



ITW Performance Polymers
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Technical Data Sheet

Permatex® Black Silicone Adhesive Sealant

AAM Revised 11/15

PRODUCT DESCRIPTION

Permatex® Black Silicone Adhesive Sealant (low odor formula) is a general purpose, single component, room temperature vulcanizing (RTV) compound, designed for the sealing of mechanical assemblies. Upon curing from the exposure to moisture in the air, this non-sagging paste forms a tough, flexible, waterproof seal of silicone rubber, which resists aging, weathering and thermal cycling without hardening, shrinking or cracking. **Note: Not recommended for engine gasketing applications or windshield installation.**

PRODUCT BENEFITS

- Low odor formula
- Easy application
- Applied to horizontal or vertical surfaces
- Superior adhesion and flexibility
- Waterproofs
- Insulates
- Unaffected by vibration
- Non-flammable
- Non-toxic

TYPICAL APPLICATIONS

Permatex® Black Silicone Adhesive Sealant is an excellent all-purpose adhesive/sealant for the following materials:

- Metal
- Glass
- Wood
- Most plastics (excluding polyethylene and polypropylene)
- Silicone resin
- Vulcanized silicone rubber
- Ceramics
- Natural and synthetic fibers
- Painted surfaces

Bonds, seals, repairs, mends, and secures:

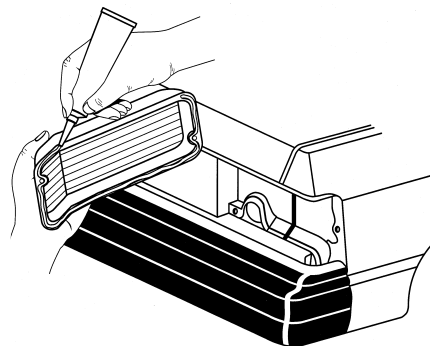
- Lens Housings
- Windshields (for sealing only; not for installation)
- Windows
- Door frames
- Housings and covers

DIRECTIONS FOR USE

For Assembly

1. Remove all previous material from mating surfaces. Permatex®
2. For best results, clean and dry all surfaces with a residue-free solvent.
3. Cut nozzle to desired bead size, 1/16" to 1/4" in diameter. A 1/8" bead is usually sufficient for most applications.

4. Remove cap, puncture tube or cartridge seal and attach extension nozzle.
5. Apply a continuous and even bead of silicone to one surface, as shown below:



6. Assemble parts immediately while silicone is still wet. Secure or tighten as required, avoiding excessive squeeze-out.
7. Pressure should be applied to parts for 24 hours until the silicone is fully cured.

For Storage and Cleanup

1. Allow excess material to extend beyond the extension nozzle to cure, sealing and protecting the remaining product from moisture. For reuse, simply remove the cured product from the tip.
2. Remove uncured product from parts and hand-tools with a dry cloth, if skinned over, break film with a dry cloth to remove as much as possible, and remove the remaining material with Permatex® Gasket Remover (**not for use on painted surfaces**) as previously stated.
3. Clean hands with a dry cloth or Permatex® Fast Orange® hand cleaner.

PROPERTIES OF UNCURED MATERIAL

	Typical Value
Chemical Type	Oxime silicone rubber
Appearance	Black non-sag paste
Odor	Mild
Specific Gravity	1.42
Extrusion rate @ 25°C, (grams/min)	>250
Flash Point TCC °C (°F)	>93 (>200)

TYPICAL CURING PERFORMANCE

Permatex® Black Silicone Adhesive Sealant cures on exposure to moisture in the air. The product dries tack free in 1 hour and fully cures in 24 hours. Cure times will vary with temperature, humidity and gap.

PERFORMANCE OF CURED MATERIAL

After 7 days at 25°C (77°F), 50% Relative Humidity

	Typical Values	
Hardness (Shore A)	>18	
Elongation, %*	>350	
Tensile Strength, N/mm ² (psi)**	>1.2	(>170')

*Material will stretch 3.5 times its original length before breaking.

**Amount of force required to break material.

TYPICAL ENVIRONMENTAL RESISTANCE

Temperature Resistance Typical Values

Continuous, °C (°F)	-59 to 232	(-75 to 450)
Intermittent, °C (°F)	-59 to 260	(-75 to 500)

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 Material Safety Data Sheet, (MSDS).

ORDERING INFORMATION

Part Number	Container Size
81173 (16C)	12.9 oz. cartridge

STORAGE

Products shall be ideally stored in a cool, dry location in unopened containers at a temperature between 8° and 28°C (46° and 82°F) unless otherwise labeled. Optimal storage is at the lower half of this temperature range. To prevent contamination of unused product, do not return any material to its original container.

NOTE

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