



## BETAFORCE™ 2850L

### Structural Adhesive

#### Description

BETAFORCE™ 2850L is structural two component polyurethane adhesive with long open time at room temperature. This product is designed for hybrid applications where bigger differences are expected in the thermal expansion of dissimilar materials and a longer open time is required.

#### Benefits

BETAFORCE™ 2850L integrates unique properties like high modulus, high strength and optimized elongation in one system. The system provides industry leading retention of mechanical properties over a wide temperature range. BETAFORCE™ 2850L is ideal for dissimilar material bonding where differences are expected in the thermal expansion of structural materials.

#### Application Technique

BETAFORCE™ 2850L can be dispensed from bulk containers into standard meter mix equipment. The proper mix ratio is in turn dispensed manually or robotically through a static mixer equipped gun. Seal materials should be fabricated from Viton or UHMWPE.

#### Packaging

BETAFORCE™ 2850L is available in 5 gallon metal pails. Two-component cartridges (290 ml tubes) are also available.

#### Storage and Use Temperature

BETAFORCE™ 2850L must be stored in dry containers at temperatures below 90°F (32°C). Product stored below 60°F (15.5°C) should be warmed to room temperature before using.

#### Safety Precautions

Keep away from heat, sparks and open flame. Use only with adequate ventilation. Avoid breathing vapors. If swallowed, call physician immediately. For eye contact, flush with water for 15 minutes and get medical attention. For skin contact, wash with soap and water. Refer to Material Safety Data Sheet for details.

#### Storage Stability

Shelf life is dependent upon storage temperature of the material. Shelf stability is assured for 180 days from date of manufacturing for pail and drum packaging and 90 days in unopened cartridges.

#### Cleaning

Uncured BETAFORCE residues can be removed with BETACLEAN 3000 or BETACLEAN 3900. Cured BETAMATE residues can only be removed mechanically.

#### Bonding Surface Preparation

All surfaces must be free from dirt, dust, grease and oil. Cleaning and priming steps may be needed for uncoated metals and some thermoplastic and thermoset materials.

Uncured Physical Properties	A: 2850L	B: 2850L
Composition	PMDI Prepolymer	Polyol Curative
Appearance	Black	White
Weight per Volume, lbs/gal (g/ml)	9.77 (1.17)	11.9 (1.43)
Viscosity; Extrusion rate (Ballan) 4 bar/2mm nozzle	~30 g/min.	~31 g/min.
Processing Considerations		
Mixing Ratio (parts by volume)	1:1 +/- 0.05	
Open time	Approx. 30-35 min.	
Cure	24 hours @ 23° C	
Mechanical Properties		
Lap Shear Strength	Approx. 11 MPa, bond thickness 2.0mm	
Tensile Strength (ASTM D 412-2006a)	Approx. 10 MPa	
Elongation at Break (ASTM D 412-2006a)	Approx. 115%	
E-Modulus (ASTM D 412-2006a)	Approx. 27 MPa	

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