

## Echo Couplant Solutions

<i>All Echo Ultrasonics® couplants have been formulated with operator safety and environmental regulations as a priority.</i>						
	Couplant	Key Benefits	Viscosity	Temperature Range	Corrosion Characteristics	
Ambient	<b>SuperSoniX™</b>	<ul style="list-style-type: none"> <li>Highest performance gel couplant</li> <li>Expanded Ambient Temperature</li> <li>Gel couplant, not stringy or sticky</li> <li>Gel viscosity remains in place for overhead and vertical surfaces</li> <li>Broad operating range</li> <li>Slow drying</li> <li>Water-soluble</li> <li>Improved stability against corrosion salts</li> </ul>	Medium	-10 to 220°F -23° to 104°C	Very Good	
	<b>UltraSoniX™</b>	<ul style="list-style-type: none"> <li>High performance</li> <li>Glycerin-free, in accordance with FAA Advisory Circular AC 25-29</li> <li>Overhead/vertical application (medium and high viscosity)</li> <li>Slow drying</li> <li>Fast Wetting</li> <li>No nitrates, nitrites, glycol ethers or formaldehyde</li> <li>Water soluble, acrylic polymer, lower residue than most couplants</li> </ul>	High Medium	10 to 220°F -12° to 104°C	Very good Meets ASTM F519	
	<b>EchoTrack™</b>	<ul style="list-style-type: none"> <li>Economical high performance</li> <li>Overhead / vertical application (medium &amp; high viscosity)</li> <li>Slow drying</li> <li>Fast wetting</li> </ul>	High Medium	18° to 180°F -8° to 82°C	Very good	



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		<ul style="list-style-type: none"> <li>No nitrates, nitrites, glycol ethers or formaldehyde</li> <li>Water soluble, acrylic polymer, least residue</li> </ul>				
	<b>EchoPure™</b>	<ul style="list-style-type: none"> <li>Couplant of choice for Phased Array Manual UT Inspection (<b>PAMUT</b>). Eliminates dry spots under the wedge and resulting element drop out. Improves defect reproducibility.</li> <li>Complies with <b>P91 steel</b> inspection requirement for a water-free couplant.</li> <li>Broadest temperature range for water-soluble couplants</li> <li>No couplant build up which can result in false indications.</li> <li>Very slow drying and salt stable</li> <li>Overhead / vertical application</li> <li>Excellent transducer lubrication</li> </ul>	High Medium Low Fluid	-60 to 350°F -51 to 176°C	Very good Meets ASTM F519	
<b>Ambient</b>	<b>SoniX™</b>	<ul style="list-style-type: none"> <li>Salt stable (boiler and corrosion salts, etc.)</li> <li>Strong lubricious coupling film</li> <li>Fast Wetting</li> <li>No nitrates, nitrites, glycol ethers or formaldehyde</li> <li>Glycerin-free</li> <li>Water soluble, cellulose based</li> </ul>	High viscosity fluid 40,000 cps	18° to 120°F -8° to 50°C	Very good Meets ASTM F519	
	<b>Forever Wedge</b>	<ul style="list-style-type: none"> <li>High viscosity fluid for phased array and angle beam wedge attachment and for coupling delay lines</li> </ul>	Fluid	-50 to 700°F -45 to 371°C	N/A	



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		<ul style="list-style-type: none"> <li>• Won't dry, run, leach or dissolve with water or couplants</li> <li>• Eliminates the need to replace wedge couplant during inspections</li> </ul>			
	<b>Glycerin</b>	<ul style="list-style-type: none"> <li>• GE approved for the inspection of CFM56-7B engine fan blades in accordance with service bulletin <b>SB72-1033</b>.</li> <li>• Packaged from USP glycerin, 99+%</li> <li>• Will not harden on equipment</li> <li>• Pumpable fluid</li> <li>• Boiling point 555°F / 290°C</li> <li>• Compatible with most plastics</li> </ul>	Low viscosity 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
<b>Powder</b>	<b>EchoMix® Powder</b>	<ul style="list-style-type: none"> <li>• Powder couplant easily mixed in water</li> <li>• Good wetting</li> <li>• Salt resistant</li> <li>• No formaldehyde</li> <li>• Compact for shipping and storage</li> <li>• Water soluble</li> <li>• Operating range can be extended with propylene glycol antifreeze</li> </ul>	Medium gel 23,000 cps Adjustable low to high	32° to 120°F 0° to 50°C	Mild, short term ferrous corrosion inhibition
	<b>EchoMix Powder SINGLE</b>	<ul style="list-style-type: none"> <li>• ONE PART powder</li> <li>• Easily mixed in water</li> <li>• Good wetting</li> <li>• Salt resistant</li> <li>• No formaldehyde</li> <li>• Compact for shipping and storage</li> <li>• Water soluble</li> <li>• Operating range can be extended with propylene glycol antifreeze</li> </ul>	Medium gel 23,000 cps Adjustable low to high	32° to 120°F 0° to 50°C	Mild, short term ferrous corrosion inhibition



