
Secondary Cure	Heat
Application	Bonding

LOCTITE[®] 340[™] is a toughened acrylic adhesive intended for structural bonding of steel parts. It fixtures at room temperature with the aid of Activator 785[™], but attains full strength only when exposed to temperatures above 90 °C. It is intended for use in applications where the completed assembly is subsequently subjected to a paint bake cycle at temperatures up to 200 °C. LOCTITE[®] 340[™] is suitable for bonding structural or sheet steel where some continuous or repeated loading is encountered (e.g. metal furniture, doors or vehicle bodies). It is capable of bonding through many commonly-used protective wax or oil coatings.

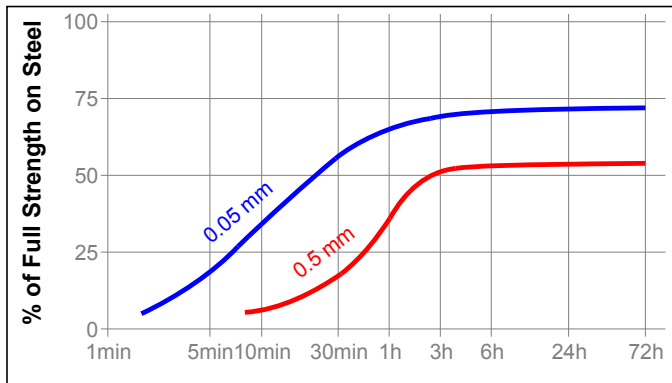
TYPICAL PROPERTIES OF UNCURED MATERIAL

Specific Gravity @ 25 °C	0.98
Vapour Pressure, hPa	<30
Flash Point - See MSDS	
Viscosity, Brookfield - RVT, 25 °C, mPa·s (cP):	
Spindle 5, speed 20 rpm	120,000 to 200,000

TYPICAL CURING PERFORMANCE

Cure Speed vs. Bond Gap

The rate of cure will depend on the bondline gap. The following graph shows the shear strength developed with time on grit blasted steel lap shears at different controlled gaps and tested according to ISO 4587. (Activator 785[™] applied to one surface).



TYPICAL PROPERTIES OF CURED MATERIAL

Physical Properties:

Coefficient of Thermal Expansion, ASTM D 696, K ⁻¹	100×10 ⁻⁶
Coefficient of Thermal Conductivity, ASTM C177, W/(m·K)	0.1
Specific Heat, kJ/(kg·K)	0.3

TYPICAL PERFORMANCE OF CURED MATERIAL

Adhesive Properties

Cured for 24 hours @ 22 °C followed by 30 minutes @ 185 °C, Activator 785[™] on one side

Lap Shear Strength, ISO 4587:	
Steel (degreased)	N/mm ² 6 to 16 (psi) (870 to 2,320)

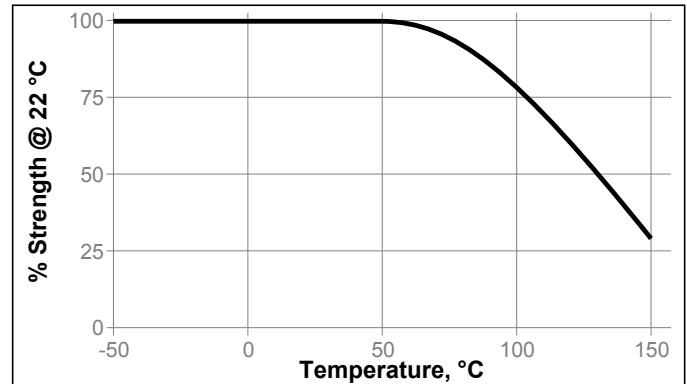
TYPICAL ENVIRONMENTAL RESISTANCE

Cured for 30 minutes @ 185 °C, Activator 785[™] on one side.

Lap Shear Strength, ISO 4587:	
Steel (grit blasted)	

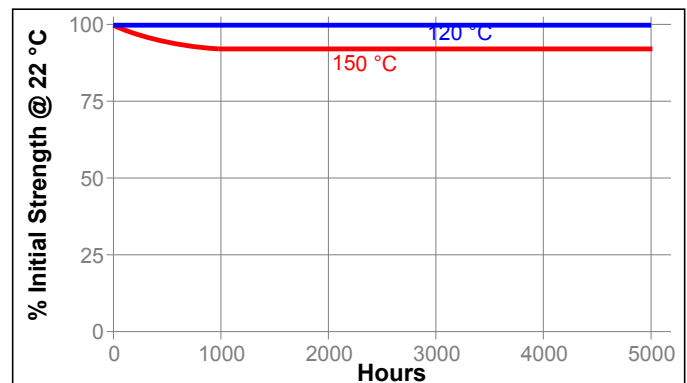
Hot Strength

Tested at temperature



Heat Aging

Aged at temperature indicated and tested @ 22 °C



Chemical/Solvent Resistance

Aged under conditions indicated and tested @ 22°C.

