

CALCIUM NITRATE TETRAHYDRATE SPECIFICATIONS

1. Name:	Calcium Nitrate - Technical Grade
2. Molecular Formula:	$\text{Ca}(\text{NO}_3)_2 \cdot 4\text{H}_2\text{O}$
3. Molecular Weight:	236.1
4. Melting Point:	42.7 °C
5. Specific Gravity:	1.82

PHYSICAL CHARACTERISTICS

1. Description:	White crystalline powder
2. Ph (5% Solution):	5.0-7.5

CHEMICAL CHARACTERISTICS

1. Purity:	99.0 % Min
2. Lead (Pb):	20 ppm
3. Iron (Fe):	10 ppm
4. Ammonium:	50 ppm
5. Chloride (Cl):	50 ppm
6. Nitrites:	Not detected
7. Sulfate (SO ₄):	50 ppm
8. Insoluble matter:	400 ppm
9. Sodium:	Nil
10. Barium:	Nil
11. Magnesium:	Nil

PACKING INFORMATION

1. 25 Kg HDPE woven bags with LDPE liner
2. 50 Kg HDPE woven bags with LDPE liner

INDUSTRIAL APPLICATIONS

1. **Fertilizer industry** - Nitrogen in nitrate form is plants' preferred form of nitrogen. It helps plants absorb other nutrients in addition to calcium. Particularly in clay soils, ammonium may trap the nitrogen in the soil, thus rendering it unavailable to the plant. Nitrate, on the other hand, facilitates nitrogen to remain in the root area in a form that is easy to absorb and in this way allows the plant to quickly receive its nutrients requirements.
2. **Concrete** - used in accelerating concrete admixtures.
3. **Sewage and wastewater treatment** - used in wastewater pre-conditioning for odour emission prevention. The wastewater pre-conditioning is based on establishing an anoxic biology in the waste water system. In the presence of nitrate, the metabolism for sulfates stops, thus preventing formation of hydrogen sulfide.
4. **Cold packs** - The dissolution of calcium nitrate tetrahydrate is highly cooling. For this reason, it is sometimes used for re-generable cold packs.