

PRODUCT DESCRIPTION

301297 is a medium-viscosity, high strength threadlocking adhesive for all types of metal, threaded fasteners. Cured performance shows consistent high strength with good temperature and solvent resistance against most industrial solvents. Can be used on any metal surface including oily steel, aluminum, stainless steel and zinc plated parts. The product is an equivalent to Loctite Grade 271, also called Stud-lock grade. This product cures rapidly on normal plated or oiled metal surfaces and fixtures within 20 minutes. Cures can be accelerated with either elevated temperatures or an anaerobic activator. 301297 provides a consistent torque-tension relationship with phosphate and oil finishes over the entire recommended torque range for grade 5 fasteners.

Base Resin- Methacrylate

Percent Solids- 100%

Benefits of Adhesive:

- Good Adhesion and Sealing Capability
- 100% Solids Formulation For Cost-Effectiveness
- High Strength for Permanent Locking Applications
- Excellent Chemical Resistance and Improved Hot Strength
- Medium viscosity for 3/8-16 UNC fasteners

PHYSICAL PROPERTIES

TYPICAL UNCURED PROPERTIES (LIQUID)

Viscosity- 500cps at 2.5 rpm, #3 spindle, Brookfield RV
Specific Gravity 1.05 (20°C)
Color- Red
Toxicity- Low, see MSDS

TYPICAL CURING PROPERTIES

Fixture Time 15-20 minutes @ 23°C on zinc plate
Full Cure Time 24 hrs. @ 23°C
Cure Activity- Fastest on plain steel fasteners, slower on plated.
Cure Activator- Can be used inconjunction with an anaerobic activator on plastic or plated surfaces.

TYPICAL CURED PROPERTIES (SOLID)

Shore D Hardness- >80
Torque Strength:
Breakaway/Steel 3/8-16 UNC Range 140-300 in-lbs. depending on surface, typical value is 200 in-lbs. on zinc plated.
Prevail torque 3/8-16 UNC Range 150-350 in-lbs. depending on surface typical value is 250 in lbs. on zinc plated.
Thermal Service Range- -50°C to 150°C

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Studlock 301297 AA Type (271) Technical Data Sheet

Solvent Resistance-

Water, oil, glycol, gasoline @ 60°C
transmission fluid immersion tests.

100% retention of strength

Coefficient of Friction

0.18 black oxide, 0.20 zinc

Coefficient of thermal expansion

80x10⁻⁶/K

Specific heat kJ/kgK

0.3

Typical Process Methods:

Apply adhesive to one surface. Assemble with mating threaded component. Tighten to desired torque within 5 minutes of assembly.

Curing Information:

Fixture Time:

15-20 minutes on zinc,
8-10 minutes on steel and black oxide.

Full Strength:

24 hours.

Application Note:

Material is not sensitive to moisture, but is sensitive to UV light and heat. Will not cure if exposed to oxygen.

Shelf Life of Packaged Product:

12 months at 23°C when stored in sealed original containers.

Important Note

Whilst all reasonable care is taken in compiling technical data on the company's products, all recommendations or suggestions regarding the use of such products are made without guarantee, since the conditions of use are beyond the control of the Company. It is the customer's responsibility to satisfy themselves self that each product is fit for the purpose for which he intends to use it, that the actual conditions of use are suitable and that in the light of continued research and development the information relating to each product has not been superseded.

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