

LOCTITE® products

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Technical Information

Loctite Superfast Universal Sealant 575

Product description

Loctite Superfast 575 is a sealing product especially developed for sealing pipe connections with relatively coarse threads and flanges.

The product allows instant start-up of fluid system when threads are tightened up as specified.

Typical application areas

Gas piping systems.

Central heating systems.

Sprinkler systems.

Fire systems.

Hydraulic systems.

Pneumatic systems.

Product features

- * Product does not run off parts of flow into other areas, due to its thixotropic viscosity.
- * Prevents leaks due to vibration loosening of the piping system.
- * Teflon filler provides lubrication during assembly and excellent chemical resistance after cure.
- * Instant seal, even at sub-zero temperatures when pipe connections are wrenched tight.
- * Low smell.

Performance properties of cured Loctite Superfast 575 (typical values)

<i>Strength (on steel parts)</i>	<i>Test method</i>	<i>Typical values</i>
Breakaway strength τ_{B_1}	MIL-S-46163	20-40 daN/cm ² (290-580 lbf/in ²)
Static shear strength τ_{B_2}	MIL-R-46082A	40-60 daN/cm ² (580-870 lbf/in ²)
Prevailing strength τ_P	MIL 22473 D	6-20 daN/cm ² (90-290 lbf/in ²)
Tensile shear strength	ASTM D1002	20-40 daN/cm ² (290-580 lbf/in ²)
Impact strength	ASTM D950	1-5 daN.cm/cm ² (0.5-2.3 ft.lbf/in ²)

Physical properties of uncured Loctite Superfast 575 (typical values)

Resin	Di-methacrylate ester
Viscosity (Brookfield at 25°C)	
Spindle 6, 2.5 rpm	65,000
20 rpm	19,000
Viscosity ratio	2.9
Specific gravity	1.18
Colour	White, opaque
Flashpoint (COC)	>100°C
Shelf life at +5° to +28°C	: Minimum 1 year
Toxicity	Low (see caution)
Maximum gap-filling ability	.25 mm (0.01 in)

Speed of cure

Measured on M10 nuts and bolts, quality 4.6.

Handling strength (15% of ult. strength)	5 – 8 hours
Functional strength (50% of ult. strength)	16 – 25 hours
Ultimate strength	48 – 72 hours

Cure times indicated may be influenced by surface preparation and clearance.

Sealing properties of Loctite Superfast 575

Measured in 1" single pipe joint

<i>Property</i>	<i>Min. pressure resistance in daN/cm² (lbf/in²)</i>
Instant seal* at +25°C	5 (70)
Instant seal at -10°C	5 (70)
After full cure	29 (420)
After loosening point by half turn and retightening	29 (420)
After temperature cycle of 6H from +20°C to +135°C and back again +20°C	29 (420)
Chemical resistance: immersion during one week in water	29 (420)
Vibration resistance of cured joint	29 (420)

* Instant seal is the pressure resistance of the pipe joint immediately after assembly.

To obtain optimum results pipe threads should be cut according to DIN 2999. Refer figures 1, 2 and 3.

Figure 1

Shows that on hand tight assembly 2¾ thread-windings at least not engaged.

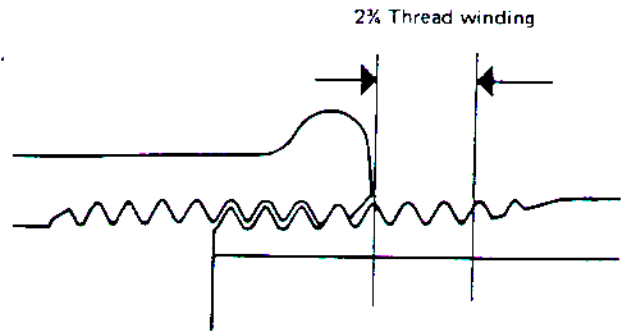


Fig. 1. Hand tight

Figure 2

When joint is wrenched on, windings not fully cut should not be engaged, because this would expand the fitting from the pipe which causes leakage.

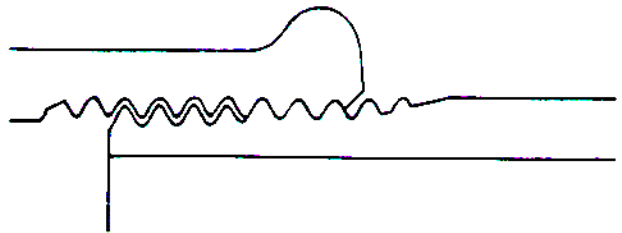


Fig. 2. Wrenched tight

Figure 3

Shows area of interference when pipe and fittings are correctly wrenched on.

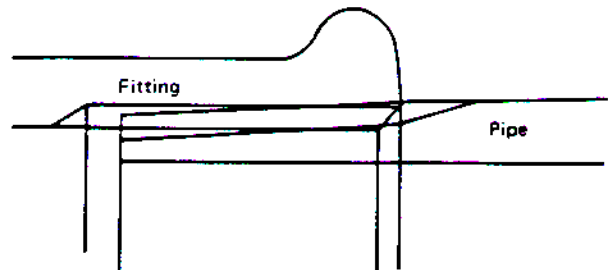


Fig. 3. Area of interference of a pipe joint

Temperature performance

Operating range of Loctite 575 is from -55°C to $+150^{\circ}\text{C}$. Long term exposure to elevated temperatures within this range will not affect the sealing properties, but will increase the strength due to further polymerisation of the product. In this case, disassembly of the joint can be difficult, especially for large diameter pipes. We recommend for difficult disassembly situations to heat up the joint above 200°C .

Application methods

For easy dispensing and exact metering semi-automatic and automatic equipment is available. See Applicator brochure.

Packaging

Loctite Superfast 575 is available in 50ml and 250ml tubes and in 2 litre containers.

Directions for use

Liquid Loctite products are single component materials that harden to a polymeric solid in the absence of air or oxygen. Contact with active metal parts or elevated temperatures accelerate the cure speed. For optimum results parts should be thoroughly cleaned and dried before applying Loctite Superfast 575. Recommended cleanser is Loctite Superclean Safety Solvent in a convenient aerosol can.

Loctite anaerobic products are non-corrosive and can be used with most materials. Certain plastics may, however, be adversely affected, e.g. some acrylics, styrene or polycarbonate. Careful testing should be carried out before use.

Approvals

Product 575 has been approved by the National Water Council for use on potable water systems.

Storage

Store material in original containers with proper fill level to provide adequate air space to maintain the liquid state. Maintain between +5°C and +28°C for maximum shelf life. When stored under these conditions, a minimum of one year shelf life may be expected. Material removed from containers may be contaminated during use. Do not return remaining liquid to original containers.

Specifications

The properties listed in this data sheet are typical and should not be used as a basis for preparing-- specifications.

Caution

Loctite anaerobic adhesives/sealants are not common allergenic, (sensitising,) materials. However, when used under conditions in which skin is continuously bruised or micro-lacerated sensitisation has been known to occur. Contact with skin in such conditions should be avoided.

Remove adhesive from the skin with soap and water. In case of eye contact flush with water and seek medical attention.

To avoid contact use the applicator nozzle provided. Automatic applicators are available.

Note

No liability is accepted to any injury, loss or damage arising directly or indirectly from the use of the company's products or from the use of information given in our publications, which is intended to serve as a guide only.

Customers should satisfy themselves by appropriate trials that the products are suitable for their intended use.

For further information please contact your Loctite Sales Engineer or the Technical Services Department of Loctite UK

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