

# Gluconic Acid 50%

## Overview

The oil drilling industry has gained a comprehensive understanding of the unique properties and effectiveness of Gluconic Acid 50%, which has become an integral component in their practices. The primary function of this acid is to inhibit corrosion, an essential factor in the harsh environments of oil drilling. By prolonging the lifespan of critical equipment and pipelines, it ensures safer operations. Additionally, Gluconic Acid 50% optimizes drilling fluid properties, including viscosity and density, which are crucial for efficient drilling.

In addition to its corrosion inhibiting properties, Gluconic Acid 50% serves as a cement retarder in well-casing operations, ensuring long-term structural integrity and operational stability. It also functions as a preventative measure against scale formation, a pervasive issue in oil wells that can result in operational inefficiencies and equipment damage. Gluconic Acid 50% mitigates this risk, ensuring more efficient operations.

One of the most notable characteristics of gluconic acid is its remarkable chelating power, particularly in alkaline and highly concentrated alkaline solutions. It surpasses all other chelating agents, such as EDTA, NTA, and related compounds, in this regard. Heavy metals such as calcium, iron, copper, and aluminum are firmly chelated in alkaline solutions and masked, thereby eliminating their interferences.

Gluconic acid is stable even at the boiling point of concentrated alkaline solutions. However, it is easily and completely degraded in wastewater treatment plants, with a degradation rate of 98% after two days.

## Specifications

Appearance.....	Colorless
Activity.....	50%
Density .....	1.20-1.25
Carrier.....	Water
Molecular Wt.....	196.16
Formula .....	C6H12O7

## Packaging

Gluconic Acid 50% is packaged in 55 gallon, 555 lb. net weight plastic drums, 2500lb totes and bulk.

## **Product Benefits using Sodium Gluconate**

**Corrosion Inhibition:** Sodium gluconate effectively prevents corrosion of metal equipment and pipelines. This protection is crucial in the harsh, corrosive environments encountered in oil drilling, prolonging the lifespan of expensive equipment and reducing maintenance costs.

**Scale Prevention:** It prevents scale buildup, a common problem in oil wells. By inhibiting scale formation, sodium gluconate ensures smoother operation, reduces downtime, and extends the service life of drilling equipment.

**Environmental Friendliness:** One of the most significant advantages of sodium gluconate is its environmental friendliness. Being biodegradable and less toxic than many traditional chemicals used in the industry, it minimizes environmental impact, making it a sustainable choice in line with increasing environmental regulations.

**Mud Drilling Fluid Modifier:** In drilling mud applications, sodium gluconate helps maintain the desired viscosity and density, crucial for the efficiency and safety of drilling operations. This ensures smoother drilling processes and can lead to better overall drilling performance.

**Cement Retarder:** As a cement retarder, sodium gluconate allows for controlled setting times of the cement used in well casings. This control is vital for the structural integrity and longevity of the wells.

**Cost-Effectiveness:** By reducing equipment wear and tear and minimizing the need for frequent replacements or repairs, sodium gluconate can lead to significant cost savings over the long term.

**Operational Efficiency:** By improving the performance of drilling fluids and cement, sodium gluconate contributes to more efficient and effective drilling operations, leading to potential time and resource savings.

### **Storage Instructions**

This product should be stored above 60°F since lactones may crystallize at lower temperatures. This product is a slightly corrosive organic acid solution. It is recommended that material of construction and handling be stainless steel, rubber lined steel, epoxy resin coated steel, plastic or glass. The use of aluminum, mild steel, and iron as equipment for materials of construction is not recommended.

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