		% of initial strength
Environment	°C	336 h
Motor oil	80	80
Gasoline	22	30
Brake fluid	22	100
95% RH	40	100

GENERAL INFORMATION

This product is not recommended for use in pure oxygen and/or oxygen rich systems and should not be selected as a sealant for chlorine or other strong oxidizing materials.

For safe handling information on this product, consult the Material Safety Data Sheet (MSDS).

Where aqueous washing systems are used to clean the surfaces before bonding, it is important to check for compatibility of the washing solution with the adhesive. In some cases these aqueous washes can affect the cure and performance of the adhesive.

This product is not normally recommended for use on plastics (particularly thermoplastic materials where stress cracking of the plastic could result). Users are recommended to confirm compatibility of the product with such substrates.

Directions for use

1. For best performance bond surfaces should be clean and free from grease.
2. To ensure a fast and reliable cure, activator should be applied to one of the bond surfaces and the adhesive to the other surface.
3. The recommended bondline gap is 0.05 mm. Where bond gaps are large (up to a maximum of 1.0 mm), or faster cure speed is required, Activator 785™ should be applied to both surfaces. Parts should be assembled immediately (within 1 minute).
4. Parts should be assembled immediately (within 15 minutes).
5. Excess adhesive can be wiped away with organic solvent.
6. Bond should be held clamped until adhesive has fixtured.
7. Product should be allowed to develop full strength before subjecting to any service loads (typically 24 to 72 hours after assembly, depending on bond gap, materials and ambient conditions).

Not for product specifications

The technical data contained herein are intended as reference only. Please contact your local quality department for assistance and recommendations on specifications for this product.

Storage

Store product in the unopened container in a dry location. Storage information may be indicated on the product container labeling.

Optimal Storage: 8 °C to 21 °C. Storage below 8 °C or greater than 28 °C can adversely affect product properties. Material removed from containers may be contaminated during use. Do not return product to the original container. Henkel Corporation cannot assume responsibility for product which has been contaminated or stored under conditions other than those previously indicated. If additional information is required, please contact your local Technical Service Center or Customer Service Representative.

Conversions

$(^{\circ}\text{C} \times 1.8) + 32 = ^{\circ}\text{F}$
 $\text{kV/mm} \times 25.4 = \text{V/mil}$
 $\text{mm} / 25.4 = \text{inches}$
 $\mu\text{m} / 25.4 = \text{mil}$
 $\text{N} \times 0.225 = \text{lb}$
 $\text{N/mm} \times 5.71 = \text{lb/in}$
 $\text{N/mm}^2 \times 145 = \text{psi}$
 $\text{MPa} \times 145 = \text{psi}$
 $\text{N}\cdot\text{m} \times 8.851 = \text{lb}\cdot\text{in}$
 $\text{N}\cdot\text{m} \times 0.738 = \text{lb}\cdot\text{ft}$
 $\text{N}\cdot\text{mm} \times 0.142 = \text{oz}\cdot\text{in}$
 $\text{mPa}\cdot\text{s} = \text{cP}$

Note

The data contained herein are furnished for information only and are believed to be reliable. We cannot assume responsibility for the results obtained by others over whose methods we have no control. It is the user's responsibility to determine suitability for the user's purpose of any production methods mentioned herein and to adopt such precautions as may be advisable for the protection of property and of persons against any hazards that may be involved in the handling and use thereof. In light of the foregoing, **Henkel Corporation specifically disclaims all warranties expressed or implied, including warranties of merchantability or fitness for a particular purpose, arising from sale or use of Henkel Corporation's products. Henkel Corporation specifically disclaims any liability for consequential or incidental damages of any kind, including lost profits.** The discussion herein of various processes or compositions is not to be interpreted as representation that they are free from domination of patents owned by others or as a license under any Henkel Corporation patents that may cover such processes or compositions. We recommend that each prospective user test his proposed application before repetitive use, using this data as a guide. This product may be covered by one or more United States or foreign patents or patent applications.

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Reference 1.0