Description: SODIUM NITRATE is a high-purity inorganic salt produced under controlled manufacturing conditions. It is widely used in concrete admixture formulations, cold-weather concreting systems, corrosion inhibitor blends, and industrial chemical processes. The product is manufactured to ensure high purity, consistent particle size distribution, and excellent solubility performance.

Technical Properties:

Chemical Content	Sodium Nitrate
Appearance	Liquid
Color	Clear colorless to pale yellow
Solid Content	40 ± 1 %
pH	6 - 9
Density (20 °C)	1.28 – 1.32 g/cm^3
Chloride Content (%)	< 0.1
Water Solubility	Completely soluble
Freezing	-10 °C

Advantage:

- It can be used in combination with normal and super plasticizers however using in combination with admixtures that have retarding effect is not recommended.
- Accelerates cement hydration, providing high early-age compressive strength.
- Reduces setting time, enabling faster demolding in precast and fast-track applications.
- Supports cold weather concreting, accelerating strength development at low temperatures.
- Enhances surface hardness and reduces early shrinkage cracking.
- Compatible with cement, fly ash, slag, and silica fume for high-performance admixtures.
- Does not contain chloride or any other substances that may cause corrosion.

Area of Use:

- Production of early strength accelerating admixtures to enhance early-age compressive strength.
- Cold weather concrete systems, accelerating setting and strength development at low temperatures.
- Precast concrete production, reducing demolding time.
- High-performance and fast-track concrete systems requiring rapid strength gain.

Method of Application:

- The product should be incorporated into the admixture formulation under continuous mechanical stirring.
- It can be blended with water, slump retention polymers, set regulators, defoamers, or other functional additives depending on the targeted performance.
- Dilution with deionized or clean industrial water is recommended when necessary.
- Mixing time and sequence should be optimized according to production equipment and formulation design.
- Laboratory trials must be conducted to determine the optimum dosage and combination ratio before industrial production.

Precautions in Application:

- Do not exceed the recommended dosage without prior laboratory verification.
- Always perform trial mixes before full-scale production.
- Do not add directly to dry cement; ensure addition into mixing water or fresh concrete.
- Adjust dosage in case of changes in cement type, aggregate grading, mineral additions, or ambient temperature.
- Protect the product from frost and direct sunlight.
- Ensure proper mixing time to achieve homogeneous distribution.
- Compatibility with other admixtures must be tested before combined use.
- Use appropriate personal protective equipment during handling.

Compatibility: SODIUM NITRATE shows broad compatibility with most commonly used admixture components and cement types. However, compatibility testing is strongly recommended prior to large-scale production.

Compatible with:

- Portland cement (CEM I).
- Blended cements (CEM II, CEM III, etc.).
- Fly ash, slag, silica fume.
- Lignosulfonate based admixtures.
- Retarders and accelerators (dosage optimization required).
- Defoamers and viscosity modifying agents.

Precautions in Application:

- Avoid contamination with foreign materials.
- Protect from freezing. If frozen, thaw at room temperature and mix thoroughly before use.
- Avoid prolonged exposure to high temperatures.
- Use corrosion-resistant tanks and transfer lines.
- Do not mix with strong oxidizing agents.
- Ensure proper mixing to prevent phase separation during dilution.
- Improper formulation or incorrect dosage may negatively affect setting time and performance of final concrete admixture.
- The product should be incorporated into the admixture formulation under continuous mechanical stirring.
- It can be blended with water, slump retention polymers, set regulators, defoamers, or other functional additives depending on the targeted performance.
- Dilution with deionized or clean industrial water is recommended when necessary.
- Mixing time and sequence should be optimized according to production equipment and formulation design.
- Laboratory trials must be conducted to determine the optimum dosage and combination ratio before industrial production.admixture can be washed with fresh cold water and should not be allowed enter sewers or open bodies of water.

Cleaning: SODIUM NITRATE is intended to be used as a primary dispersing component in the production of concrete admixtures.

Packing: 1000 kg container Bulk

Storage and Shelf Life: Must be stored at temperatures between +5°C and +35°C. Under proper storing conditions, the product's shelf life is 12 months from production date if kept in original packaging unopened and undamaged. Packaged products must be shaken before use.

Security Information: Use protective clothes, gloves, glasses and mask compatible with Health and Safety regulations during the application. It should not contact skin and eyes. In case it contacts to skin and eyes, rinse it with water and if swallowed ask for medical help. Food and beverage should not be allowed in the application area. It should be stored at the reach out of the children. The Material Safety Data Sheet (MSDS) should be read for detailed information.

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