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<b>Specialty</b>	<b>Echo Shear Wave</b>	<ul style="list-style-type: none"> <li>• Transmit normal incidence shear wave</li> <li>• Water soluble</li> <li>• Easily removed with water wash</li> <li>• Low toxicity, non-irritating</li> </ul>	High viscosity paste	40 to 90°F 4° to 32°C	
	<b>Echo Z+</b>	<ul style="list-style-type: none"> <li>• High acoustic impedance</li> <li>• Decreases surface noise</li> <li>• Ideal for rough surfaces and concrete</li> <li>• Strong ferrous corrosion inhibition</li> </ul>	Medium viscosity paste or Fluid	0 to 200°F -18° to 93°C	Strong ferrous corrosion inhibition
	<b>Echo 8ZH</b>	<ul style="list-style-type: none"> <li>• For flow metering and long term monitoring at elevated temperatures</li> <li>• Enhanced acoustic impedance</li> <li>• Reduces acoustic noise from rough surface</li> </ul>	Paste	Short term: -45 to 750°F Long term: -45 to 400°F	
<b>High Temperature</b>	<b>VersaSonic®</b>	<ul style="list-style-type: none"> <li>• Broad operating range – subzero to 700°F</li> <li>• Best performing UT couplant between 300 and 700°F</li> <li>• Fast Response, no wait time</li> <li>• Low smoke / Low toxicity /No char residue</li> <li>• Does not contain peanut oil</li> </ul>	Gel and paste	-10° to 700°F -23 to 371°C	Best long-term corrosion protection Meets ASTM F519
	<b>HiTempco</b>	<ul style="list-style-type: none"> <li>• Less smoke than VersaSonic</li> <li>• No residue or varnish</li> <li>• Fast response, no wait time</li> <li>• Excellent corrosion inhibition</li> <li>• Non-toxic, non-irritating</li> </ul>	Paste	-50 to 775°F -45 to 412°C	Excellent corrosion inhibition
	<b>EchoTherm™</b>	<ul style="list-style-type: none"> <li>• Most economical ultra-high temperature couplant for use above 700°F and in ports.</li> <li>• EchoTherm contains a plastic polymer which melts and begins to smoke at 750°F</li> <li>• Leaves plastic residue (char)</li> </ul>	Paste	200° to 1000°F 93 to 538°C	N/A



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	<b>EchoTherm Extreme™</b>	<ul style="list-style-type: none"> <li>• Highest performance extreme temperature couplant</li> <li>• Fast Response, no wait time</li> <li>• No plastic polymer / char residue</li> <li>• Broadest operating range</li> <li>• Low smoke</li> </ul>	Paste	-40° to 1250°F -40 to 675°C	Meets ASTM F519
Sonotech Replacement	<b>Echo 700</b>	<ul style="list-style-type: none"> <li>• Replaces Sono 900 (discontinued)</li> </ul>	Paste	600 to 700°F 316 to 371°C	
	<b>Echo 760</b>	<ul style="list-style-type: none"> <li>• Replaces Sono 950 (discontinued)</li> </ul>	Paste	600 to 760°F 316 to 404°C	
	<b>Echo 775</b>	<ul style="list-style-type: none"> <li>• Replaces Sono 1100</li> </ul>	Paste	700 to 775°F 371 to 413°C	
Fluid	<b>EchoFLOW</b>	<ul style="list-style-type: none"> <li>• Easily pumped in extreme cold environment</li> <li>• Environmentally safe, approved for use on the Alaskan Tundra</li> <li>• Water-soluble.</li> </ul>	Fluid	-40 to 150°F -40 to 65°C	N/A
	<b>Echo 3HT</b>	<ul style="list-style-type: none"> <li>• Water-soluble. No need to remove</li> <li>• Least expensive intermediate temperature fluid</li> </ul>	Fluid	-30 to 350°F -34 to 177°C	
	<b>Echo 6HT</b>	<ul style="list-style-type: none"> <li>• Low-cost silicone-based fluid</li> <li>• Replacement for peanut, canola and mineral oils</li> <li>• Low in viscosity, which is maintained over a broad operating range.</li> <li>• No sticky film, varnish or smoke</li> <li>• Less subject to under insulation cracking (which leads to a lower auto-ignition temperature)</li> </ul>	Fluid	-40° to 675°F -40° to 357°C	Excellent



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	<b>Echo 8 HT™</b>	<ul style="list-style-type: none"> <li>Broadest operating range</li> <li>Three Viscosities: thin to very thick liquid for AUT and MUT</li> <li>Minimal smoke</li> <li>Excellent lubricant</li> <li>Low toxicity / Non-irritating</li> <li>Non-irritating</li> <li>Auto-ignition temperature: 850°F / 454°C</li> </ul>	Fluid	-50° to 800°F -45° to 425°C	Excellent	



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