



Borax 10 MSR

Borax Decahydrate
Disodium Tetraborate Decahydrate
 $\text{Na}_2\text{B}_4\text{O}_7 \cdot 10\text{H}_2\text{O}$
CAS N° 1303-96-4
NCM N° 2940.19.00



+ Characteristics

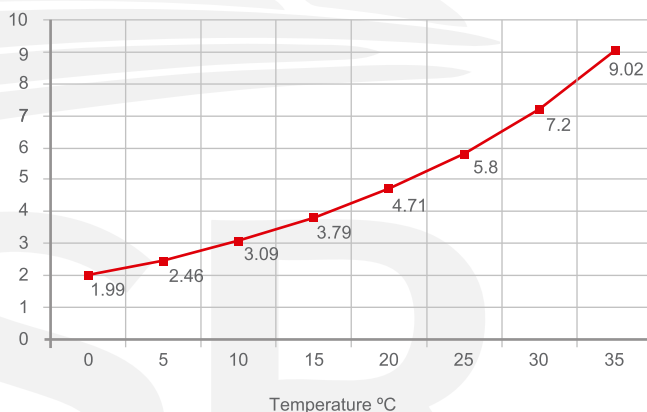
Molecular weight	381.43
Purity as B element	11.3 % min.
Purity as $\text{Na}_2\text{B}_4\text{O}_7 \cdot 10\text{H}_2\text{O}$	99.5 % min.

Borax 10 MSR is the refined form of natural sodium borate. It is composed of Boric Oxide (B_2O_3), Sodium Oxide and water. It is a mild alkaline, white and crystalline salt with excellent buffering and fluxing properties. It is available in its granulated form.

... Chemical and Physical Properties

B_2O_3	36.5%min.
Na_2O	16.2% min.
Sulfates (SO_4)	0.10% max.
Chlorides (Cl-)	0.10% max.
Iron (Fe_3^+)	0.0003% max.
Humidity	0.10% max.

+ Solubility in water



—■— Borax Decahydrate % weight in saturated solution

+ Packaging

Borax 10 MSR is available in 25kg polypropylene bags and in 1000kg bulk bags.



+ Applications and benefits

Soaps and Detergents

Borax Decahydrate is incorporated into many cleaning products, as a pH buffering agent to aid in the emulsification of oils, and also as a gentle abrasive. Borax 10 MSR is added to powdered soaps to remove medium to heavy soils found in industrial operations. It is also added to different formulations in order to clean hard surfaces such as metals, glass and ceramics. It is also used as an additive in hand cleaners, polishes, waxes, and industrial cleaning compounds. In laundry detergents, Borax Decahydrate facilitates the removal of oily solutions from fabrics while imparting alkalinity, pH buffering and softening properties to the washing water.

Personal Care Products

Borax 10 MSR is used in cosmetics, toiletries and pharmaceuticals. It is also used in contact lens solutions together with Boric Acid as a gentle cleaner and a buffering agent. Borax Decahydrate is also used as a cross-linking agent to emulsify waxes and paraffin used as a base for lotions, creams and ointments.

Metallurgical Fluxes

Borax 10 MSR's capacity to dissolve metal oxides is exploited in the recovery of metals such as brass, copper, lead and zinc from scrap and smelting slag. In ferrous metallurgy, Borax Decahydrate is used as a cover flux to prevent oxidation at the surface of the molten ingot. In welding, brazing and soldering, this product is used to cover metal surfaces by excluding air and preventing oxidation. It also acts a solvent and cleaning agent.

Corrosion Inhibitor

Different boron formulations can be used as corrosion inhibitors and anti-freeze solutions (mixed with Ethylene Glycol in automobile engine cooling systems) as well as in brewing, heat treating, hydraulic fluids and treatment of metal products. Borax 10 MSR is incorporated in many aqueous systems that require this property. In addition, it protects ferrous metals against oxidation and finds its use in the production of automobile and engine cooling formulations and various water treatment chemicals. This product neutralizes the acid residue that results from the decomposition of Ethylene Glycol and minimizes the rate of oxidation on the metal surface. Aqueous solutions with Borax Decahydrate have replaced chromates used in railroad and other diesel engine coolants.

Adhesives

Borax 10 MSR is used in starch adhesive formulations of corrugated cardboard and paperboard. It is also used as a peptizing agent in the manufacture of casein-based and dextrin-based adhesives. It greatly improves the adhesion and strength of the adhesive by cross-linking conjugated hydroxyl groups.

Refractories

Borax 10 MSR compounds are used as stabilizers and bonding agents in specialty abrasives.

Other Applications

Borax Decahydrate is used as a flame retardant in cellulose materials, as a regulator and catalyst in dyes, as a degreaser in enameling processes, and as a herbicide.