# GAZ- GR14 Perfluorinated Polyether Synthetic Grease

GAZPRO LUBRICANTS

## Product Description:

**GAZ-GR14** is clear oils or white buttery greases available in all NLGI grades form #0 - 3. The base fluid is an extremely stable perfluorinated polyether (PFPE) oil with exceptional chemical resistance against acids and alkali, low volatility, and a wide-temperature service range. The thickening agent for the greases is a tetrafluoroethylene telomer.
**GAZ-GR14** is rust inhibited, nonflammable, chemically inert, and an excellent lubricant for high temperatures and reactive oxygen applications.

Wide Temperature Range, Chemically Inert Non Flammable Lubricants.

## Applications:

**GAZ-GR14** exhibit low temperature properties that can be used in cryogenic applications. Typical uses are to lubricate ball and roller bearings, gears, screw actuators, electrical contacts, and as an assembly lube on O-rings, and other elastomers, chemical valves, bearings with alkaline and acid exposure, and highly flammable or explosive Oxygen applications. At high-temperatures it can withstand 280ºC (536 °F) for long periods of time, up to indefinitely. **GAZ-GR14** is an ideal candidate for fill-for-life applications in the uses cited above.

Due to the chemical resistance of **GAZ-GR14** makes them ideal for use in the chemical industry because they are completely inert and non-reactive. They do not react with corrosive gases, and liquids such as chlorine, fuming sulfuric acid, and strong NaOH. They will not catch fire and are ideal for use in all Oxygen applications because they contain no Hydrogen, completely stable, and non-reactive.

**GAZ-GR14** is water white, non-reactive, non-flammable and safe for service with oxygen and chemical environments.

**GAZ-GR14** is a fully saturated chain of only carbon, oxygen and fluorine. There is no hydrogen in the molecule to form reaction products such as gums and varnishes as may occur with mineral oil and ester based products. All of GAZPRO's PFPE Oils and Greases contain a soluble rust inhibitor.

## Features and Benefits:

- **Chemically Inert** - They are not affected by chemicals, which attack other greases.
- **Non-flammable** - They will not catch fire or explode in the presence of Oxygen.
- **Low Volatility** - The low vapor pressure yields long life at high-temperatures.
- **High Volume Resistivity** - This makes them suitable for electronic applications.
- **High Viscosity Index and Low Pour Point** - These properties allow them to be used at extremely high and low temperatures.
- **No Effect on Seals, Elastomers, and Paints** - They will not swell or shrink over 95% of the commercial elastomers and seals at high temperatures. They will not attack paints.
- **Non-Toxic and Biologically Inert** - They will comply with local and Federal safety and health regulations.
- **Extremely Hydrolytically Stable** - They will not react with water even at high temperatures such as pressurized.

## Typical Properties:

| BASE OILS (RUST INHIBITED OILS) | GAZ-GR14 |
|---|---|
| **GREASE (RUST INHIBITED)** | **GAZ-GR14** |
| NLGI Grade | #2 |
| Approximate ISO VG Grade of Fluid | 460 |
| Specific Gravity - g/ml.<br>0°C (32°F)<br>100°C (212°F) | <br>1.95<br>1.78 |
| Oil Viscosity, cSt, @ (ASTM D-445)<br>40°C<br>100°C<br>20°C | <br>448 cSt<br>49.5 cSt<br>1360 cSt |
| Viscosity Index (ASTM D-2270) | 172 |
| Oil Pour Point<br>°C<br>°F | <br>-36<br>-33 |
| Operating Temperature Range<br>°C<br>°F | <br>-27 to 288<br>-17 to 550 |
| % Wt. Loss after 30 hrs. (ASTM D-972)<br>at 149°C (300°F) | <br>< 1.0% |
| 4-Ball Wear, ASTM D 2266,grease<br>20 Kg., 1200 RPM,s,1 hr. Wear in mm | <br>0.38mm |
| 4-Ball EP Weld Point, Grease<br>ASTM D-2596, Weld Load, Kg. | <br>620Kg |

## Limitations:

Although it is very inert (under certain conditions), newly exposed surfaces of aluminum and magnesium may react with the grease. Before applying the grease, the surface should be clean of any organic rust inhibitors. The mineral oil based corrosion inhibitors prevent **GAZ-GR14** from going to the surface and protecting it.