

## Brake Bonder 362

### Product Description

**Hernon® Brake Bonder 362** is a black heat curing, nitrile/phenolic solvent-based adhesive. Cured **Brake Bonder 362** furnishes excellent resistance to thermal shock, chemicals, and water. The cured bond withstands temperatures exceeding 600°F (315°C). The primary application for **Brake Bonder 362** is bonding brake, clutch, and other friction materials to metal.

### Product Benefits

- Single component
- Excellent resistance to high temperature, chemicals, and water
- Flexible, thermal shock resistant bond
- Excellent adhesion
- High strength at room temperature and elevated temperatures.

### Typical Applications

- Friction materials (brakes, clutches, etc.) to metal
- Aluminum, steel, and other metals to themselves and each other.

### Typical Properties (Uncured)

Property	Value
Base	Nitrile Phenolic
Solvent	Methyl Ethyl Ketone
Appearance	Black Liquid
Viscosity @ 25°C, cP	4,000 to 6,000 <sup>1</sup>
Specific gravity	0.94
Flash point	See SDS
Solid Content %	30- 39

<sup>1</sup> Viscosity may increase over time. It may be necessary to add a small amount of solvent to adjust the viscosity of aged material.

### Typical Properties (Cured)

Bar Disc Shear strength, tested according to SAE J840

Temperature	Shear Strength, psi
73°F (22°C)	2500 - 4500
400°F (204°C)	500 - 1500

### General Information

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

#### Directions for use

##### Application

1. Clean surfaces to be bonded. Metal should be degreased and grit-blasted.
2. Apply **Brake Bonder 362** to friction surface to be bonded. The dry film thickness should be 0.008 to 0.015 in. (0.20 to 0.38 mm). Wet film thickness - 0.025 to 0.045 in. (0.635 to 1.140 mm), depending upon the coverage pattern used.
3. After final coat has been applied, allow to dry 24 hours before bonding or allow to dry 10 minutes and pre-bake at 180 to 190°F (82 to 87°C) for 30 minutes before bonding. Adhesive **MUST** be fully dried before bonding. The following points about drying should be kept in mind.

- Adhesive patterns having the greatest surface area will dry best.
- The solvent evaporation rate from a heavy adhesive coating is much slower.
- Humidity affects solvent evaporation rates. This can cause a drying problem during summer months. Normal drying cycles may require seasonal adjustments to provide adequate drying.
- The adhesive will dry faster on soft lining and slower on hard linings due to solvent escape through the lining.

### Curing

1. **Brake Bonder 362** can be cured using an oven, press cure, or dielectric cure. Oven-type heating unit, whether infrared, gas or electric, should maintain even temperature and have adequate air circulation. Pressure jigs are used to force the gas and vapors out of the adhesive during bonding. If there is not enough pressure or full contact the bond will be weak and spongy.
2. Jigs must keep pressure constant during cure. Because adhesive thickness decreases approximately 0.003 in. (0.076 mm) during cure, relaxation of pressure will cause a weak, spongy bond.
3. Uniform pressure must be exerted on full surface of lining to avoid slipping (cocking) of the lining of the shoe.
4. Pressure may vary between 75 and 150 psi (5.3 and 10.6 kg/cm<sup>2</sup>) depending on type of lining used.
5. For brake and non-brake shoe applications a minimum cure cycle of 30 minutes at 400°F is recommended while under constant pressure.

### Clean up

1. Prior to cure, the adhesive can be removed with MEK. Work should be done in a well-ventilated area.
2. Following cure, the adhesive will be resistant to basically all solvents. The only practical means of cleaning a cured adhesive is with some type of abrasion.

### Storage

**Brake Bonder 362** should be stored in a cool, dry location in unopened containers at a temperature between 40°F to 60°F (4°C to 16°C) unless otherwise labeled. Optimal storage is at the lower half of this temperature range. 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.

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