

ECSR

EthicalChem Scale Remover

DESCRIPTION

Scale deposits can be located both downhole and in surface equipment and often have an adverse effect on production. EthicalChem's ECSR has excellent chelating dissolving power, forming stable chelates with calcium, copper, and aluminum to outperform legacy chelating agents such as EDTA, NTA and related compounds. ECSR has proven to be effective in dissolving barium sulfate scale, setting it apart from other scale dissolvers currently in the market.

Conventional chelating dissolvers react slowly with sulfate scales posing risk of undesirable precipitation of sulfates.

ECSR is an innovative formula containing an activator which damages the mineral surface and breaks the crystal bond forces making the detachment step easier. Complexes with cations form readily which are carried into solution.

FEATURES/BENEFITS

- Complexes and sequesters many types of metal ions in aqueous solution
- Dissolves barium sulfate scale
- Case specific formulations
- Resistant to oxidation & reduction at all temperatures
- Proven performance at:
 - Temperatures from ambient to 300° F
 - All brine concentrations
- Supplied as ready to use solution, no additives required

Full Scale Field Implementation Examples

Client	Issue	Result
Shell	Deteriorating performance of CO ₂ removal unit	Removed 6 types of scale, restored performance.
GEMSA	Scale in main production pipeline	increased production by more than 4,000 barrels
Zeitco	Off shore pipelines with scale	Increased production by over 7 times
Petrobel	Scale in production pipeline	Removed scale, restored production

LABORATORY TESTING ON BARITE SCALE (INDEPENDENT TESTS PERFORMED AT TEXAS A&M UNIVERSITY)

A solubility test was performed on barite scale using the new Scale Dissolver in both ambient and downhole conditions. Analysis of the scale verified the composition was 100% barium sulfate (barite).

The test conditions and results are shown in the table to the right. Results highlight how the ECSR scale remover was able to dissolve 90% of the barite, leaving only 10% of the scale behind as a solid in both tested conditions: standard temperature and pressure (STP) and downhole conditions (149°C, 1000 psi). The remaining 10% was reduced to very small fractions or crumbling material which would easily be removed from a well, subsequently restoring well productivity.

Third Party Test Results of ECSR Effects on Barite Scale						
Test	Conditions	Initial Sample wt (g)	Final Sample wt (g)	ECSR Solvent (mL)	Soak time	% wt Loss
1	STP	5.542	0.5607	110 ml	16	90%
2	149°C, 1000 PSI	2.0941	0.2117	50 ml	16	90%

