

3M

Scotch-Weld™ Urethane Adhesive DP-620NS, Black

Technical Data

June, 2003

Product Description

3M™ Scotch-Weld™ Urethane Adhesive DP-620NS is a black, long working time, two-component polyurethane. Formulated as 1:1 ratio liquids. With the squeeze of the trigger, or with automated dispensing, the components are automatically mixed and dispensed through a static mixer tip as a bubble-free, non-sag paste. At room temperature the mixture will set within 4 hours and fully cure in forty-eight hours at room temperature. Cure can be accelerated with heat.

Suggested Applications

- Prototype building
- Limited production run assembly
- Bonding of dissimilar substrates
- Replaces spot welding, screws, and nails in fixtured assemblies
- High tensile strength adhesive applications

Features

- Automatic one-step mixing and dispensing decreases waste
- Odorless application
- Virtually no shrinkage
- Balanced, low viscosity, liquid components form easy to use, non-sag paste when dispensed
- Exceptional bond strength from unfilled urethane system
- Does not become brittle at low temperatures
- Withstands a wide range of temperatures
- 100% urethane
- Bonds to wood, metal, plastic, fiberglass, ceramic and most substrates

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Urethane Adhesive
DP-620NS, Black

Typical Properties

Note: The following technical information and data should be considered representative or typical only and should not be used for specification purposes.

Test	Conditions	Test Method	Properties
Viscosity Mix	77°F (25°C)	HBDVI+CP	non-sagging
Work Life	77°F (25°C), 1/4" thick by 1/2" wide bead	PEC	20 minutes
Cure Time	77°F (25°C)	PEC	48 hours
Lap Shear Strength on: Aluminum	7 days @ 77°F (25°C)	ASTM D1002-72	2,500 psi
Temperature Range	Continuous	PEC	-60°F (-51°C) to 250°F (121°C)

Installation

SECTION 1: PREPARATION

Preparation of Substrate For Bonding

1. Remove all debris, old caulks, grease and waterproofing compounds from bonding or repair surface. Grind away any absorbed oils to ensure a clean surface.
2. Clean the bonding or repair surface with sandpaper or a bristle brush and use moisture and oil-free compressed air to blow away debris. Mask off area surrounding repair or bond area, if a defined bond area is required.

Preparation of Cartridges:

1. Select the desired manual or pneumatic dispenser or automated machinery and mix tip.
2. Cut the blind-end off of the cartridge orifice or remove the plugs and place the cartridge in the dispenser.
3. Dispense just enough material so that both components dispense equally.
4. Assemble the mix tip onto the cartridge.
5. Lay the dispenser with the mix tip-end facing downward.

SECTION 2: PROCEDURES

General Procedure for Bonding in Production Processes:

1. Adjust the mixer tip to provide a dispense at the deepest portion of any bonding area.
2. Dispense onto the prepared surface or into the prepared cavity, depression, void, groove or crack and slightly over-fill.
3. Within 20 minutes after the start of dispensing, mate the prepared substrates to be bonded.
4. At 75°F (24°C), a 1/4"-thick section fully cures in 48 hours and cure can be accelerated with external heat. **Note:** Thicker masses or substrates at higher temperature take less time to cure. Thinner masses or substrates at lower temperature take more time to cure.

SECTION 3: CLEAN-UP AND FINISHING

1. Remove the masking tape surrounding the bonding areas.

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Storage Product has a shelf life of 6 months when properly stored in unopened packages at temperatures of 65° to 85°F (18° to 30°C). Do not expose to excessive cold or moisture.

Maintenance No maintenance is required. However, if repairs become damaged, simply remove damaged area then clean and reapply 3M™ Scotch-Weld™ Urethane Adhesive DP-620NS.

Precautionary Information Refer to Product Label and Material Safety Data Sheet (MSDS) for health and safety information before using this product. For environmental information, refer to MSDS. Always wear gloves, eye protection, appropriate respiratory protection, and work in a well-ventilated area. For additional health and safety information, call 1-800-364-3577 or (651) 737-6501.

For Additional Information To request additional product information or to arrange for sales assistance, call toll free 1-800-362-3550 or visit www.3M.com/adhesives. Address correspondence to: 3M Industrial Adhesives and Tapes Division, Building 21-1W-10, 900 Bush Avenue, St. Paul, MN 55144-1000. Our fax number is 651-778-4244. In Canada, phone: 1-800-364-3577. In Puerto Rico, phone: 1-787-750-3000. In Mexico, phone: 52-70-04-00.

Product Use All statements, technical information and recommendations contained in this document are based upon tests or experience that 3M believes are reliable. However, many factors beyond 3M's control can affect the use and performance of a 3M product in a particular application, including the conditions under which the product is used and the time and environmental conditions in which the product is expected to perform. Since these factors are uniquely within the user's knowledge and control, it is essential that the user evaluate the 3M product to determine whether it is fit for a particular purpose and suitable for the user's method of application.

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ISO 9002

This Industrial Adhesives and Tapes Division product was manufactured under a 3M quality system registered to ISO 9002 standards.

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