

Fusionbond® 3780-05**Product Description**

Hernon® Fusionbond® 3780-05 is a high-performance, two-component methacrylate adhesive that cures at room temperature with a 1:1 mix ratio. Engineered with advanced technology, this next-generation formula delivers strong, durable bonds while significantly reducing odor for improved user experience.

Fusionbond® 3780-05 offers a working life of 5 to 10 minutes. Once cured, it delivers durable performance across a broad temperature range of -67°F to 250°F.

Designed for versatility, **Fusionbond® 3780-05** effectively bonds a wide range of substrates such as various metals and some plastics such as acrylic and fiberglass.

Product Features:

- Formula fills gaps up to 0.125 inches
- High shear strength with high resistance to environmental factors
- Low odor formula

Typical Properties (Uncured)

Property	Part A	Part B
Chemical Type	Methacrylate	Methacrylate
Appearance	Amber	Yellow
Specific gravity	1.06	1.06
Viscosity at 25°C, cP	30,000 to 60,000	30,000 to 60,000
Mix ratio (by weight)	1	1

Typical Curing Performance

Property	Value
Working time, minutes	5-10
Fixture time*, using G/B steel, minutes	<5

*Fixture time is defined as the time to develop a shear strength of 0.1 N/mm².

Typical Properties (Cured)

Property	Value
Hardness, ASTM D2240, Shore D	80-90
Glass Transition Temperature (Tg) °C	68
Elongation, tensile strain at break, %	8.12
Modulus, psi	85,714

Typical Cured Performance

Shear Strength, ASTM D1002
Grit-blasted lap-shear specimens

Substrate	Cure at 22°C	Value, psi
Steel	24 Hours	3,500-4,500
Aluminum	24 Hours	3,000-3,500
Fiberglass (FR4)	24 Hours	780

General Information

This product is not recommended for use in pure oxygen and/or oxygen rich systems and should not be selected as a sealant for chlorine or other strong oxidizing materials.

For safe handling information on this product, consult the Safety Data Sheet (SDS).

Handling and Application

Mixing: It is highly recommended that either meter mix equipment or cartridges with static mix nozzles be used to properly ratio and dispense the adhesive. For hand mixing, combine Part A and Part B in the correct ratio and mix thoroughly. Heat buildup during and after mixing is normal. *Mixing smaller amounts will minimize heat buildup.

Applying: Bonding surfaces should be clean, dry, and free of contamination. To assure maximum bond strength, surfaces must be mated within the adhesive's open time. Use enough material to completely fill the joint when parts are clamped.

Curing: Parts should remain undisturbed during the interval between the adhesive's open time and fixture time. After the fixture time is achieved the material has reached handling strength. Cure temperatures below room temperature (70°F to 75°F) will slow the fixture time. Temperatures above room temperature will shorten the open-time and the fixture time.

Hernon® Technical Data Sheet

Fusionbond® 3780-05

Clean Up: It is important to clean up excess adhesive from the work area and application equipment before it cures.

Use **Hernon® Cleaner 62** for removing uncured adhesive. Keep containers tightly closed after use. Keep away from heat, sparks, and open flames.

Storage

Fusionbond® 3780-05 should be stored in a cool, dry location in unopened containers at a temperature between 45°F and 75°F (7°C and 24°C) unless otherwise labeled. Shelf life can be extended by refrigeration from 45°F to 55°F (7°C to 13°C). To prevent contamination of unused material, do not return any material to its original container.

Dispensing Equipment

Hernon® offers a complete line of semi and fully automated dispensing equipment. Contact **Hernon® Sales** for additional information.

These suggestions and data are based on information we believe to be reliable and accurate, but no guarantee of their accuracy is made. HERNON MANUFACTURING, INC., shall not be liable for any damage, loss or injury, direct or consequential arising out of the use or the inability to use the product. In every case, we urge and recommend that purchasers, before using any product in full scale production, make their own tests to determine whether the product is of satisfactory quality and suitability for their operations, and the user assumes all risk and liability whatsoever, in connection therewith. Hernon's Quality Management System for the design and manufacture of high-performance adhesives and sealants is registered to the ISO 9001 Quality Standard.