

## LIGHT SODA ASH

Chemical Formula	:	<b>Na<sub>2</sub>CO<sub>3</sub></b>	
Structural Formula	:	$\begin{array}{c} \text{O} \\    \\ \text{Na} - \text{O} - \text{C} - \text{O} - \text{Na} \end{array}$	
Common names	:	<b>Sodium carbonate, calcined soda, disodium carbonate</b>	
CAS Registry Number	:	<b>497-19-8</b>	

The synthetic soda ash is produced using the ammonia-soda process, popularly known as the Solvay process. Common salt and limestone are the raw materials processed and converted into soda ash and calcium chloride.

### Physical & Chemical Properties :

Light Soda Ash is a white, odorless, uniform product, free from dirt and other foreign matter. Soda Ash has a tendency to absorb moisture from the atmosphere. The moist Soda Ash then starts absorbing the atmospheric carbon dioxide. This phenomenon of absorption of moisture and carbon dioxide by Soda Ash is known as weathering. After such weathering, Soda Ash is likely to contain appreciable moisture and sodium bicarbonate. However, the total alkali content of the bag does not change. Soda Ash has a tendency to cake when in contact with moisture and consequently becomes lumpy.

Characteristics		Units	IS 251 : 1998 Specifications	TCL Assured Specifications
Molecular Weight				<b>106</b>
Bulk Density		Kg/m <sup>3</sup>	<b>500 – 750</b>	<b>550 – 720</b>
Volatile matter content (at the time of packing)		%, max	<b>2</b>	<b>0.80</b>
Total Alkalinity (as Na <sub>2</sub> CO <sub>3</sub> )		%, min	<b>98.5</b>	<b>99.0</b>
Sulphates (as Na <sub>2</sub> SO <sub>4</sub> )		%, max	<b>0.08</b>	<b>0.03</b>
Chlorides (as NaCl)		%, max	<b>1.0</b>	<b>0.80</b>
Iron (as Fe <sub>2</sub> O <sub>3</sub> )	By Colorimetric method	%, max		<b>0.0029</b>
	By Spectrophotometric method		<b>0.007</b>	<b>0.002</b>
Matter insoluble in water		%, max	<b>0.15</b>	<b>0.03</b>

## **Applications :**

Light Soda Ash is one of the most important basic industrial chemicals and the most widely used fixed alkali for manufacture of other alkali products, sodium salts, glass, soap, sodium silicates, detergent, bicarbonates, bichromates, pulp and paper, cellulose and rayon, iron and steel, aluminium, cleaning compounds, water softening chemicals, textiles and dyestuffs, drugs and many other materials. It also finds extensive use as an alkali for household purposes and as a washing powder by laundries and washermen.

## **Packaging :**

Available in 50 kg HDPE/PP bags and 750 kg PP jumbo bags with lamination/liner

## **Storage :**

Soda Ash should be stored under cover in a cool, dry place and the bags should not be stacked more than 15 high.

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Additional information required can be provided from our Corporate/Regional offices.

### Marketing Office :

#### **Tata Chemicals Limited**

**Ralli House, 21, D. Sukhadwala Marg, Mumbai – 400 001**

Tel : 91 22 2001144 Fax : 91 22 2033368

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## DENSE SODA ASH

Chemical Formula	:	<b>Na<sub>2</sub>CO<sub>3</sub></b>	
Structural Formula	:	$  \begin{array}{c}  \text{O} \\     \\  \text{Na} - \text{O} - \text{C} - \text{O} - \text{Na}  \end{array}  $	
Common names	:	<b>Sodium carbonate, calcined soda, disodium carbonate</b>	
CAS Registry Number	:	<b>497-19-8</b>	

The synthetic soda ash is produced using the ammonia-soda process, popularly known as the Solvay process. Common salt and limestone are the raw materials processed and converted into soda ash and calcium chloride.

### Physical & Chemical Properties :

Characteristics	Units	IS 251 : 1998 Specifications	TCL Assured Specifications
Molecular Weight			<b>106</b>
Bulk Density	Kg/m <sup>3</sup>	<b>951 - 1250</b>	<b>1000 - 1200</b>
Volatile matter content (at the time of packing)	%, max	<b>2</b>	<b>0.80</b>
Total Alkalinity (as Na <sub>2</sub> CO <sub>3</sub> )	%, min	<b>98.5</b>	<b>99.0</b>
Sulphates (as Na <sub>2</sub> SO <sub>4</sub> )	%, max	<b>0.08</b>	<b>0.03</b>
Chlorides (as NaCl)	%, max	<b>1.0</b>	<b>0.80</b>
Iron (as Fe <sub>2</sub> O <sub>3</sub> )	By Colorimetric method		<b>0.0029</b>
	By Spectrophotometric method	%, max	<b>0.007</b>
Matter insoluble in water	%, max	<b>0.15</b>	<b>0.03</b>
Sieve Analysis :			
<i>BS Mesh</i>	<i>Microns</i>		
+ 10	+ 1700	%, max	<b>1.0</b>
- 200	- 75		<b>15.0</b>
			<b>1.0</b>
			<b>5.0</b>

Dense Soda Ash is a white, odorless, uniform product, free from dirt and other foreign matter. Soda Ash has a tendency to absorb moisture from the atmosphere. The moist Soda Ash then starts absorbing the atmospheric carbon dioxide. This phenomenon of absorption of moisture and carbon dioxide by Soda Ash is known as weathering. After such weathering, Soda Ash is likely to contain appreciable moisture and sodium bicarbonate. However, the total alkali content of the bag does not change. Soda Ash has a tendency to cake when in contact with moisture and consequently becomes lumpy.

