

LOCTITE[®] 574™

June 2022

PRODUCT DESCRIPTION

LOCTITE[®] 574[™] provides the following product characteristics:

characteristics.			
Technology	Acrylic		
Chemical Type	Dimethacrylate ester		
Appearance (uncured)	Orange paste ^{LMS}		
Fluorescence	Positive under UV light ^{⊾мs}		
Components	One component -		
	requires no mixing		
Viscosity	Thixotropic		
Cure	Anaerobic		
Secondary Cure	Activator		
Application	Sealing		
Strength	Medium		

LOCTITE[®] 574[™] seals close fitting joints between rigid metal faces and flanges. The product cures when confined in the absence of air between close fitting metal surfaces. Provides resistance to low pressures immediately after assembly of flanges. Typically used as a form-in-place gasket on rigid flanged connections, e.g. gearbox and engine casings, etc. The thixotropic nature of LOCTITE[®] 574[™] reduces the migration of liquid product after application to the substrate.

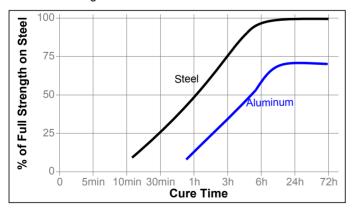
TYPICAL PROPERTIES OF UNCURED MATERIAL

Specific Gravity @ 25 °C	1.1
Flash Point - See SDS	
Viscosity, Brookfield - RVT,25°C,mPa·s (cP):	
Spindle 6, speed 2.5 rpm	70,000 to 120,000 ^{LMS}
Spindle 6, speed 20 rpm	23,000 to 35,000 ^{LMS}

TYPICAL CURING PERFORMANCE

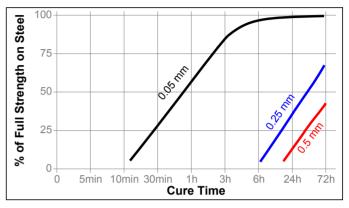
Cure Speed vs. Substrate

The rate of cure will depend on the substrate used. The graph below shows the shear strength developed with time on grit blasted steel lap shears compared to different materials and tested according to ISO 4587.



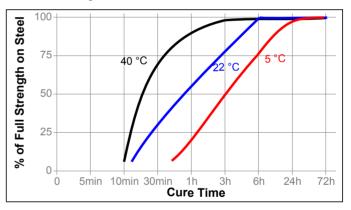
Cure Speed vs. Bond Gap

The rate of cure will depend on the bondline gap. The following graph shows shear strength developed with time on grit blasted steel lap shears at different controlled gaps and tested according to ISO 4587.



Cure Speed vs. Temperature

The rate of cure will depend on the ambient temperature. The graph below shows the shear strength developed with time on grit blasted steel lap shears at different temperatures and tested according to ISO 4587.



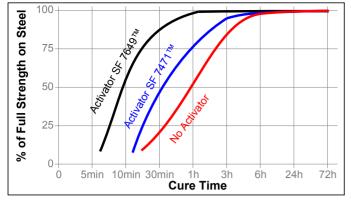
Cure Speed vs. Activator

Where cure speed is unacceptably long, or large gaps are present, applying activator to the surface will improve cure speed. The graph below shows the shear strength developed with time on grit blasted steel lap shears using and tested according to ISO 4587.





Aged at temperature indicated and tested @ 22 °C



TYPICAL PROPERTIES OF CURED MATERIAL

Physical Properties:	
Coefficient of Thermal Expansion,	80×10-6
ISO 11359-2, K ⁻¹	
Coefficient of Thermal Conductivity, ISO 8302,	0.1
W/(m·K)	
Specific Heat, kJ/(kg·K)	0.3

TYPICAL PERFORMANCE OF CURED MATERIAL

Adhesive Properties

After 24 hours @ 22°C

Steel pins and collars	N/mm² (psi)	≥6.0 ^{LMS} (≥870)
Lap Shear Strength :	N/mm²	8.5
Steel (grit blasted)	(psi)	(1,230)
Tensile Strength, ISO 6922:	N/mm²	5
Steel (grit blasted)	(psi)	(725)

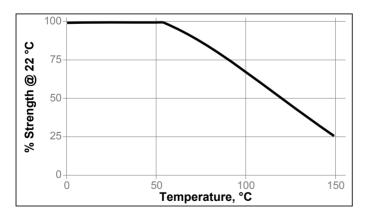
TYPICAL ENVIRONMENTAL RESISTANCE

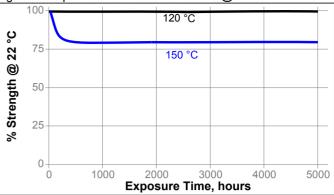
The following tests refer to the effect of environment on strength. This is not a measure of sealing performance.

Cured for 1 week @ 22°C Lap Shear Strength : Steel (grit blasted)

Hot Strength

Tested at temperature





Chemical/Solvent Resistance

Aged under conditions indicated and tested @ 22 °C

		% of initial strength			
Environment	°C	100 h	500 h	1000 h	
Motor oil	125	100	100	100	
Gasoline	22	75	75	75	
Water/glycol 50/50	87	85	85	85	

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 Safety Data Sheet (SDS).

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. The product is designed for close fitting flanged parts with gaps up to 0.25 mm (in).
- 3. Apply manually as a continuous bead, a rolled film or by screen printing to one surface of the flanges. For gaps greater than 0.125mm (0.005 in) using a pen roller, a rolled film should be applied to both flange surfaces.
- Low pressures (<0.5 MPa, psi) may be used when testing to confirm a complete seal immediately after assembly and before curing.
- 5. Flanges should be tightened as soon as possible after assembly to avoid shimming.

Loctite Material Specification^{LMS}

LMS dated September 01, 1995. Test reports for each batch are available for the indicated properties. LMS test reports include selected QC test parameters considered appropriate to specifications for customer use. Additionally, comprehensive controls are in place to assure product quality and consistency. Special customer specification requirements may be coordinated through Henkel Quality.



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 Henkel representative.

Conversions

 $(^{\circ}C \ge 1.8) + 32 = ^{\circ}F$ kV/mm $\ge 25.4 =$ V/mil mm / 25.4 = inches μ m / 25.4 = mil N $\ge 0.225 =$ lb N/mm $\ge 5.71 =$ lb/in N/mm² $\ge 145 =$ psi MPa $\ge 145 =$ psi MPa $\ge 145 =$ psi N·m $\ge 8.851 =$ lb·in N·m $\ge 0.738 =$ lb·ft N·mm $\ge 0.738 =$ lb·ft N·mm $\ge 0.142 =$ oz·in mPa·s = cP

Disclaimer

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Reference 1.2

