

DELTA 77

Nut Grade Adhesive

TECHNICAL DATA SHEET
EDITION: 19/08/08
PRODUCT CODE: D77



PRODUCT DESCRIPTION

Delta 77 is a fast curing, medium strength anaerobic thread locking compound for bonding and sealing threads and retaining of cylindrical parts.

Delta 77 is highly resistant to heat, vibrations, water, gases, oils, hydrocarbons and many chemicals.

APPLICATIONS

- Ideal for less active materials such as stainless steel and plated parts.
- Ideal for fasteners between 1/4" and 3/4" (6 to 20mm) diameters.
- Locks and seals threaded joints-nuts, screws and studs with improved oil resistance.
- Meets Military specifications: MIL-S-46163 Type II Grade N and MIL-S-22473E Letter Grade CVV.

| ADHESIVE PROPERTIES | |
|---|----------------------|
| Composition | Dimethacrylate Ester |
| Colour | Blue |
| Viscosity Brookfield RVT Spindle 3 @20 rpm | 2,250 cps at 25°C |
| Specific Gravity | 1.07 |
| Maximum Diameter of Thread/Gap Filling: | 3/4" / 0.20mm |
| Flash Point | > 100°C |
| Solvent Content | None |
| Shelf Life | 2 year |

| CURING PROPERTIES | |
|---|------------------------------------|
| Handling Cure Time | 10 minutes |
| Functional Cure Time | 1 - 3 hours |
| Full Cure Time | 24 hours |
| Breakaway Torque, ISO 10964: M10 steel nuts and bolts N·m | 20 N·m 180 lb.in. |
| Prevail Torque, ISO 10964: M10 steel nuts and bolts | 7 N·m 60 lb.in. |
| Break loose Torque, ISO 10964: Pre-torqued to 5 N·m M10 steel nuts and bolts | 24 N·m 210 lb.in. |
| Max. Prevail Torque, ISO 10964: Pre-torqued to 5 N·m M10 steel nuts and bolts N·m | 24 N·m 210 lb.in. |
| Compressive Shear Strength, ISO 10123: Steel pins and collars | >8 N/mm ² >1,000 psi |
| Temperature Range | -55°C to 150°C |



ANAEROBIC ADHESIVES
Thread Locking Series

| PHYSICAL PROPERTIES | |
|---|-----------------------|
| Coefficient of Thermal Expansion ASTM D 696, K-1 | 80 x 10 ⁻⁶ |
| Coefficient of Thermal Conductivity ASTM C 177,W/(m-K) | 0.10 |
| Specific Heat, kJ/(kg-K) | 0.30 |

| CHEMICAL RESISTANCE | | | |
|---------------------|-------|-----------------------------|------------|
| Chemical | Temp | % Initial Strength Retained | |
| | | 500 hours | 1000 hours |
| Acetone | 22°C | 95 | 90 |
| Ethanol | 22°C | 100 | 100 |
| Motor Oil | 125°C | 95 | 95 |
| Gasoline | 22°C | 100 | 100 |
| Brake Fluid | 22°C | 100 | 100 |
| Water/Glycol | 87°C | 90 | 80 |

APPLICATION METHOD

Surfaces should be dry, clean and free of any contamination. Thread locker should be applied to the bolt in sufficient quantity to fill threads. Delta 77 performs the best in thin bond gaps. This thread locker is specifically formulated to give controlled friction and torque/tension ratio during assembly.

STORAGE

Anaerobic adhesives shall be ideally stored in a cool, dry place in unopened containers at a room temperature between 5°C to 25°C. Please do not return any unused material in its original container.

HEALTH & SAFETY

- Classification: Xi irritant
- Keep out of reach of children
- Refer to product Material Safety Data Sheet (MSDS).

LEGAL NOTE

The data contained within this Technical Data Sheet is furnished for information only and is believed to be reliable at the time of issue. We cannot assume responsibility for results obtained by others over whose methods we have no control. It is the responsibility of the customer to determine the products suitability for use. Delta Adhesives Limited accepts no liability arising out of the use of this information or the products described herein.

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