

# Borax Decahydrate Crystals

## ▶ BACKGROUND

When people think of Borax Decahydrate (also known as Borax or Sodium Tetraborate) they only think of a white crystalline or fine powder. However, in few Asian countries like India, China etc. Borax Decahydrate is traditionally used in Crystal form.

Borax Crystals (as they are commonly called) are mainly composed of Boric Oxide ( $B_2O_3$ ), Sodium Oxide and water. Borax crystals are transparent, colourless & not flammable or reactive. They are measuring approx. 3-5 inches in size. Borax Crystals have excellent buffering and fluxing properties.

## ▶ APPLICATION AND BENEFITS

Borax Crystals are used as metallurgical fluxes. The ability to dissolve metal oxides is exploited in the recovery of metals such as brass, copper, lead and zinc from scrap or smelting slag. In ferrous metallurgy, Borax Crystals are used as a cover flux to prevent oxidation at the surface of the molten ingot. In welding, brazing, and soldering, Borax Decahydrate covers the metal surfaces, excluding air and preventing oxidation. It also acts as a solvent and cleaning agent.

Traditionally, in India, Borax Crystals have been used for thousands of years in Unani medicine as an antiseptic.

Borax Crystals also act as a source of slow and controlled release of micronutrient boron in Agriculture applications. In areas prone to heavy & frequent rainfall, the valuable nutrients get leached off from the top layer of soil. Borax Crystals are usually used in such areas to prevent leaching and provide a slow and sustained release of Boron.

## ▶ GENERAL INFORMATION

Product Name	Borax Decahydrate Crystals
Chemical Name	Borax Decahydrate, Borax 10 Mol, Di Sodium Tetraborate Decahydrate
Chemical Formula	$Na_2B_4O_7 \cdot 10 H_2O$
CAS No	1303-96-4



## ► PHYSICAL PROPERTIES

Molecular Weight	381.35
Appearance	Colourless Transparent Crystals
Bulk Density (Loose)	1.78 gms/cc
Particle Size	3- 5 inches

## ► CHEMICAL PROPERTIES

Boron Content (As B)	10.5% Min
Boron Content (As B <sub>2</sub> O <sub>3</sub> )	36.4% Typical
Na <sub>2</sub> O	16.25 % Typical
Matter Insoluble in Water	1.0% Max

## ► SOLUBILITY AND pH

Solubility in Water		pH@ 20°C	
At 20°C	4.7%	pH 0.1% solution	9.3
At 30°C	65.64%	pH 1.0% solution	9.2

## ► PACKAGING

25 Kg PP Bags with Inner Liner.

\*All data above are determined by Raj Borax Private Ltd analytical methods.

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