



45036/56666 DOUBLE/BUBBLE® D-85 Urethane Blue

45036/56666 (DOUBLE/BUBBLE® D-85) is a rigid, two-component, extra fast setting, polyurethane structural adhesive. It displays an excellent combination of shear strength and peel strength, with good impact resistance. It is highly recommended for bonding engineering thermoplastics, SMC, laminated surfaces and repair of reaction injection molded parts. 45036/56666 is recommended for the following substrates: Metal, Carbon Steel, Stainless Steel, Aluminum, Tin, Plastic, Epoxy, Polyester, Phenolic, Urethane, Stone, Glass, Ceramic, and Leather. 45036/56666 can be used to repair urethane parts. It is recommended for repair of rubber hoses and flexible electrical connections. 45036/56666 is available in the unique DOUBLE/BUBBLE® job sized package as reorder no. 04023.

Technology / Base	Polyurethane
Type of Product	Structural Adhesive
Components	Two Component
Curing	Room Temperature (secondary thermal cure)
Appearance / Color	Off-White
Consistency	Liquid

Features and Benefits

- Excellent impact performance
- High tensile, shear and peel strength
- Fast setting time
- Bonds a wide variety of substrates. Excellent for bonding metal, engineering thermoplastics, SMC, laminated surfaces, urethane, stone, glass, ceramic, leather and reaction injection molded parts

Technical Data

Rheology	Value	Condition/Method
Viscosity - Part A	18000	at 25°C
Viscosity - Part B	4000	at 25°C
Viscosity - Mixed	11000	at 25°C
Uncured Material Characteristics		
Volume Mix Ratio	100 to 78	
Weight Mix Ratio	100 to 100	
Specific Gravity	1.26	
Gel Time	4 min	at 25°C
Handling Time	1 hr	at 25°C
Full Cure	24 hrs at 25°C (77°F).	4 g The cure schedule is dependent upon the temperature. The recommended cure schedule will vary with the desired properties. Various heat-cure profiles may produce suitable results.
Operating Temperature	93°C (200°F)	
Shelf Life	12 months unopened	
Cured Mechanical Properties		
Hardness	80 to 85 Shore D	ASTM D2240
Tensile Strength	2600 to 3300 psi	ASTM D638, 25°C 50% RH
Elongation at Break	80 to 120%	ASTM D638, 25°C 50% RH
Overlap Shear Strength		
Aluminum, Acid Etched at 25°C	4296 psi	ASTM D1002, 24 hr at 25°C 50% RH
Aluminum, Acid Etched at -40°C	3569 psi	ASTM D1002, 24 hr at 25°C 50% RH
Aluminum, Acid Etched at 82°C	487 psi	ASTM D1002, 24 hr at 25°C 50% RH
Aluminum, Acid Etched at 149°C	361 psi	ASTM D1002, 24 hr at 25°C 50% RH
Tear Strength	250 to 800 pli	
T-Peel Strength		
T-Peel Strength at 25°C	15.1 pli	ASTM D1876, Al/Al, 24hr 25°C 50%RH
T-Peel Strength at -40°C	4.4 pli	ASTM D1876, Al/Al, 24hr 25°C 50%RH
T-Peel Strength at 82°C	4.5 pli	ASTM D1876, Al/Al, 24hr 25°C 50%RH



General Instructions

The individual components containing fillers should be stirred or agitated without introducing excessive air before use to ensure that all fillers are properly dispersed. To obtain the best cured properties, accurate proportioning and thorough mixing are essential. The production of the desired polyurethane requires accurate measurement of the two components and adequate mixing. In general, hand-mixing small production runs is easily accomplished by weighing the two components. Machine mixing utilizes the volumetric ratio. Most machines are calibrated by weighing the components and adjusting the volume ratio. Larger volume hand mixing is easily controlled by filling pre-measured buckets to the indicated heights. When using meter-mixed dispense equipment (MMD) machines, reservoir should be blanketed with nitrogen or dry air to avoid moisture and other contamination. Avoid contamination with oxidized metals (such as copper, brass, or mild steel), and rust or other metal oxides. The stability of the product is greatly reduced by materials such as strong acids or bases, sulfur compounds, amines, or reducing agents of any type. Surfaces to be bonded must be clean, dry and free from grease, oil, wax, weak oxide films and other contaminants.

Handling and Clean-Up

See SDS for handling and clean-up information.

Storage

These materials should be stored in a dry environment within a moderate temperature range. Extended exposure to temperatures above 35°C begins to degrade resin. Keep materials dry and free of moisture. Avoid exposing either component to moisture. Purge the container with dry air before closing to maintain the storage life. When using meter-mixed dispense equipment (MMD) machines, reservoir should be blanketed with nitrogen or dry air to avoid moisture and other contamination. Avoid contamination with oxidized metals (such as copper, brass, or mild steel), and rust or other metal oxides. The stability of the product is greatly reduced by materials such as strong acids or bases, sulfur compounds, amines, or reducing agents of any type.

Specifications and Approvals

Safety and Disposal

See SDS for safety and disposal information.

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Date Modified: 01 June 2019

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