



PROTAVIC METASIL 5002

FLEXIBLE ADHESIVE/SEALANT

PROTAVIC METASIL 5002 is a one-part silicone rubber designed for high performance mechanical sealing and bonding. It is a thixotropic paste designed for the formation of tough, rubbery bonds between most engineering materials such as aluminum, glass, nickel, steel, stainless steel, tin, titanium, acrylate, polycarbonate, polyester, polystyrene and silicone rubber itself. The high peel strength, high tear strength, electrical insulation, weatherability, resistance to vibration, ozone and moisture provide reliability in high performance applications including sealing pressurized aircraft cabins, bonding silicone rubber gaskets, metal bonding, sealing electrical and electronic equipment, sealing windows in hot and cold environments and attaching nameplates, brackets and trim materials to machines, fabrics and plastic housings.

Curing is affected by relative humidity, degree of confinement, porosity of the substrate and cross-sectional thickness of the silicone. On exposure to air, curing forms a skin on the surface and then progresses through the material. At 77°F and 50% relative humidity, a tack-free skin is formed within 20 minutes. Tooling is not practical after skin formation and should be completed within 10 minutes of application. Sections up to 0.125 inches become rubbery solids in 24 hours at 77°F. For thicknesses over 0.25 inches, our two-component silicone rubber compounds avoid prolonged curing periods. Lower temperature and humidity decrease the rate of cure. Higher temperature and humidity accelerate the cure. During curing, acetic acid vapors release from the surface. When cure is complete, the odor disappears. If required, cured product can be repaired easily with fresh sealant.

TYPICAL PROPERTIES

| | |
|-----------------------------|----------------|
| Color | Translucent |
| Form | Soft Paste |
| Viscosity (25°C), cP | Thixotropic |
| Specific Gravity (25°/25°C) | 1.08 |
| Flash Point, °F | Not applicable |

PRODUCT USER DATA

| | |
|--------------------------|-------|
| Slump | None |
| Skin Over time, minutes | 20 |
| Tack-free time, hours | 1 |
| Cure time (77°F, 50% RH) | |
| Handling strength, hours | 12-24 |
| Full Cure, days | 7 |

DIRECTIONS FOR USE

A. Preparation

1. The substrate should be thoroughly cleaned with solvent to remove dust, oil, moisture and any protective coatings. Suitable solvents include nonoily grades of MEK (methyl ethyl ketone), naphtha, 1,1,1-trichloroethane and isopropyl alcohol. Follow manufacturer's safety procedures for use of any solvent.

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- 2. Scrub and rinse the substrate.
- 3. Wipe all solvents completely from surfaces to be bonded.

B. Application

- 1. To achieve highest adhesion, clean and dry surfaces as above.
- 2. Apply **PROTAVIC METASIL 5002** as it comes from the container.
- 3. If using a cartridge container, cut the nozzle at a slight angle with a sharp tool. Apply with a sharp tool. Apply with a forward stroke, pushing the adhesive/sealant ahead of the nozzle forcing it into position.
- 4. Remove excess and complete tooling within 10 minutes after application.

C. Limitations

- 1. **PROTAVIC METASIL 5002** is not recommended for surfaces which chalk or bleed oil or solvents.
- 2. Silicone adhesive sealants are generally not paintable.
- 3. Adhesive strength may be low when used with certain plastics which contain migratory plasticizers such as PVC.

TYPICAL CURED STATE PROPERTIES (after 7 days at 77°F)

| | | | |
|------------------------------|------------------|--------------------------------|------------|
| General | | Mechanical | |
| Color | Translucent | Ultimate Tensile Strength, psi | 650 |
| Form | Rubbery solid | Elongation at Break, % | 400 |
| Specific Gravity (25°C/25°C) | 1.07 | Tear Strength (Die B), ppi | 70 |
| | | Hardness (Shore A) | 30 |
| Electrical | | Thermal | |
| Dielectric Constant (1000Hz) | 2.95 | Operating Range, °F | -40 to 450 |
| Volume Resistivity, ohm·cm | 10 ¹² | | |
| Dielectric Strength, Kv/in | 440 | | |

STORAGE

Store inside in a cool, dry, well-ventilated location. Avoid outdoor and other high humidity areas. Avoid storage over 90°F. Avoid oxidizers.

HANDLING PRECAUTIONS

Read Material Safety Data Sheet before handling. Keep containers tightly closed when not in use. These products are chemicals. Observe good industrial hygiene practices. Avoid breathing vapors. Irritation may result from repeated skin contact. Avoid use of contact lenses. Prevent eye contact. Use proper ventilation, goggles and protective clothing. In case of accidental skin contact, wash the affected area with soap and water. Contaminated clothing should be promptly removed and thoroughly cleaned. Wash thoroughly after handling and before eating, drinking, smoking or using the toilet. OSHA regulations have established a TWA for acetic acid at 10 ppm.

AVAILABILITY

For direct application: 6 oz .cartridges.
For application with bulk dispensing equipment: 1 and 5 gallon pails.