

Citric Acid Anhydrous

A mild acid, Scale removal & Acidizing additive

Product Overview

Citric acid is a versatile, weak organic acid produced through fermentation, with a wide range of industrial applications. In the oil and gas sector, citric acid's non-toxic, biodegradable nature and effectiveness in handling particular challenges make it a valuable asset.

One of its primary uses is in the removal of carbonate scales that accumulate in pipelines, reservoirs, and equipment, which can obstruct the flow and processing of oil and gas. Citric acid is highly effective in dissolving these scales, ensuring smoother operations and less downtime for maintenance.

Citric acid is also utilized in the process of acidizing wells, which enhances reservoir rock permeability, facilitating the flow of hydrocarbons. By injecting citric acid into the reservoir, it dissolves sedimentary rocks like limestone and dolomite, creating pathways for the hydrocarbons to flow more freely.

In addition, citric acid plays a notable role in corrosion inhibition. The oil and gas industry frequently encounters the challenge of corrosion in pipelines and equipment due to the presence of water, gases, and other corrosive substances. Citric acid, often used in combination with other inhibitors, forms a protective layer that minimizes corrosion and protects these assets.

The adaptability and effectiveness of citric acid in the oil and gas industry highlight its potential in industrial applications. Its compatibility with the environment and performance make it a valuable asset in the challenging and demanding context of oil and gas extraction and processing.

Specifications

Assay (%).....	99.5 – 100.5
Water (%)	0.5 max
Residue on Ignition (%)	0.05 max
Oxalate/Oxalic Acid (%)	0.036 max
Sulfate (%)	0.015 max
Arsenic (ppm)	1 max
Heavy Metals (ppm)	5 max
Lead (ppm)	0.5 max

Benefits using Citric acid

Environmentally Friendly: Citric acid is biodegradable and non-toxic, making it an environmentally friendly alternative to many harsher chemical agents used in the industry.

Effective Scale Removal: Citric acid is highly effective in dissolving carbonate scales that can accumulate in pipelines, reservoirs, and equipment.

Enhanced Oil Recovery: In well acidizing, citric acid is used to dissolve sedimentary rocks like limestone and dolomite. This process enhances the permeability of the reservoir rocks, facilitating improved oil and gas flow and potentially increasing the yield from a reservoir.

Corrosion Inhibition: Citric acid can act as a corrosion inhibitor, protecting equipment and pipelines from degradation.

Drilling Mud Treatment: By adjusting the pH and controlling the properties of drilling muds, citric acid ensures the efficiency and safety of drilling operations.

Cost-Effective: Compared to other industrial agents, citric acid is relatively inexpensive and readily available.

Compatibility with Other Chemicals: Citric acid is often compatible with other chemicals used in oil and gas operations.

Reduction of Mineral Deposits: Citric acid helps in reducing the formation of mineral deposits in equipment, which can improve the lifespan and efficiency of these assets.

Packaging

25 Kg BOPP Bags

50 Pound Bags

1000 Kg Super Sacks

Safety & Handling

Handling citric acid safely is crucial, especially in industrial settings like the oil and gas industry where the quantities and concentrations used are significantly higher than in household applications. Here are some key safety measures for handling citric acid:

Personal Protective Equipment (PPE): Even though citric acid is less hazardous than many industrial chemicals, appropriate PPE should still be worn. This includes gloves, goggles, and protective clothing to prevent skin and eye contact.

Respiratory Protection: In areas where citric acid dust or aerosols may be present, use appropriate respiratory protection to prevent inhalation. This is particularly important in scenarios where citric acid is used in powder form.

Handling and Storage: Citric acid should be stored in a cool, dry place away from incompatible substances. Proper labeling and secure storage containers are essential to prevent accidental exposure or mixing with other chemicals.

Avoiding Ingestion and Inhalation: Although citric acid is commonly found in food, industrial-grade citric acid should not be ingested. Measures should be in place to avoid accidental inhalation or ingestion, including the use of dust suppression systems and ensuring good ventilation in work areas.

First Aid Measures: Workers should be trained in first aid measures in case of exposure to citric acid. This includes flushing the skin or eyes with water in case of contact, and seeking medical attention if necessary.

Spill Response: Procedures should be in place for dealing with spills of citric acid, including the use of neutralizing agents, containment, and cleanup procedures to prevent environmental contamination or worker exposure.

Training and Information: Workers handling citric acid should be properly trained in its safe handling, including understanding the material safety data sheet (MSDS) for citric acid, which provides detailed information on handling, hazards, and emergency measures.

Waste Disposal: Waste containing citric acid should be disposed of in accordance with local environmental regulations to prevent contamination of water sources or harm to the environment.

Emergency Procedures: Emergency procedures should be in place in case of accidental exposure or spillage. This includes having emergency showers and eyewash stations readily accessible in areas where citric acid is handled.

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