

缓蚀剂 Inhibitor

产品概述

缓蚀剂外观一般为黄红至红褐色可自由流动的均匀液体。具有良好的耐热稳定性，能够在高温环境下保持其性能，分解温度大于 160℃，在 120℃时仍能保持热稳定性，能够有效减缓油井设备的腐蚀，保障油井的安全稳定运行，优良的缓蚀性能，能在金属表面形成一层致密的保护膜，阻止水相腐蚀。

性能特点

- 1、能够保护金属表面；
- 2、产品低毒且光谱性好；
- 3、产品具有耐酸性和耐温性；
- 4、缓蚀效果持久。

技术指标

常压静态腐蚀速率测定条件及缓蚀剂评价标准								
酸液类型	实验温度	反应时间	酸液质量分数%		缓蚀剂质量分数	缓蚀剂评价指标		
	℃	h	HCl	HF	%	g/(m ² ·h)		
盐酸	60	4	20	/	0.5	≤5.00		
	90		20		1.0	≤6.00		
土酸	60		12	3	0.5	≤5.00		
	90		12	3	1.0	≤8.00		
高温高压动态腐蚀速率测定条件及缓蚀剂评价标准								
酸液类型	实验温度℃	实验压力mpa	搅拌速度r/min	反应时间h	酸液质量分数%		缓蚀剂质量分数%	缓蚀剂评价指标g/(m ² ·h)
					HCl	HF		
盐酸	100	16.0	60	4	20	0	1.5	≤10.00
	120				20		2.0	≤35.00
	140				20		3.0	≤45.00
	160				20		4.0	≤65.00
	180				20		5.0	≤80.00
土酸	100	16.0	60	4	12	3	1.5	≤6.00
	120				12	3	2.0	≤15.00
	140				12	3	4.0	≤30.00
	160				12	3	5.0	≤45.00
	180				12	3	6.0	≤70.00

产品用途

压裂用缓蚀剂的主要用途是在油气井酸化作业及酸洗等工艺中减缓或防止酸性介质对金属设备的腐蚀，对单酸（如盐酸、氢氟酸、磷酸）和复合酸均有良好的缓蚀性能，能够防止酸液直接接触金属，从而减少腐蚀的发生。

包装与贮存

1. 本产品用吨桶、桶包装，吨桶净重 1000kg、桶装 200kg 、25kg，也可根据客户要求定制包装。
2. 本产品在贮存在阴凉干燥处，避免阳光直射和高温环境。
3. 保质期:2 年。

Product Overview

The appearance of the corrosion inhibitor is generally a yellowish-red to reddish-brown, freely flowing, uniform liquid. It has good thermal stability and can maintain its performance under high temperature conditions. Its decomposition temperature is greater than 160℃, and it maintains thermal stability even at 120℃. It can effectively slow down the corrosion of oil well equipment, ensuring the safe and stable operation of the oil well. With excellent corrosion inhibition performance, it can form a dense protective film on metal surfaces, preventing aqueous corrosion.

Characteristics

1. Capable of protecting metal surfaces;
2. The product is low in toxicity and has good spectral characteristics;
3. The product has acid resistance and temperature resistance;
4. The corrosion inhibition effect is long-lasting.

Technical Specification

Conditions for determining static corrosion rate under normal pressure and evaluation criteria for corrosion inhibitors								
Acid type	Experimental temperature	Reaction time	Acid concentration %		Mass fraction of corrosion inhibitor	Evaluation indicators for corrosion inhibitors		
	℃	h	HCl	HF	%	g/(m².h)		
Hydrochloric acid	60	4	20	/	0.5	≤5.00		
	90		20		1.0	≤6.00		
Mud acid	60		12	3	0.5	≤5.00		
	90		12	3	1.0	≤8.00		
Conditions for measuring dynamic corrosion rate under high temperature and high pressure, and evaluation criteria for corrosion inhibitors								
Acid type	Experimental temperature℃	Testing pressureMPa	Stirring speed/r/min	Reaction time/h	Acid concentration %		Mass fraction of corrosion inhibitor %	Evaluation indicators for corrosion inhibitors g/(m².h)
					HCl	HF		
Hydrochloric acid	100	16.0	60	4	20	0	1.5	≤10.00
	120				20		2.0	≤35.00
	140				20		3.0	≤45.00
	160				20		4.0	≤65.00
	180				20		5.0	≤80.00
Mud acid	100	16.0	60	4	12	3	1.5	≤6.00
	120				12	3	2.0	≤15.00
	140				12	3	4.0	≤30.00
	160				12	3	5.0	≤45.00
	180				12	3	6.0	≤70.00

Applications

The primary purpose of corrosion inhibitors used in fracturing is to mitigate or prevent corrosion of metal equipment caused by acidic media during acidification operations and acid cleaning processes in oil and gas wells. These inhibitors exhibit excellent corrosion resistance against both single acids (such as hydrochloric acid, hydrofluoric acid, and phosphoric acid) and composite acids. They can prevent acid liquor from directly contacting metals, thereby reducing the occurrence of corrosion.

Package and Storage

1. Package: This product is packaged in ton barrels and barrels, with a net weight of 1000kg for ton barrels and 200kg and 25kg for barrels. Customized packaging is also available upon customer request.
2. Storage: in a cool and dry place, avoiding direct sunlight and high-temperature environments.
3. Shelf - life : two (2) year .



小心轻放



防晒



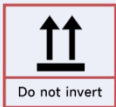
严禁倒置



Handle with care



Sun protection



Do not invert



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