



DELTA 88

Retaining Grade High Temperature Adhesive

TECHNICAL DATA SHEET

EDITION: 19/08/08

PRODUCT CODE: D88

PRODUCT DESCRIPTION

Delta 88 is a high temperature resistance, low viscosity, high strength anaerobic retaining compound for bonding rigid assemblies. This adhesive is used to increase the strength of mechanical assemblies.

Delta 88 retaining compound is a single component anaerobic adhesive which develops high strength rapidly when confined in the absence of air between close fitting surfaces.

Meets US Military Specifications R-46082B Type II.

APPLICATIONS

- Retains bushings and sleeves in housing and on shafts.
- Retains bearings in place, preventing spin out.
- Retains rotor to shafts in fractional and sub-fractional horsepower motors.
- Retains keys and splines. Augments press fits. Restoring the fit to worn assemblies or out of tolerance parts.

ADHESIVE PROPERTIES	
Composition	Urethane Methacrylate
Colour	Green
Viscosity <small>Brookfield RVT Spindle 4 @20 rpm</small>	640 cps at 25°C
Specific Gravity	1.20
Flash Point	>93°C
Solvent Content	None
Shelf Life	1 year

CURING PROPERTIES	
Handling Cure Time	60 minutes
Functional Cure Time	3 - 4 hours
Full Cure Time	24 hours
Compressive Shear Strength, ISO 10123	
After 24 hours at 22°C	
Steel Pins & Collars	>22 N/mm ² > 3,150 psi
After 30 minutes at 22°C	
Steel pins & Collars	11 N/mm ² 1,595 psi
Temperature Range	-55°C to 200°C
Breakaway Torque, MIL-S-46163	20 to 40 N.m.
	175 to 350 lb.in.
Prevail Torque, MIL-S-46163	30 to 60 N.m.
	265 to 530 lb.in.

ANAEROBIC ADHESIVES
Retaining 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	100	100
Ethanol	22°C	100	100
Motor Oil	125°C	100	100
Gasoline	22°C	100	100
Brake Fluid	22°C	100	100
Water/Glycol	87°C	100	95

DIRECTIONS FOR USE

For Assembly

- For best results, clean all surfaces (external and internal) with D406 Surface Prep Cleaner and allow solvent to evaporate.
- If the material is inactive metal or the cure speed is too slow spray with Anaerobic Activator D405 and allow to dry.
- **For slip Fitted Assemblies** apply adhesive around the leading edge of the pin and the inside of the collar and use a rotating motion during assembly to ensure good coverage.
- **For Press Fitted Assemblies** apply adhesive thoroughly to bond surfaces and assemble at high press on rates.
- **For Shrink Fitted Assemblies** the adhesive should be coated onto the pin, the collar should then be heated to create sufficient clearance for free assembly.
- Parts should not be disturbed until sufficient handling strength is achieved.

For Disassembly

- Apply localized heat to the assembly to approximately 250°C. Disassemble while hot.



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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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