



SPECIFICATION

PRODUCT NAME: Sodium Nitrate

ORIGIN:CHINA

IUPAC Name:Sodium Nitrate

Cas Number: 7631-99-4

HS Code: 3102.50.00

Formula: NaNO₃

Appearance: White Powder

Material: Nitrile rubber

Minimum layer thickness: 0,11 mm

Break through time: 480 min

Material tested:KCL 741 Dermatril® L

This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves

Splash contact

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Physical and chemical properties

1.1 Information on basic physical and chemical properties

- a) Physical state solid
- b) Color No data available
- c) Odor odorless
- d) Melting point/freezing point Melting point: 308 °C
- e) Initial boiling point and boiling range 380 °C



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- f) Flammability (solid,gas) The product is not flammable.
- g) Upper/lower flammability or explosive limits: No data available
- h) Flash point does not flash
- i) Autoignition temperature No data available
- j) Decomposition temperature No data available
- k) pH 5,5 - 8,0 at 50 g/l at 20 °C
- l) Viscosity Viscosity, kinematic: No data available
- m) Water solubility 874 g/l at 20 °C - soluble
- n) Partition coefficient: n-octanol/water Not applicable for inorganic substances
- o) Vapor pressure No data available
- p) Density 2,26 g/cm³ at 20 °C Relative density No data available
- q) Relative vapor density No data available
- r) Particle characteristics No data available
- s) Explosive properties No data available
- t) Oxidizing properties The substance or mixture is classified as oxidizing with the category

Description:

Brief Overview

Sodium nitrate is a white solid with the formula of NaNO_3 . It is very soluble in water and is also a good source of nitrate anion, which is greatly used by many industries. Being available as a natural resource, sodium nitrate is mined extensively to meet its huge demand till the 20th century.

Nitrate salts are bounded within the mineral and serves as the main source of sodium nitrate till the 20th century. German chemist Fritz Haber and Carl Bosch developed a process to synthesize nitrate on an industrial scale.

Manufacturing Process

Method 1: Mining: Sodium nitrate and its nitrate salts can be mined from the caliche ore in Chile and Peru. For more than a century, supply of nitrate salts was purely mined from Chile and Peru. Mined nitrate salts are processed, purified and standardized for industrial consumption. However, with the increase in demand for sodium nitrate, alternative methods are required before natural supplies are depleted.

Method 2: Haber Process: Sodium nitrate is manufactured on an industrial scale using hydrogen and nitrogen gas, with the presence of CaO catalyst. As the reaction is exothermic, it is thermodynamically favorable under low-pressure conditions of 200-atmospheric pressure. Using this process, ammonia is manufactured and can be converted to nitrate easily through the process of nitrification.

Method 3: Neutralization: Sodium nitrate can also be manufactured by neutralizing nitric acid with soda ash. Alternatively, mixing ammonium nitrate with either sodium hydroxide, sodium bicarbonate or sodium carbonate can also yield sodium nitrate.



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Applications

Textile Industry: Sodium nitrate is used in dyeing and printing of textiles. It is used in the manufacture of azo dyes and for oxidizing dyeings and prints with leuco vat dyes. It is a versatile bleaching agent for cellulose, synthetics and blends, especially poly-cotton blends. It is also safe for those synthetic fibers which are sensitive to alkali. Sodium Nitrate is non-sensitive metal ions and hard water under acidic conditions.

Food Industry: Sodium nitrate is also a food additive used as a preservative and color fixative in cured meats and poultry. It is listed under its INS number 251 or E number E251. It is approved for use in the EU, USA and Australia and New Zealand.

Other Applications: Sodium nitrate is also used in antiseptic dental mouthwash, wastewater industry for facultative microorganism respiration and color fixation, fertilizer, manufacture of high-strength glass and manufacture of gunpowder.

We hereby certify that the above statements are true and correct in every respect.

佰阿斯达国际贸易(江苏)有限公司
EPOCH MASTER GLOBAL BUSINESS(JIANGSU) INC.

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