

PYROGEL[®] extended range high and low temperature ultrasonic couplant



Pyrogel provides coupling over a wide temperature range for flaw inspection, thickness gaging, flow metering and acoustic emission testing.

Temperature Operating Range

Flaw Inspection: 0° to 600°F (-17° to 315°C)
 Thickness Gaging: -50° to 800°F (-45.6° to 427°C)

Benefits

- Broadest operating range Sonotech couplant
- Resists drying, allowing long-term coupling without reapplication
- Good choice for long-term flow metering
- Long term corrosion inhibition characteristics, suitable for most metals

Safety

- Non-toxic, non-irritating
- Contains NO perfluorocarbons or fluorinated material, which can cause adverse health effects at high temperatures

Removal

Remove excess couplant by wiping with disposable rags or paper towels. For removal using aqueous solutions (non-solvent based): consider: Shocon, Aqueous Reactivator, Power Purge, Citrikleen XPC, CIS Resolve and ZEP-EZ citrus turpentine products. For more complete removal of residual films using solvents, select from the following: aliphatic hydrocarbons, aromatic hydrocarbons, higher alcohols, isoparaffins, higher ketones, ethers

Properties

Viscosity (At ambient temperature)
 Grade 7 (low viscosity fluid)~620 cps
 (BrookfieldLV, @ 2 @ 30 rpm)
 Grade 25 (fluid/high visc).....~150,000 cps
 (Brookfield LV #5 @ 1.5 rpm)
 Grade 60 (stable gel).....~550,000 cps
 (Brookfield LV, #5 @ 1.5 rpm)
 Grade 100 (paste)..... >4,000,000 cps
 (Brookfield LV, #5 @ 0.3 rpm)
 Velocity¹..... 1.20±.05 mm/μsec
 Acoustic Impedance¹.....1.35±.05 MRayls

Packaging Grades 25, 60 and 100

2-oz (50 g) tube 4-oz (100 g) tube
 quart (liter) gallon (4-liter)

Pyrogel GR 7 – custom order- minimum 2 gallons

Chemical Analysis and Certification

Independent laboratory analysis of Chlorine and Sulfur reference ASTM procedures is furnished with each shipment at no additional charge and at www.sonotech-inc.com

Total Halogens..... <250ppm
 Sulfur..... <50ppm

Corrosion Inhibition

- Pyrogel contains a ferrous corrosion inhibitor with a relative effectiveness rating of 100. Ferrous Corrosion Characteristics Chart available at <http://www.sonotech-inc.com>.

Extreme Temperature Guidelines

- A couplant's upper temperature range for short duration thickness gaging is higher than when used for flaw detection.
- When testing on vertical or overhead surfaces, a thicker grade of couplant is likely to stay in place, while a thinner grade generally performs better on flat surfaces.
- Sonotech couplants do not contain perfluorocarbons; thus "polymer plume fever" is not an operator hazard.

Flash Point and Auto-Ignition

- The Flash Point of a product is the lowest temperature at which vapors arising from the product will ignite momentarily when exposed to a flame.
- Auto Ignition is the temperature at which a substance ignites without other sources of energy.

Two general methods of flash point testing are called closed-cup and open cup: The closed cup method (Pensky-Martens) prevents vapors from escaping and therefore usually results in a flash point that is lower than in an open cup (Cleveland) test. Determination for high temperature products (>680°F/360°C) utilizes the Cleveland Open Cup test. Because the two methods yield different results, the test method that is used is listed when reporting the flash point.

Auto Ignition Temperature.....960°F (515°C)
 Cleveland Open Cup Flash Point.....525°F (274°C)²
 Cleveland Open Cup Flash Point.....400°F (204°C)³

² Pyrogel 25 ³ Pyrogel 60



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