

Soda Ash

Characteristics: Soda ash, or anhydrous sodium carbonate, is a white powdered or granular alkaline material, produced in two grades that differ in granulation and in bulk density. It is capable of absorbing atmospheric moisture and carbon dioxide slowly to form sodium sesquicarbonate and various hydrates.

Properties:	Formula	Na_2CO_3
	Molecular	105.99
	Absolute Density g/cm^3	2.533 (at 25 degree C)
	Melting point, degree C	851
	Solubility	see graph in next pages
	pH of 1% solution at 25 degree C	11.3
	(Properties of pure sodium carbonate)	

Typical Analysis:

	Dense Soda Ash	Light Soda Ash
Sodium Carbonate (Na_2CO_3), %	99.8	99.5
Equivalent Sodium Oxide (Na_2O), %	58.4	58.2
Sodium Sulfate (Na_2SO_4), %	0.02	0.02
Sodium Chloride (NaCl), %	0.01	0.01
Drying loss, %	0.10	0.12
Iron (Fe)%	2	8
Bulk density, lbs/ft ³	63-66	35

Screen analysis (cum. % on):

US No. 30	3	3
100	90	18
200	99	65

Product Markets and Uses:

Market - Aluminum manufacturers	Use - Supplies sodium ion and alkalinity required to dissolve bauxite
Market - Chemical manufacturers	Use - Raw material source of alkalinity and sodium ion.
Market - Cleanser compounders	Use - Basic material which supplies detergency.
Market - Foundries and Steel mills.	Use - Supplies sodium ion needed in desulfurization.
Market - Glass manufacturers.	Use - Used as a fluxing agent in a glass batch.
Market - Mines	Use - pH control in froth flotation
Market - Paper industry	Use - Supplies the sodium ion required in the pulping of wood fiber SO_2 removal.
Market - Soap Makers	Use - as a raw material to saponify fatty acids.
Market - Waste water treatment plants.	Use - Supplies alkalinity required in neutralization.
Market - Potable water treatment plants	Use - To supply the alkalinity and sodium ion need in water softening.
Market - Environmental Control	Use - Scrub acid gas from air discharge streams, pH control of water effluents.