

Oilfield Chemical Additives Supplier for

- Drilling
- Completion
- Production
- Stimulation

Corrosion inhibitor

CIA-400EA



Corrosion inhibitor CIA-400EA

Almost 60% of oil and 40% of gas reserves worldwide are contained in carbonate reservoirs where acidizing stimulation is more challenging compared to sandstone reservoirs.

Utilization of emulsified acids in matrix acidizing operations has been the most effective technique. While in operation, Deep, narrow conduits generate, along with the excellent sweep efficiency and corrosion inhibition of the well equipment.



At Youzhu Chem Innovations on Corrosion inhibition additives have been applied for enhancing the performance of emulsified acids for a variety of conditions, their limitations, and the developmental solutions

Technical Index

Appearance	Dark red/ Brown Liquid
Specific Gravity, 20°C	1.0-1.2
pH (neat)	2.0-6.0
Soluble in water and acid	Miscible
Ionic Charge	Cationic
Flash point	Beyond 50°C

Product introduction

The compatibility between corrosion inhibitors and emulsified acids is difficult, and efficient

corrosion inhibitors have always been eager to be developed. The corrosive action of acid on steel at high bottom-hole temperatures can be greatly reduced at temperatures up to 350°F, by adding CIA-400EA to the acid mixture. For different construction environments, the need to use different corrosion inhibitors, once the system does not match the problem, the corrosion inhibitor can not play a normal role, but also exacerbate the corrosion of the equipment and pipeline, which will affect the production of oil and gas wells, but also bring a lot of safety issues. On the other hand, the emulsified acid system, if destroyed, will lead to many problems. At this point the formation is not acidified well and the formation porosity distribution is no longer favorable for production. At the same time, due to the separation of the oil and water phases, the corrosion of the acid on the metal pipeline will increase at this time. This not only increases production costs, but also leads to many other problems.

Safety Precautions

Refer to the safety data sheet (SDS) for handling, transport, environmental information, and first aid.

Usage

Tempte	15%HCL & 12-3Mud	20%HCL	28%HCL
<200°F	6	8	12
201-225°F	8	12	16
226-250°F	10	15	20
251-300°F	12-15	15-24	24-30
301-350°F	20-30	30-50	40-60

Concentration is dependent on acid type, strength, bottom-hole temperature, contact time, and additional additives.

Applications

- Matrix acidizing stimulation operations
- Fracture acidizing stimulation operations
- Wellbore cleaning with acid formulations

Features and Benefits

- Excellent high-temperature metal corrosion protection
- Provide corrosion protection in all HCL and HCL-HF blends up to 177°C
- Contains no heavy metal salts, and has a high flash point
- Reduces acid corrosion rates on common oilfield tubulars, including coiled tubing
- Improves design flexibility because it works in virtually all strengths of hydrochloric acid and mixtures of hydrochloric-hydrofluoric and hydrochloric-organic acids
- Disperses easily in all acid-based fluids
- Can provide acid corrosion inhibitor protection for as long as 24 hours
- Can provide acid corrosion inhibitor protection for K55, J55, N80, CT80, QT800 and P110、P110S etcetera

Attachment


- 1、 Test of specific gravity
 - 1) Loading 250 ml sample into 250 ml measuring cylinder.
 - 2) Place the measuring cylinder in a water bath and keep the temperature at 25°C.
 - 3) Put in a densitometer to measure sample specific gravity, record it.
- 2、 Test of pH value
 - 1) Loading 100 ml sample into 250 ml beaker.
 - 2) Place the beaker in a water bath and keep the temperature at 25°C.
 - 3) Check the pH meter.
 - 4) The pH value of the sample is measured by pH meter, record it.
- 3、 Test methods of corrosion rate
 - 1) Keep the oven temperature at 160°C.
 - 2) Configure 200 ml of 20% HCL, adding predetermined amount of CI and INTENSIFIER.
 - 3) Put prepared steel Coupons in the cell , seal, tighten, put in oven, preheat for 30 minutes at 160°C.
 - 4) Start the timing and keep the Aging Cell for required exposure period in mechanical convection oven.

- 5) Take the cell out of the oven, cool, release the pressure, take out the metal coupon, clean, wash and weigh for any weight loss.
- 6) Calculate the corrosion rate in Lbs/Ft² and g/(m².h).
- 7) Check for any pitting on the metal surface and report.

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Youzhu Chem offers a wide range of oil field chemicals widely used in the various stages of oil and gas production. And we have developed the finest quality Oil Soluble Demulsifier, Water Soluble Demulsifier and Corrosion Inhibitors. Our products enable customers to maximize value in their oilfield operations, and increase the overall efficiency of the well.