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Product Description Sheet

Product 341

Industrial Products, January 1999

PRODUCT DESCRIPTION

LOCTITE® Product 341 is a two-part, toughened acrylic adhesive intended for structural bonding of steel parts. It fixtures at room temperature when mixed, 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.

TYPICAL APPLICATIONS

Product 341 is suitable for bonding structural or sheet steel where some continuous or repeated loading is encountered. Examples are metal furniture, doors or vehicle bodies. It is capable of bonding through many commonly-used protective wax or oil coatings.

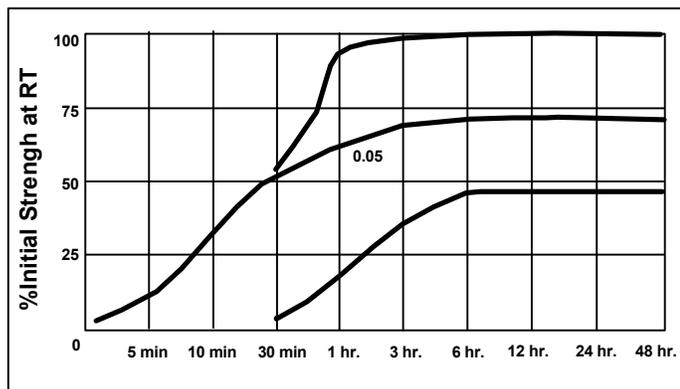
PROPERTIES OF UNCURED MATERIAL

	Typical Value
Chemical Type	Elastomer/methacrylate
Appearance	Clear yellow
Specific Gravity	0.96
Viscosity @ 25°C, mPa.s	
Brookfield RVT	
Spindle #5 @ 20 RPM	120,000 to 200,000
DIN 54453, mPa.s	
D=20 1/S	
After t=180	100,000 to 200,000
Flash Point, COC, °C	82

CURING PERFORMANCE

Cure Speed vs. Bond Gap

Figure 1 shows the rate of cure through different gaps. These tests were made on steel lap shear specimens. Test procedure in accordance with ASTM D 1002 and DIN 53283. The development of tensile shear strength provided a measurement of the rate of cure.



PHYSICAL PROPERTIES OF CURED MATERIAL AND OPERATING PARAMETERS

Time to achieve full strength on steel @ 22°C (0.05 mm) hours:

Coefficient of Thermal Expansion, ASTM D 696, 1/°K	100 x 10 ⁻⁶
Coefficient of Thermal Conductivity, ASTM C 177, $\frac{W}{m \cdot ^\circ K}$	0.1
Specific Heat, $\frac{kJ}{kg \cdot ^\circ K}$	0.3
Recommended gap, mm	0.05
Maximum gap, mm	3.0

PERFORMANCE OF CURED MATERIAL

After 24 hours @ 22°C + 30 mins. 185°C

Shear Strength, ASTM D 1002
DIN 53283, N/mm² 6 to 16

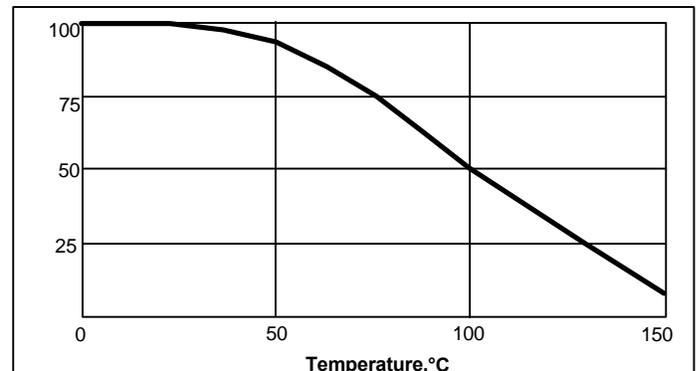
N.B. Ranges are based on mean

NOTE: All data is generated on degreased substrates. Product 341 has the ability to bond through most protective oils typically used on "as received" steel. Strength and speed of cure will be affected depending on the grade of oil and quantity present. Testing is recommended to determine actual strength and cure speed for any given substrate condition.

TYPICAL ENVIRONMENTAL RESISTANCE

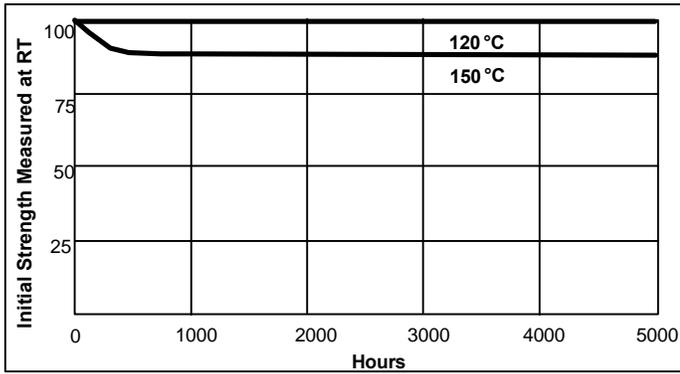
Hot Strength

Strength Test Procedure: ASTM D 1002, DIN 53283
Substrate: Grit blasted mild steel
Cure Procedure: 30 minutes @ 185°C



Heat Aging

Strength Test Procedure: ASTM D 1002, DIN 53283
Substrate: Grit blasted mild steel
Cure Procedure: 30 minutes @ 185°C



Chemical / Solvent Resistance

Strength Test Procedure: ASTM D 1002, DIN 53283
 Substrate: "Astrolan" coated steel
 Cure Procedure: 30 minutes @ 185°C
 Aging Period: 2 weeks

Solvent	Temp.	% Initial Strength retained
Motor Oil	80°C	80
Petrol	22°C	30
Brake Fluid	22°C	100
95% RH	40°C	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).

Storage

Products shall be ideally stored in a cool, dry location in unopened containers at a temperature between 8° to 28°C (46° to 82°F) unless otherwise labeled. Optimal storage is at the lower half of this temperature range. To prevent contamination of unused product, do not return any material to its original container. For specific shelf-life information, contact your local Technical Service Center.

Data Ranges

The data contained herein may be reported as a typical value and/or range. Values are based on actual test data and are verified on a periodic basis.

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, **Loctite Corporation specifically disclaims all warranties expressed or implied, including warranties of merchantability or fitness for a particular purpose, arising from sale or use of Loctite Corporation's products. Loctite 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 Loctite 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.