ULTRAGEL II® ultrasonic couplant

NSN 6850-01-157-4348

Ultragel II has a 25+ year history as the most frequently specified and used NDT ultrasonic couplant in the world. It is Sonotech's premier water based couplant for performance and ferrous corrosion inhibition for use in flaw detection, thickness gaging, flow metering, and acoustic emission testing.

Temperature Operating Range

-10º to 300ºF (-23º to 149ºC)

Benefits

- Stable couplant that holds on vertical and overhead surfaces and fills depressions in rough surfaces
- Good wetting characteristics on oily or dirty surfaces
- Extended temperature range
- Slow drying with good transducer lubrication
- Increased acoustic impedance for reduced surface noise

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*.
Spectrochemical, Graphite Furnace, Atomic Absorption analysis, or heavy metal certification is available at additional charge.

Chemistry

Total Halogens.....<50 ppm
Sulfur.....<50 ppm
Contains Glycerine

Acoustic Transmission

Optimal transmission requires that an ultrasonic couplant have no air bubbles that can reflect, scatter, and attenuate sound waves. 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. Sonotech has developed a sensitive ferrous corrosion test and rating system for our couplants that evaluates both surface and crevice corrosion.

- Ultragel II contains a ferrous corrosion inhibitor with a relative effectiveness rating of 90 *(refer to Sonotech's Quantitative Ultrasonic Couplant Comparison Chart - call for a copy)* and is compatible with most composites and metals, *except magnesium.*
- Ultragel II meets ASTM F519 Hydrogen Embrittlement test on high strength steel, and has been tested for composite shear modulus, aircraft aluminum corrosion and composite adhesion.
- Ultragel II meets Boeing Specifications BAC 5698 and BAC 5980.

Properties[1]

Viscosity.....~80,000 cps
(Brookfield Helipath Spindle E @ 1.5 rpm)
Velocity .....1.65±.05 mm/µsec
Acoustic Impedance .....1.8±.05 MRayls
pH .....7.8±.5

[1] *At ambient temperature.*

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