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## Technical Data Sheet

# Permatex® Ultra Blue® RTV Silicone Gasket Maker

INDUSTRIAL Revised 11/18

### PRODUCT DESCRIPTION

S.I.N.: 834-300

Permatex® Ultra Blue® RTV Silicone Gasket 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. Designed for superior bonding properties to oil contaminated metals as compared to other formed-in-place gaskets, and maintains outstanding oil resistance. NSF White Book registered.

### PRODUCT BENEFITS

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

### TYPICAL APPLICATIONS

- Pump housings
- Machine tools
- Compressors
- Gearboxes
- Transmission pans
- Valve covers
- Oil pans

### DIRECTIONS FOR USE

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

1. Remove all previous material from mating surfaces. Permatex® Gasket Remover is recommended for most materials.
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. 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 1/16 inch to 1/8 inch bead of silicone to one surface, first tracing the internal areas of the gasket configuration, then all surrounding bolt holes.

6. Assemble parts immediately while silicone is still wet.
7. Finger tighten flange only until material begins to seep out the sides of the flange.
8. Allow to set for at least two hours and re-torque at least one quarter to one half turn.
9. For best results, allow to cure overnight.

#### For assembly as gasket dressing

1. Repeat steps 1 thru 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 not recommended for use as a cylinder head gasket or head gasket sealant.*

#### Instructions for PowerBead™

1. Clean and dry all flange surfaces to be sealed.
2. Remove black cap from top of extension nozzle.
3. Turn nozzle extension one complete turn (360°) counterclockwise.
4. Depress finger trigger and apply a continuous 1/16 inch to 1/8 inch PowerBead to one surface.
5. Assemble parts immediately while silicone is still wet.
6. Finger tighten flange only until material begins to seep out the sides of the flange.
7. Allow to set for at least two hours and re-torque at least one quarter to one half turn.
8. For best results, allow to cure overnight.
9. To close, turn extension nozzle clockwise until tight (about one full turn). Wipe off excess material from nozzle and replace black 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.

#### 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.

NOT FOR PRODUCT SPECIFICATIONS.

THE TECHNICAL DATA CONTAINED HEREIN ARE INTENDED AS REFERENCE ONLY.

PLEASE CONTACT PERMATEX, INC., TECHNICAL SERVICE DEPARTMENT FOR ASSISTANCE AND RECOMMENDATIONS FOR YOUR SPECIFIC APPLICATION.  
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**PROPERTIES OF UNCURED MATERIAL**

|                                    | <b>Typical Value</b>  |
|------------------------------------|-----------------------|
| Chemical Type                      | Oxime silicone rubber |
| Appearance                         | Blue non-sag paste    |
| Odor                               | Low odor              |
| Specific Gravity                   | 1.3                   |
| Viscosity                          | Thixotropic paste     |
| Extrusion rate @ 25°C, (grams/min) | 880                   |
| Flash Point °C (°F)                | >93 (>200)            |

**TYPICAL CURING PERFORMANCE**

Permatex® Ultra Blue® No-Leak 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

|   | <b>Typical Values</b> |       |
|---|-----------------------|-------|
| Hardness (Shore A)                          | 30                    |       |
| Elongation, %*                              | 360                   |       |
| Tensile Strength, N/mm <sup>2</sup> (psi)** | 1.7                   | (240) |
| Gap Fill, inch                              | 0.25                  |       |

\*Material will stretch 3.6 times its original length before breaking.

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

**TYPICAL ENVIRONMENTAL RESISTANCE**

| <b>Temperature Resistance</b> | <b>Typical Values</b> |              |
|-------------------------------|-----------------------|--------------|
| Continuous, °C (°F)           | -54 to 204            | (-65 to 400) |
| Intermittent, °C (°F)         | -54 to 260            | (-65 to 500) |

**Chemical / Solvent Resistance**

The product retains effective properties in contact with 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        |
|--------------|-----------------------|
| 81724 (77BR) | 3.35 oz. tube, carded |
| 81725 (77C)  | 13 oz. Cartridge      |
| 85519        | 9.5 oz. PowerBead     |

**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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