Echo Couplant Solutions

All Echo Ultrasonics® couplants have been formulated with operator safety and environmental regulations as a priority.					
	Couplant	**Key Benefits**	**Viscosity**	**Temperature Range**	**Corrosion Characteristics**
Ambient Temperature	**SuperSoniX™**	• Expanded ambient temperature • Gel couplant, not stringy or sticky • Viscosity remains in place for overhead and vertical surfaces • Broad operating range • Slow drying • Water-soluble • Improved stability against corrosion salts	Medium and High	-10° to 220°F -23° to 104°C	Very good
	Signal™	• Improves signal to noise ratio on rough surfaces such as castings, rough bar stock and fiberglass • Highest acoustic impedance of any water-based ultrasonic couplant • Slow drying • Water-soluble	Medium	-18° to 224°F -28° to 107°C	Very good
	UltraSoniX™	• Glycerin-free, in accordance with FAA Advisory Circular AC 25-29 • Slow drying, fast wetting • Water soluble	Medium	10° to 220°F -12° to 104°C	Very good Meets ASTM F519

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Ambient Temperature	**EchoPure™**	• Couplant of choice for Phased Array Manual UT Inspection (**PAMUT**). Eliminates dry spots under the wedge and resulting element drop out. Improves defect reproducibility. • Complies with **P91 steel** inspection requirement for a water-free couplant. • Broadest temperature range for water-soluble couplants • No couplant build up which can result in false indications. • Very slow drying and salt stable • Overhead / vertical application • Excellent transducer lubrication	High Medium Low Fluid	-60° to 350°F -51° to 176°C	Very good Meets ASTM F519
	SoniX™	• Salt stable (boiler and corrosion salts) • Strong lubricious coupling film • Fast wetting • Glycerin-free • Water soluble, cellulose based	Medium	18° to 120°F -8° to 50°C	Very good Meets ASTM F519
	Glycerin	• GE approved for the inspection of CFM56-7B engine fan blades in accordance with service bulletin **SB72-1033.** • Packaged from USP glycerin, 99+% • Will not harden on equipment • Pumpable fluid • Compatible with most plastics	Fluid	65° to 500°F 18° to 260°C	Can be corrosive to carbon steel and aluminum. No corrosion effect on most plastics, fiberglass or composites.

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Powder	**EchoMix® Single**	• ONE PART powder • Easily mixed in water • Salt resistant • No formaldehyde • Compact for shipping and storage • Water soluble • Operating range can be extended with propylene glycol-based antifreeze	Medium gel Adjustable low to high	32° to 120°F 0° to 50°C	Mild, short term ferrous corrosion inhibition
Specialty Application	**Forever Wedge Couplant™**	• High viscosity fluid for phased array and angle beam wedge attachment and for coupling delay lines • Won't dry, run, leach or dissolve with water or couplants • Eliminates the need to replace wedge couplant during inspections	Fluid	-50° to 700°F -45° to 371°C	N/A
	Echo Shear Wave Couplant™	• Transmit normal incidence shear wave • Water soluble, easily removed with water • Low toxicity, non-irritating	Paste	40° to 90°F 4° to 32°C	N/A
	Echo Z+™	• High acoustic impedance • Decreases surface noise • Ideal for rough surfaces and concrete • Strong ferrous corrosion inhibition	Fluid Low Medium High Very High	0° to 200°F -18° to 93°C	Strong ferrous corrosion inhibition
	Echo 8 ZH™	• For flow metering and long-term monitoring at elevated temperatures • Enhanced acoustic impedance • Reduces acoustic noise from rough surface	Paste	Short term: -45° to 750°F Long term: -45° to 400°F	Strong ferrous corrosion inhibition

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High Temperature	**VersaSonic®**	• Broad operating range – subzero to 700°F • Best performing UT couplant between 300 and 700°F • Fast response, no wait time • Low smoke / Low toxicity /No char residue • Does not contain peanut oil	Medium and High Viscosity Gel	-10° to 700°F -23° to 371°C	Best long-term corrosion protection Meets ASTM F519
	HiTempco+™	• Less smoke than VersaSonic • No residue or varnish • Fast response, no wait time • Excellent corrosion inhibition • Non-toxic, non-irritating	Paste	-50° to 850°F -45° to 455°C	Excellent corrosion inhibition
	AeroSoniX™	• High Temperature Couplant for Drones • Pumps like a fluid, stays in place like a gel • Optimal viscosity for drone inspections	Low Viscosity Gel	-50° to 775°F -45° to 412°C	Excellent corrosion inhibition
	EchoTherm™	• Ultra-high temperature couplant • Stable reading once polymer melts (a few seconds). Best on difficult measurements such as heavy corrosion, curved surface and small pipe. • Will smoke at 750°F • Leaves plastic residue and should be wiped off transducer after use	Paste	200° to 1000°F 93° to 538°C	N/A
	EchoTherm™ Extreme	• Highest performance extreme temperature couplant • Fast response, no wait time • No plastic polymer / char residue • Broadest operating range • Low smoke	Paste	-40° to 1250°F -40° to 675°C	Meets ASTM F519

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Fluid	**EchoFLOW™**	• Easily pumped in extreme cold environment • Environmentally safe, approved for use on the Alaskan Tundra • Water-soluble	Fluid	-40° to 150°F -40° to 65°C	N/A
	Echo 3 HT™	• Water-soluble. No need to remove • Least expensive intermediate temperature fluid	Fluid	-30° to 350°F -34° to 177°C	Similar to water
	Echo 6 HT™	• Low-cost silicone-based fluid • Replacement for peanut, canola and mineral oils • Low in viscosity, which is maintained over a broad operating range. • No sticky film, varnish or smoke	Fluid	-40° to 675°F -40° to 357°C	Excellent
	Echo 8 HT™	• Broadest operating range • Three viscosities: thin to very thick liquid for AUT and MUT • Minimal smoke • Excellent lubricant • Low toxicity / non-irritating • Non-irritating • Auto-ignition temperature: 850°F / 454°C	Fluid	-50° to 800°F -45° to 425°C	Excellent