

Enviro-Syn modified and synthetic acid products provide safer alternatives to commonly used acids. They minimize the hazards, corrosion rates and negative HSE properties, while maintaining solubilizing ability and reactivity rates. Enviro-Syn modified and synthetic acid products can be enhanced through the addition of conventional oilfield chemistry.

Product	Applications							Features					Specifications		Description
	Spearhead ¹	Compatible with Wireline ¹	Acid Fracturing ¹	Production ¹	Injection Wells	Thermal (SAGD, CSS)	Remedial Work	Low Corrosion Rate ²	Non-corrosive to Skin	Low Fuming ³	Biodegradable	Non-regulated for Ground Transport (USA)	HCl Solubilizing Equivalency (%) ⁴	Maximum Temperature (°C / °F)	
HALOGEN FREE, CHROME SAFE SYNTHETIC ACID															Extremely effective, chloride-free oilfield stimulation acid and scale dissolver compatible with chrome alloys.
HCR-3000 [®]	✓			✓	✓		✓	✓	✓	✓	✓	✓	20	220/430	Liquid acid replacement stable at ultra-high temperatures.
HIGH TEMPERATURE MODIFIED ACID															High solubilizing ability and controlled reaction rate vs. HCl for improved scale penetration. Reduced precipitation issues with ultra-low, long-term corrosion rates.
HCR-6000-NEAT [™]			✓			✓	✓	✓	✓	✓	✓	✓	15	220/430	A Corrosion Inhibitor package is required based on operational requirements and temperatures. Thermal stability up to 220°C/430°F.
HCR-6000 [®]			✓			✓	✓	✓	✓	✓	✓	✓	15	180/356	Controlled reaction rates for more efficient wormholing at lower stimulation rates and volumes. Stable at ultra-high temperatures.
HCR-7000-NEAT [™]	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	15	190/375	A Corrosion Inhibitor package is required based on operational requirements and temperatures. Thermal stability up to 190°C/375°F.
HCR-7000 [®]	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	15	110/230	Increased reaction rate vs. HCR-6000 systems.
HCR-7000-WL [®]	✓	✓		✓	✓		✓	✓	✓	✓	✓	✓	15	130/270	Long-term wireline and casing corrosion protection allowing the spotting of acid with plug-and-perf during wireline pump down operations.
HCR-7000FRACWL-90	✓	✓					✓		✓	✓			20	90/194	Higher solubilizing capability up to 90°C/194°F.
HCR-7000FRACWL-110	✓	✓					✓		✓	✓			20	110/230	Higher solubilizing capability up to 110°C/230°F.
HCR-7000FRAC+ [®] WL	✓	✓					✓			✓			28	110/230	Highest solubilizing capability with immediate acid spend.
HYDROFLUORIC MODIFIED ACID															Ultra-low corrosion rates on casing and wireline, well below traditional mud acid systems (3% HF with 12% HCl).
HFR-1000 [™]			✓	✓	✓			✓	✓	✓	✓		N/A	190/375	Activated downhole once mixed with HCl or HCR to produce an active mud acid. Typical mix is 12:2 HCl/HCR:HFR blend.

¹Typical dilutions
Spearhead: 33% and 50%
Acid Fracturing and Production: 50% – 90%
²Working concentration corrosion rates <0.05 lb/ft² at 6 hours
³100% concentrate.
⁴30% dilution