



ITW Performance Polymers  
30 Endicott Street  
Danvers, MA 01923  
(855) 489-7262

## Technical Data Sheet

# Permatex® Optimum Grey® RTV Silicone Gasket

AAM  
(Revised 05/20)

### PRODUCT DESCRIPTION

Permatex® Optimum Grey® is a single component, room temperature vulcanizing gasketing compound designed to provide reliable “formed-in-place” gaskets for mechanical assemblies. This material cures on exposure to moisture in the air to form a tough, flexible, silicone rubber gasket. The product resists aging, weathering and thermal cycling without hardening, shrinking or cracking. Permatex® Optimum Grey® is the most advanced high performance, high temperature (up to 700°F intermittent) RTV gasket available.

### PRODUCT BENEFITS

- High temperature resistance
- Sensor safe, non-corrosive
- Superior adhesion and flexibility
- Replaces most cut gaskets
- Improved oil resistance
- Can be used as a gasket maker or dressing
- Non-flammable, Non-toxic
- Low odor

### TYPICAL APPLICATIONS

- Pumps
- Compressors
- Exhaust manifolds/headers
- Valve covers
- Oil pans
- Thermostat housings
- Gearboxes

### DIRECTIONS FOR USE

#### For assembly as form-in-place gasket

1. Remove all previous material from mating surfaces. Permatex® Silicone Stripper or Gasket Remover is recommended for most materials, not for plastics or painted surfaces.
2. For best results, clean and dry all surfaces with a residue-free solvent, such as Permatex® Brake and Parts Cleaner.
3. Cut nozzle to desired bead size, 1/16 “ to 1/4 “ in diameter. An 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, first tracing the internal areas of the gasket configuration, then all surrounding bolt holes as shown below:
6. Assemble parts immediately while silicone is still wet. Secure or tighten to recommended torque specs.
7. Re-torque will not be necessary after the product has

cured.

#### For assembly as a gasket dressing

1. Repeat steps 1 through 4 as in previous section.
2. Apply a thin film of silicone to one surface to be sealed.
3. Place the pre-cut gasket onto silicone film.
4. Apply a second thin film to pre-cut gasket surface.
5. Remove any excess and assemble parts immediately.  
*Note: Product is not recommended for use as a cylinder head gasket or head gasket sealant.*

#### Storage of Unused Product

1. Create a “Silicone Plug” by allowing excess material to extend beyond the extension nozzle or aerosol tip to cure, sealing and protecting the remaining product from moisture. For reuse, simply remove the cured product from the tip.
2. For PowerBead™ dispensers, you may store remaining product using either the above “silicone plug” method or using the included plastic cap.

#### For Cleanup

1. Remove uncured product from parts and hand-tools with Permatex® Fast Orange® Wipes or Fast Orange® Hand Cleaners. If skinned over, break film with a dry cloth to remove as much as possible. Remove the remaining material with Permatex® Gasket Remover.
2. Clean hands with a dry cloth or Permatex® Fast Orange® Hand Cleaner.

### PROPERTIES OF UNCURED MATERIAL

	Typical Value
Chemical Type	Oxime silicone rubber
Appearance	Grey non-sag paste
Odor	Low odor
Specific Gravity	1.4
Extrusion rate @ 25°C, (grams/min)	>200
Flash Point °C (°F)	>93 (>200)

### TYPICAL CURING PERFORMANCE

Permatex® Optimum Grey® Hi-Temp RTV Silicone Gasket cures on exposure to moisture in the air. The product dries tack free in two hours 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)	30-40
Elongation, %*	>300
Tensile Strength, N/mm <sup>2</sup> (psi) **	>1.72 (>250)

\*Material will stretch 3 times its original length before breaking.

NOT FOR PRODUCT SPECIFICATIONS.

THE TECHNICAL DATA CONTAINED HEREIN ARE INTENDED AS REFERENCE ONLY.

PLEASE CONTACT ITW PERFORMANCE POLYMERS TECHNICAL SERVICE DEPARTMENT FOR ASSISTANCE AND RECOMMENDATIONS FOR YOUR SPECIFIC APPLICATION.

ITW PERFORMANCE POLYMERS 30 ENDICOTT STREET, DANVERS, MA 01923 PHONE (855) 489-7262

\*\*Amount of force required to break material.

**TYPICAL ENVIRONMENTAL RESISTANCE**

**Temperature Resistance Typical Values**

Continuous, °C (°F)	-54 to 316	(-65 to 600)
Intermittent, °C (°F)	-54 to 371	(-65 to 700)

**Chemical / Solvent Resistance**

The product retains effective properties in contact with most shop fluids, automotive fluids, such as motor oil, transmission fluids, alcohol and antifreeze solutions. Note: Not recommended for parts in contact with gasoline.

**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
27036	3.35 oz. tube, carded

**STORAGE**

Products shall be ideally stored in a cool, dry location in unopened containers at a temperature between 8° to 28°C (46° to 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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