ULTRAGEL II® ultrasonic couplant

NSN 6850-01-157-4348

Since 1976, Ultragel II has been the NDT industry's most specified and used NDT ultrasonic couplant because of its outstanding acoustic performance, chemical characteristics and corrosion inhibition. Ultragel II is ideal for flaw detection, thickness gaging, flow metering and acoustic emission testing over extended ambient temperatures.

Temperature Operating Range
-10º to 210ºF (-23º to 99ºC)

Benefits
- Holds on vertical and overhead surfaces, fills depressions in rough surfaces
- Excellent wetting characteristics
- Slow drying with good transducer lubrication
- Increased acoustic impedance for reduced surface noise
- Contains glycerine to extend drying time

Safety
- Non-flammable and non-irritating
- No silicones or petroleum distillates
- No heavy metals incorporated into formula

Removal
- Water-soluble; easily removed with a water rinse
- Isopropyl alcohol or 100% ethyl alcohol will also remove Ultragel II

Chemical Analysis and Certification
Independent laboratory analysis of Chlorine, Fluorine and Sulfur referencing ASTM procedures is furnished with each shipment at no additional charge and is available at *http://www.sonotech-inc.com*
Spectrochemical, Graphite Furnace, Atomic Absorption analysis, or heavy metal certification is available at additional charge.

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

Acoustic Transmission
Optimal transmission requires that an ultrasonic couplant have no air bubbles; Sonotech's unique processing eliminates couplant air bubbles.

Corrosion Inhibition
A basic premise in NDT is that it must be truly nondestructive. The couplant must not cause detrimental metallurgical damage to the part through corrosion. Ferrous Corrosion Characteristics Chart available at http://www.sonotech-inc.com.
- Ultragel II contains a ferrous corrosion inhibitor with a relative effectiveness rating of 90 and is compatible with most composites and metals, *except magnesium.*

Ultragel II has been tested and approved to:
- ASTM F519 Hydrogen Embrittlement testing on high strength steel, ASTM F945 Stress Corrosion Cracking on Titanium Alloys
- PWA 36604, or MCL E-205 Type II (ASTM F945), PWA 36700/36604 Hot corrosion testing on High Temperature Alloys AMS 5544 (Waspalloy), 5536 (Hastelloy X), 6359 (Ferrous based alloys), 4037 (Aluminum), 5608 (Haynes 188), 5508 (Greek Ascoloy) and 4375 (Magnesium), PWA 286 and 275 (gas turbine blade coatings), PWA 1484 turbine blade alloy
- Boeing Specifications BAC 5968 (adhesive bonds), BAC 5980 (composites), BAC 5439-PSD622

Properties (at ambient temperature)
Viscosity……~80,000 cps
(Brookfield Helipath Spindle E @ 1.5 rpm)
Velocity .....1.65$\pm$.05 mm/µsec
Acoustic Impedance .....1.8$\pm$.05 MRayls
pH .....7.8$\pm$.5

Packaging
12ea x 4 oz (100g) carton
12ea x 12 oz (340g) carton
1-gallon (4 liter) container
5-gallon (18.9 liter) container
15-gallon (56.8 liter) drum
55-gallon (208.2 liter) drum

SONOTECH® INC

774 Marine Drive, Bellingham, WA 98225-1530 360-671-9121 Fax 360-671-9024 www.sonotech-inc.com
sonotech@sonotech-inc.com Order Phone: 800-458-4254 Order Fax: 800-730-9024