

PRODUCT DESCRIPTION

LOCTITE® product 3298 is a toughened acrylic adhesive material intended for high strength structural bonding. This Multibond product incorporates a silane coupling agent which ensures good bond durability on glass surfaces. It cures at ambient temperature with the aid of Activators 737, 738/7386 or 740/7407.

TYPICAL APPLICATIONS

The product is suitable for bonding a range of materials, including sheet metal and glass, where continuous or repeated loading is encountered, e.g. furniture, containers, doors.

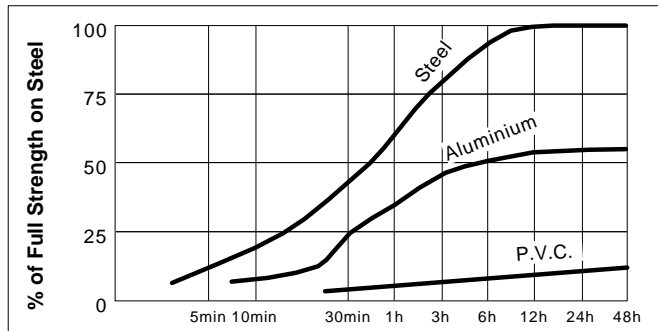
PROPERTIES OF UNCURED MATERIAL

	Value	Typical Range
Chemical Type:	Modified Methacrylate Ester	
Appearance	Green	
Specific gravity, 25 °C	1.02	
Viscosity @ 25 °C mPa.s:		
Brookfield RVT		
Spindle 5@20 rpm		18,000 to 50,000
DIN 54453MV		
D=20 1/S		15,000 to 45,000
Vapour pressure, mbar	<40	
Shelf life @ 6 to 22 °C, months	6	

TYPICAL CURING PERFORMANCE

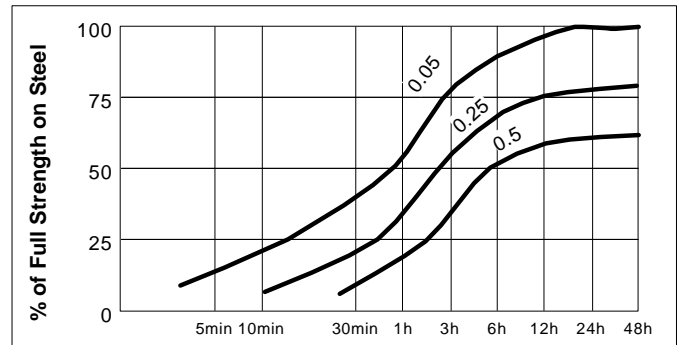
Cure speed vs substrate

The rate of cure may vary depending on substrate used. Graph below shows the shear strength developed with time on grit blasted mild steel laps compared to different materials and tested according to ASTM D1002.



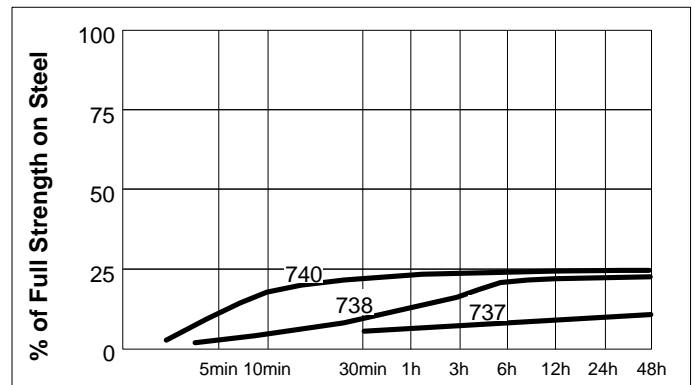
Cure speed vs. bond gap

The rate of cure will depend on the bondline gap. Graph below shows the shear strength developed with time on grit blasted mild steel laps with different bond gaps and tested according to ASTM D1002.



Cure speed vs activator

Activator must be used to ensure cure of 3298. The rate of cure will depend on the activator used. In general Activator 737 is recommended for optimum durability or where large bond gaps are present. For fastest fixturing and where gaps are less than 0.1 mm, Activator 740 is recommended. For non-metallic surfaces Activators 738 or 740 are preferred. Graph below shows the shear strength developed with time on PVC laps with different activators.



