VERDACITY



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VerdAcity, SHSIX1-2501, is an effective alternative to hydrochloric acid for use in saltwater disposal wells. It prevents scale formation, iron build up, and degradation of materials and parts exposed to corrosive solutions on frac equipment. Formulated with our proprietary technology, NRGMax, VerdAcity will dissolve most Fe, Ca, and CO3-2 scales. It's safe on steel and most importantly, it's safer for your people.

Applications

 $\mathsf{T}\mathsf{M}$

Acidizing

Pre-flush

• Tubulars

Formations

- Near Wellbore
- Surface Equipment
 - Flowlines

ELEVATED PERFORMANCE

- Effectively and immediately attacks carbonate-based scales, minerals, and formation matrices.
- Aids in prevention of Fe, Ca, and CO3 ⁻² scales from forming on surface equipment, tubing, and downhole perforations.
- Slow rate of reaction greatly reduces precipitation of byproducts, fines or insoluble material
- Deeper formation penetration
- Reduction of iron pads and tank bottoms

- Faster separation of oil results in cleaner water
- No lined acid truck (tank) or secondary containment (berms) required
- Reduced overall surface pumping pressures (low friction gradient)
- Non-regulated by TDG and WHMIS
- Water soluble
- Less precipitate/solids formation





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PHYSICAL PROPERTIES

Appearance	Clear to Hazy Liquid	
Color	Colorless	
Odor	Mild to Alcohol	
рН@24°С (75°F)	<1.0	
Flash Point	>200° F (>93° C)	
Pour Point	32° F	
Density@25°C (77°F)	8.34 to 8.68 lbs/gal	
Solubility	Miscible	

LIMITATIONS

As with any acid treatment it is crucial that monitoring is done before and after treatments are administered to maximize the desired results. With SHSIX1-2501, each application is unique and will require monitoring for optimum results. Caution should be taken to ensure when loading, unloading, or pumping that only acid approved poly hoses, pumps, and piping are utilized.

HCI ALTERNATIVE DATA

	HCl Acid	VerdAcity SHSIX1-2501
Immediately Active	Yes	Yes
рН	0	0
Reaction Rate	Quick	Moderate
Exothermic	Highly	Mild
Biodegradable	No	Yes
Health Rating	3-Severe	0
Reactivity Rating	2-Moderate	0
Transportation Handling	Corrosive	None



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PACKAGING 330 Gallon One-Way Totes and Bulk ISO Transport

SAFETY AND HANDLING

- Environmentally safe
- Non-toxic (Below regulated toxicity limits)
- LC50 of 707 mg/L (96hr, trout) $|\rangle$ HCI acid 2 4 mg/L
- LD50 of 1973 mg/kg (oral rat) $|\rangle$ HCl acid 290 mg/kg (oral rat)
- Not Mutagenic
- Use OECD Guidelines, section 471, Chemicals
- Drums should be stored in a cool, dry place.

As with all industrial chemicals, contact with eyes or skin should be avoided (see SDS). Seek medical attention when required. See SDS for first-aid measures and/or accidental release.

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