Summary Technical Data Sheet

Sodium Metasilicate Pentahydrate

Product Name: Sodium Metasilicate Pentahydrate
CAS Number: 10213-79-3
Formula: $Na_2SiO_3 \cdot 5H_2O$
Synonyms: Disodium trioxosilicate, Disodium metasilicate, metso anhydrous, water glass, soluble glass, sodium sesquisilicate, sodium siliconate, sodium polysilicate
Appearance: White granular powder
Molecular Weight: 212.14 g/mol
Melting Point: 1,088 ° C (1,990° F)
pH: 12 (1% aqueous solution)

Typical Product Specifications

Alkali content (as Na_2O)	28.0 – 30.5 %
Content (as SiO_2)	27.0 – 29.0 %
Fe	≤ 200 ppm
Density	0.85 ~ 1.05 g/cm^3
Particle Size (14~30 mesh)	≥ 90.0 %
Whiteness	≥ 85 %

Sodium Metasilicate Pentahydrate is a white granular powder, which is used in many cleaners, detergents, and soap formulations. It is an effective cement binding agent, coagulant in water treatment, dye fixative, binder, corrosion inhibitor, and penetrating sealant.

In cleaning formulations, Sodium Metasilicate Pentahydrate significantly improves detergent action and acts as an efficient emulsifying and suspension agent. It is widely used as a builder in cleaners, soaps and detergents since it effectively improves and maintains the cleaning efficiency of surfactants by inactivating water hardness.

Sodium Metasilicate Pentahydrate has many applications in construction, particularly in cement and sealants. In cements and concrete, Sodium Metasilicate Pentahydrate is an effective binding agent with the benefits of easy dissolution in water, low dust, and high reactivity. It is an important component of wet and dry mixes in shotcrete, which yields excellent strength of the resulting structure. It is also used in oil well cements to prevent separation of solids from the cement matrix. Sodium Metasilicate can be used as an extender and enable a higher ratio of water to cement.

In pulp and paper, Sodium Metasilicate Pentahydrate is used as a sizing agent and buffer/stabilizing agent in combination with hydrogen peroxide.

Automotive applications of Sodium Metasilicate Pentahydrate include the decommissioning of old engines, exhaust repair, and cooling system sealant.

Sodium Metasilicate is an important starting material for silica catalysts and zeolites. It is also used in boiler water, paint strippers, drilling fluids, fire retardants.

Storage and Handling: Keep containers tightly closed in a cool, dark, ventilated place.

Packaging: 55 lb / 25 kg bag

Transport Regulations: UN 3253. Hazard Class 8. Packing Group 3. Disodium trioxosilicate.

The above information, while not guaranteed, reflects our analysis and believed to be accurate. It is the end user's responsibility, prior to use of the above mentioned product to determine the suitability of the product. Aqua Bond shall not be, directly or indirectly responsible for damages of any nature whatsoever resulting from the use or reliance upon the above information.
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