### **Applications :**

Dense Soda Ash is one of the most important basic industrial chemicals and thus finds use in glass, silicate, ultramarine, bichromate and other industries.

### **Packaging :**

Available in 50 kg HDPE/PP bags and 1 MT PP jumbo bags with lamination/liner

### **Storage :**

Soda Ash should be stored under cover in a cool, dry place and the bags should not be stacked more than 15 high.

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## MEDIUM DENSE SODA ASH

Chemical Formula	:	<b>Na<sub>2</sub>CO<sub>3</sub></b>	
			$\begin{array}{c} \text{O} \\    \\ \text{Na} - \text{O} - \text{C} - \text{O} - \text{Na} \end{array}$
Structural Formula	:	<b>Na -- O -- C -- O -- Na</b>	
Common names	:	<b>Sodium carbonate, calcined soda, disodium carbonate</b>	
CAS Registry Number	:	<b>497-19-8</b>	

The synthetic soda ash is produced using the ammonia-soda process, popularly known as the Solvay process. Common salt and limestone are the raw materials processed and converted into soda ash and calcium chloride.

### Physical & Chemical Properties :

Medium Dense Soda Ash is a white, odorless, uniform product, free from dirt and other foreign matter. Soda Ash has a tendency to absorb moisture from the atmosphere. The moist Soda Ash then starts absorbing the atmospheric carbon dioxide. This phenomenon of absorption of moisture and carbon dioxide by Soda Ash is known as weathering. After such weathering, Soda Ash is likely to contain appreciable moisture and sodium bicarbonate. However, the total alkali content of the bag does not change. Soda Ash has a tendency to cake when in contact with moisture and consequently becomes lumpy.

Characteristics		Units	IS 251 : 1998 Specifications	TCL Assured Specifications
Molecular Weight				<b>106</b>
Bulk Density		Kg/m <sup>3</sup>	<b>751 - 950</b>	<b>751 - 950</b>
Volatile matter content (at the time of packing)		%, max	<b>2</b>	<b>0.80</b>
Total Alkalinity (as Na <sub>2</sub> CO <sub>3</sub> )		%, min	<b>98.5</b>	<b>99.0</b>
Sulphates (as Na <sub>2</sub> SO <sub>4</sub> )		%, max	<b>0.08</b>	<b>0.03</b>
Chlorides (as NaCl)		%, max	<b>1.0</b>	<b>0.80</b>
Iron (as Fe <sub>2</sub> O <sub>3</sub> )	<i>By Colorimetric method</i>	%, max		<b>0.0029</b>
	<i>By Spectrophotometric method</i>		<b>0.007</b>	<b>0.002</b>
Matter insoluble in water		%, max	<b>0.15</b>	<b>0.03</b>

### **Applications :**

Medium Dense Soda Ash is one of the basic industrial chemicals and thus finds use in glass, silicate, bichromate and other industries.

### **Packaging :**

Available in 50 kg HDPE/PP bags with lamination

### **Storage :**

Soda Ash should be stored under cover in a cool, dry place and the bags should not be stacked more than 15 high.

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**GRANULAR SODA ASH**

Chemical Formula : **Na<sub>2</sub>CO<sub>3</sub>**

Structural Formula : **Na -- O -- C(=O) -- O -- Na**

Common names : **Sodium carbonate, calcined soda, disodium carbonate**

Specification : **T. C. Specification**

CAS Registry Number : **497-19-8**

The synthetic soda ash is produced using the ammonia-soda process, popularly known as the Solvay process. Common salt and limestone are the raw materials processed and converted into soda ash and calcium chloride.

**Physical & Chemical Properties :**

Characteristics		Units	TCL Assured Specifications
Molecular Weight			<b>106</b>
Bulk Density		Kg/m <sup>3</sup>	<b>951 - 1250</b>
Volatile matter content (at the time of packing)		%, max	<b>0.80</b>
Total Alkalinity (as Na <sub>2</sub> CO <sub>3</sub> )		%, min	<b>99.0</b>
Sulphates (as Na <sub>2</sub> SO <sub>4</sub> )		%, max	<b>0.03</b>
Chlorides (as NaCl)		%, max	<b>0.80</b>
Iron (as Fe <sub>2</sub> O <sub>3</sub> )	<i>By Colorimetric method</i>	%, max	<b>0.0029</b>
	<i>By Spectrophotometric method</i>		<b>0.002</b>
Matter insoluble in water		%, max	<b>0.03</b>
Sieve Analysis :			
<u>BS Mesh</u>	<u>Microns</u>		
+ 4	4000	%, max	<b>10.0</b>
- 14	1180		<b>15.0</b>

Granular Soda Ash is a white, odorless, uniform product, free from dirt and other foreign matter. Soda Ash has a tendency to absorb moisture from the atmosphere. The moist Soda Ash then starts absorbing the atmospheric carbon dioxide. This phenomenon of absorption of moisture and carbon dioxide by Soda Ash is known as weathering. After such weathering, Soda Ash is likely to contain appreciable moisture and sodium bicarbonate. However, the total alkali content of the bag does not change. Soda Ash has a tendency to cake when in contact with moisture and consequently becomes lumpy.

### **Applications :**

Granular Soda Ash finds use in steel industries and is used in blast furnace for removal of sulphur from iron ore. It also imparts fluidity to the slag, thus ensuring smoother and continuous blast furnace operation. It is also used in jaggery (gur) industries.

### **Packaging :**

Available in 50 kg HDPE/PP bags with lamination

### **Storage :**

Soda Ash should be stored under cover in a cool, dry place and the bags should not be stacked more than 15 high.

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