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## Technical Data Sheet

### Permatex® Gear Oil RTV Sealant

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#### PRODUCT DESCRIPTION

Permatex® Gear Oil RTV Sealant is a single component, room temperature, vulcanizing, gasketing compound designed to provide reliable "formed-in-place" gaskets for mechanical assemblies. The product has been specially formulated to withstand the harsh gear oil environment found in many differentials and transfer cases that destroys normal RTV materials. Normal RTV's are broken down by friction modifiers found in many gear oils and causes leaks and seepage. This specialty RTV has been tested to stringent OEM specifications to ensure complete sealing as a gasket maker. It seeks and seals leak paths that cut and molded gaskets cannot. This product can be used to seal cut gaskets. 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.

#### PRODUCT BENEFITS

- Maximum gear oil resistance
- Safe for use with friction modifiers
- Sensor safe, non-corrosive
- Good adhesion and flexibility
- Replaces most cut gaskets
- Can be used as a gasket maker or dressing
- Non-flammable
- Low odor

#### TYPICAL APPLICATIONS

- Specially designed and formulated for differentials and transfer cases

#### DIRECTIONS FOR USE

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

1. Remove all previous material from mating surfaces. Permatex® Gasket Remover is recommended for most materials but 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. A 1/8" bead is usually sufficient for most applications.
4. Remove cap, puncture tube 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.
6. Assemble parts immediately while silicone is still wet.
7. Finger tighten flange until material begins to seep out the sides of the flange.
8. Allow to set for at least one hour and re-torque one

quarter to one half turn.

9. For best results, allow to cure overnight.

##### 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 flange 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, slowly pull the cured product from the tip.

##### 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      |
| Appearance          | Grey metallic paste |
| Odor                | Mild                |
| Specific Gravity    | 1.45                |
| Viscosity           | Thixotropic paste   |
| Flash Point °C (°F) | >93 (>200)          |

#### TYPICAL CURING PERFORMANCE

Permatex® Gear Oil RTV Sealant 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)                          | 67             |
| Elongation, %*                              | 200            |
| Tensile Strength, N/mm <sup>2</sup> (psi)** | 1.7 (250)      |
| Gap Fill, inch                              | 0.25           |

\*Material will stretch 2 times its original length before breaking.

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

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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## TYPICAL ENVIRONMENTAL RESISTANCE

| Temperature Resistance | Typical Values |              |
|------------------------|----------------|--------------|
| Continuous, °C (°F)    | -54 to 232     | (-65 to 450) |
| Intermittent, °C (°F)  | -54 to 260     | (-65 to 500) |

## Chemical / Solvent Resistance

The product retains effective properties in contact with gear oil fluids. 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

|       |                     |
|-------|---------------------|
| 81182 | 3 oz. tube          |
| 81184 | 5 fl. 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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