

GLUCONIC ACID, GLUCONO DELTA LACTONE AND SODIUM GLUCONATE



Roquette serves as a major player in the global gluconate market. Our commercial product is available in powder or liquid forms, at varying degrees of purity. The Roquette team offers global technical support and is actively engaged in developing new applications for the product range in plant care.

Gluconic acid is obtained by the oxidation of D-glucose via a fermentation process. Subsequent dehydration steps generate crystallized **glucono-delta-lactone**. Glucono-delta-lactone is a cyclic ester of gluconic acid. **Sodium Gluconate** is the sodium salt of gluconic acid having D-gluconate as the counterion.

Gluconic acid, Glucono delta lactone and sodium gluconate are used as **chelating or solubilizing agents**, contributing to the availability and absorption of critical mineral nutrients while **improving the efficacy of slow-release formulations**. Optimal chelating performance is obtained in neutral to slightly alkaline soil applications.

HOW TO USE?

The **Gluconate family** of products are often used as a progressive acidifiers and chelating agents (**substitution EDTA/NTA and other chelators**) for mineral and metal ions.

Sodium gluconate has strong chelation properties under neutral/alkaline conditions. It has stabilizing properties. Use of gluconates increase the availability of minerals in the soil.



OUR ADVANTAGES

HEALTH & ECOLOGY

- Biodegradable and environmentally friendly compared to traditional solutions (**EDTA**)
- Non GMO
- Non toxic bioproduct

PHYSICAL PROPERTIES

- Stabilizing properties
- Stable under alkaline and high temperature conditions
- 100% soluble in water
- Non volatile
- Non corrosive

EFFICIENCY IMPROVEMENT

- Chelating agent permitting a controlled release of minerals into the soil
- Limit the loss of minerals through water drainage

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PHYSICAL PROPERTIES

This is a non-exhaustive list of our entire gluconate range. Please contact our dedicated support team in order to select the grade that will best match your requirements.

| | Sodium gluconate | Glucono delta lactone | Gluconic acid |
|--------------------------------|------------------------------|--------------------------|-----------------|
| Appearance | Yellowish crystalline powder | White crystalline powder | Yellowish syrup |
| Loss on drying | 1% max | - | - |
| pH at 10% | 6.5-7.5 | - | 3-4 |
| Reducing sugars | 0.5% max | - | 2% |
| Gluconate content | 99% | 99% | - |
| Heavy Metals | 10ppm | 10ppm | - |
| Particle size | | | |
| Residues on 315 microns | 2% | 1% | - |
| Residues on 250 microns | - | 10% | - |
| Residues on 100 microns | 85% | - | - |
| Residues on 75 microns | - | 75% | - |

