

Sodium Carbonate



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Sodium Carbonate

Sodium carbonate "soda ash" is one of the most widely used chemical compounds. The chemical formula of sodium carbonate is Na_2CO_3 . CAS-Number is 497-19-8. The purity of this product is usually reported in terms of Na_2O . Each kilogram of sodium carbonate contains 0.585 kilograms of Na_2O .

Physical and Chemical properties of sodium carbonate

Sodium carbonate has a melting point of 851 degrees Celsius. If this compound experiences a higher temperature it will decompose; Hence the boiling temperature will be meaningless for this compound.

The solubility of sodium carbonate in water at 20 ° C is 215 g / l. Sodium carbonate reacts with carbon dioxide and water to produce sodium bicarbonate. The dissolution of sodium carbonate in water is a calorific reaction.

Types of sodium carbonate

Sodium carbonate is divided into two parts in terms of application:

Dense sodium carbonate and Light sodium carbonate

The difference between heavy sodium carbonate and light sodium carbonate can only be used in density, particle size, and application. there is no chemical difference between them.

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Dense sodium carbonate:

It has a mass density of about 1000 kg / m³ and particles with a size of 300 to 500 microns. Larger granular particles like this cause no dust and impurities and reduce the possibility of particles scattering during transport.

The most important and main application of this material is in the production of glass. Melting pure silica requires a maximum temperature of 2000 degrees Celsius, so most manufacturers save on fuel costs by mixing raw sand with 18% soda (Na₂CO₃).

Applications:

- Production of float glass
- Production of industrial glass
- Lead refining
- Production of crystals, jars, and glass bottles
- Production of sodium silicate
- production of glass wool

Dense Soda Ash specification

Chemical Composition	Unit	Min	Max
Sodium Carbonate (Na ₂ CO ₃)	% wt	99.2	99.6
Sodium Chloride (NaCl)	% wt	0.1	0.5
Sodium Bicarbonate (NaHCO ₃)	% wt	-	0.1
Sodium Sulfate (Na ₂ SO ₄)	% wt	-	0.05
Iron (Fe)	ppm	-	30
Loss On Heating	% wt	-	0.2
Moisture	% wt	-	0.2
Ni	ppm	-	30
Cr	ppm	-	10
Mn	ppm	-	10
Cu	ppm	-	30
Characteristics			
Total Alkalinity (Na ₂ O)	% wt	58.12	58.42
Pouring Density	g/cm ³	0.85	1.1
Mesh	< 40	% wt	-
	40 - 140		59
	> 140		1

Dense sodium carbonate

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Light sodium carbonate

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Light sodium carbonate:

Its density is about 500 kg per cubic meter and the particle size of light sodium carbonate is about 100 microns. Light sodium carbonate is used to make chemicals and detergents.

Applications

- Production of chemicals
- Production of household and industrial detergents
- Sodium nitrate production
- Production of paper and pulp
- Petrochemical industries and refineries
- Drilling oil wells
- Production of sodium bicarbonate
- Zinc extraction
- Sugar industry
- water refinery
- Melting aid
- Tile industry
- Animal feed
- Metallurgy and steel production

Light Soda Ash specification

Chemical Composition	Unit	Min	Max
Sodium Carbonate (Na ₂ CO ₃)	% wt	99.2	99.6
Sodium Chloride (NaCl)	% wt	0.1	0.5
Sodium Bicarbonate (NaHCO ₃)	% wt	-	0.1
Sodium Sulfate (Na ₂ SO ₄)	% wt	-	0.05
Iron (Fe)	ppm	-	30
Loss On Heating	% wt	-	0.2
Moisture	% wt	-	0.2
Ni	ppm	-	30
Cr	ppm	-	10
Mn	ppm	-	10
Cu	ppm	-	30
Characteristics			
Total Alkalinity (Na ₂ O)	% wt	58.12	58.42
Pouring Density	g/cm ³	0.45	0.6

Contact Us



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