PHYSICAL PROPERTIES OF CURED MATERIAL AND OPERATING PARAMETERS

Time to achieve full strength on steel @22 °C (0.05mm gap, Activator 737), hours:	24
Coefficient of thermal expansion, ASTM D696, 1/ K: 100 x10E ⁻⁶	
Coefficient of thermal conductivity ASTM C177, W.m ⁻¹ K ⁻¹	0.1
Specific heat kJ.kg ⁻¹ K ⁻¹	0.3
Recommended gap, mm;	0.05
Maximum gap, mm	0.4

PERFORMANCE OF CURED MATERIAL

(After 24 hours at 22°C Cured with Activator 737)

Tensile shear strength, ASTM D1002, DIN EN 1465, N/mm ²	
Grit Blasted Mild Steel:	26 to 32
Aluminium	8 to 20
Tensile strength, DIN 53288, N/mm ² :	
Grit blasted mild steel	15 to 27
Grit blasted mild steel pin to glass	11 to 26
Peel strength, ASTM D1876, DIN 53282, N/mm:	
Grit blasted aluminium	4 to 6

N.B. Ranges are based on mean ± 2 standard deviation.

NOT FOR PRODUCT SPECIFICATIONS.

THE TECHNICAL DATA CONTAINED HEREIN ARE INTENDED AS REFERENCE ONLY.

PLEASE CONTACT LOCTITE CORPORATION QUALITY DEPARTMENT FOR ASSISTANCE AND RECOMMENDATIONS ON SPECIFICATIONS FOR THIS PRODUCT.
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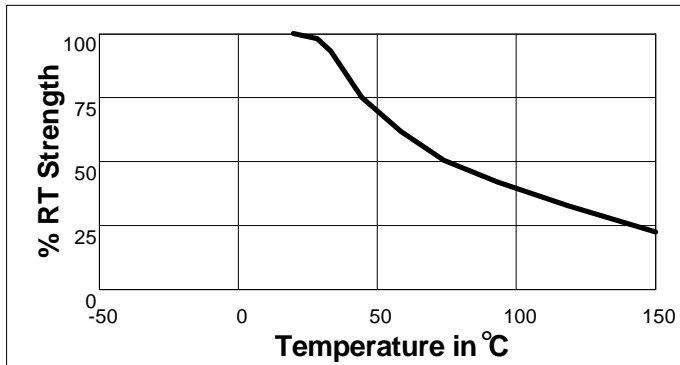
ENVIRONMENTAL RESISTANCE

Hot strength

Strength test procedure: Tensile Shear ASTM D1002, DIN EN 1465

Substrate: Grit blasted mild steel.

Cure procedure: 1 week @ 22 C/Activator 737.

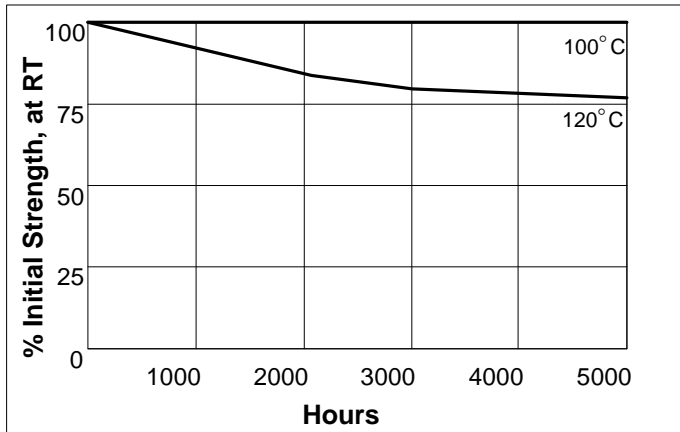


Heat ageing

Strength test procedure: Tensile Shear ASTM D1002, DIN EN 1465

Substrate: Grit blasted mild steel.

Cure procedure: 1 week @ 22 C/Activator 737.



CHEMICAL/SOLVENT RESISTANCE

Strength test procedure: Tensile Shear ASTM D1002, DIN EN 1465

Substrate: Grit blasted mild steel.

Cure procedure: 1 week @ 22 C/Activator 737.

Solvent	Temperature	% Initial strength retained at		
		100hrs	500hrs	1000hrs
Motor Oil (MIL-L-46152)	125 C	100	100	100
Acetone	22 C	95	90	80

Strength test procedure: Tensile DIN 53288 (modified)

Substrate: Grit blasted mild steel pin to glass

Cure procedure: 1 week at 22 C/Activator 737

Solvent	Temperature	% Initial strength retained at		
		100hrs	500hrs	1000hrs
95% Relative Humidity	40 C	90	45	45

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 oxidising 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

For best performance surfaces should be clean and free of grease. Product should be applied to the bolt in sufficient quantity to fill all engaged threads. This product performs best in thin bond gaps, (0.05mm). Very large thread sizes may create large gaps which will affect cure speed and strength. This product is designed to give controlled friction, (torque/tension ratio), during assembly. In critical tightening applications this ratio should be confirmed.

Storage

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

Data Ranges

The data contained herein may be reported as a typical value and/or range (based on the mean value ± 2 standard deviations). 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 licence 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.