

Fusor[®] 380NS/383NS Adhesive

Technical Data Sheet

Fusor[®] 380NS/383NS adhesive is a two-component, rapid-cure epoxy adhesive system used to bond fiberglass reinforced plastics (FRP), sheet molded compounds (SMC) and metals.

Features and Benefits:

Excellent Adhesion – provides load-bearing properties equal to or greater than the materials being bonded; phosphatizing and E-coat bake cycles do not affect the cured adhesive.

Environmentally Resistant – provides excellent resistance to moisture, sunlight, salt spray and thermal cycling.

Durable – provides exceptional impact resistance and durability.

Non-Flammable – contains no solvent and is non-flammable.

Application:

Surface Preparation – Remove soil, grease, oil, fingerprints, dust, mold release agents, rust and other contaminants from the surfaces to be bonded. On metal surfaces which are free of oxidation, use an isopropyl alcohol wipe.

Mixing – Mix Fusor 380NS resin with proper amount of Fusor 383NS hardener using automatic meter/mix/dispense equipment with a 3/8-inch diameter 24 element static mixer. To control the adhesive bondline thickness during prototyping or evaluation of the adhesive, add a few solid glass beads to the mixed adhesive.

Applying – Apply adhesive using automatic meter/mix/dispense equipment. The recommended film thickness of Fusor 380NS/383NS adhesive should be approximately 0.030 inch (0.762 mm).

Curing – Handling strength of adhesive is achieved in approximately 2 hours at room temperature, provided that the adhesive, substrate and ambient temperatures are 65°F (18°C) or higher. Complete cure will take 24 hours at room temperature. Fusor 380NS/383NS adhesive can also be cured in a bonding fixture at temperatures up to 325°F (163°C). The higher the temperature, the faster the cure rate. Once cured, adhesive may be filed, sanded, machined and painted.

Cleanup – Once the adhesive begins to harden, remove adhesive squeeze-out with a dry knife blade or similar device.

Shelf Life/Storage:

Shelf life is two years from date of manufacture when stored at 77°F (25°C) in original, unopened container.

Typical Properties*

	380NS Resin	383NS Hardener
Appearance	Off-white Paste	Black Paste
Viscosity, cP @ 77°F (25°C) Brookfield HBF, Heliopath, 5 rpm T-bar Spindle E	750,000 - 2,200,000	500,000 - 2,500,000
Density lb/gal (kg/m ³)	12.55 - 12.95 (1503.8 - 1551.8)	11.5 - 12.5 (1378.0 - 1497.8)
Flash Point (Closed Cup), °F (°C)	>200 (>93)	>200 (>93)

*Data is typical and not to be used for specification purposes.



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Cautionary Information:

Before using this or any Parker LORD product, refer to the Safety Data Sheet (SDS) and label for safe use and handling instructions.

For industrial/commercial use only. Must be applied by trained personnel only. Not to be used in household applications. Not for consumer use.

Typical Mixed Properties*

Mix Ratio, Resin to Hardener by Volume	1:1
by Weight	1:0.95
Working Time, minutes @ 75°F (24°C)	>20
@ 104°F (40°C)	10-15
Time to Handling Strength, hours @ >65°F (81°C)	2
Mixed Appearance	Gray Paste

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Typical Cured Properties*

Tensile Strength at Break, psi (MPa) ASTM D638	3,600 - 4,500 (24.8 - 31)
Young's Modulus, psi (MPa) ASTM D638	700,000 - 800,000 (4826.3 - 5515.8)
Glass Transition Temperature (T _g), °F (°C) ASTM D882-63A, modified	194 (90)
Water Absorption, % ASTM D570-81	<1
Shrinkage, % Cured 30 minutes @ 300°F (149°C)	0.4

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Values stated in this document represent typical values as not all tests are run on each lot of material produced. For formalized product specifications for specific product end uses, contact the Customer Support Center.

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