

10-2080 10-2080 HV 80 Shore D Polyurethane Adhesives

DESCRIPTION:

The 10-2080 and 10-2080 HV were developed to produce general purpose, semi rigid polyurethane adhesives for bonding a wide variety of plastic and metal substrates. The flexibility of these adhesives allows bonding to substrates with high coefficients of thermal expansion (CTE) and substrates with different CTE's.

The same isocyanate (iso) component is used separately with each polyol at a convenient 1:1 ratio by volume. The selection of polyol determines the initial viscosity of the adhesive. 10-2080 produces a light paste consistency similar to honey and 10-2080 HV produces a heavy paste consistency similar to grease. Please note each iso and polyol offer good low viscosity handling characteristics and turn thixotropic upon mixing.

Typical Product Properties:

	<u>10-2080I</u> (Iso)	<u>10-2080P</u> (Polyol)	<u>10-2080PHV</u> (Polyol-High Viscosity)
Color visual	Light Amber	Clear	Clear
Viscosity, 25°C, cps	9,000	3000	3000
Specific Gravity, 25°C	1.16	1.05	1.05

Typical Handling Properties:

	<u>10-2080I</u>	<u>10-2080P</u>	<u>10-2080PHV</u>
Mix ratio with Lab #041511I-1			
Parts by volume per 100 Iso		100	100
Parts by weight per 100 Iso		90	90
Shelf life	3 months	3 months	3 months
Mixed Viscosity		Light paste	Heavy paste
Work life @ 25°C		3-5 minutes	3-5 minutes
Handling time @25°C		25 minutes	25 minutes
Full cure time		24 hours	24 hours

Typical Cured Properties

Hardness, Shore D	75-80
Dielectric Strength, V/mil, 1/8 inch	>400
Insulation resistance, ohms, 25°C	2.4 x10-11
Thermal Conductivity, btu·in/hr·ft ² ·°F	0.80



TYPICAL BOND STRENGTH

While complete chemical curing of the adhesive could take several days bond strengths are reached quickly. Generally, most substrates reach one half of their final bond strength in 3 hours or less. Typical lap shear values on substrates abraded with fine sand paper:

Aluminum	1100 psi
Cold rolled steel	1200 psi
Stainless Steel	600 psi
Polycarbonate	400 psi
Acrylic	350 psi
Polyvinylchloride	250 psi
Nylon	250 psi

INSTRUCTIONS FOR USE:

Make sure all substrates to be bonded are prepared, clean and dry. Adhesive should be applied and arranged in its final configuration in 3-5 minutes. The set time is application specific but we do not recommend less than 25 minutes. The bond strength may be decreased by early handling.

In order to get thorough mixing and avoid excessive air entrapment these products should be mixed through static mix tubes or automatic meter mix equipment. Applying the adhesive in the presence of water may also produce carbon dioxide which will appear as bubbles during cure.

AVAILABILITY:

These adhesives are generally supplied in 50, 75, 200 and 400ml side by side TriggerBond® cartridges. They may also be obtained in bulk but should be dispensed through automatic meter mix equipment.

IMPORTANT:

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10/13