



## TECHNICAL DATA SHEET

**Product Name:** Sodium Octaborate Tetrahydrate

**CAS No.:** 12280-03-4

**EC No.:** 234-541-0

**Molecular Formula:**  $\text{Na}_2\text{B}_8\text{O}_{13}\cdot 4\text{H}_2\text{O}$

**Molecular Weight:** 412.52 g/mol

**EINECS No.:** 234-541-0

### 1. Product Description

Sodium Octaborate Tetrahydrate (SOT) is a white, odorless, crystalline powder or granule, highly soluble in water. It is commonly used as a wood preservative, flame retardant, and insecticide, especially for termites and fungi control. It also finds use in ceramics, agriculture, and corrosion inhibition.

### 2. Typical Specifications

Parameter	Specification
Appearance	White crystalline powder
Boron Content	$\geq 67.8\%$
$\text{B}_2\text{O}_3$ Content	$\geq 20.5\%$
$\text{Na}_2\text{O}$ Content	15.0–15.9%
pH (1% solution)	7.0–8.5
Solubility in Water (20°C)	Approx. 21.9%
Density	1.73 g/cm <sup>3</sup>
Melting Point	75°C (loses water of hydration)
Heavy Metals	$\leq 10$ ppm
Insolubles	$\leq 0.1\%$

### 3. Applications

**Wood Preservation:** Protects against termites, beetles, mold, and fungi.

**Flame Retardants:** Used in wood, cellulose insulation, and polymers.

**Agriculture:** Micronutrient boron source in fertilizers.

**Ceramics and Glass:** Enhances chemical durability and thermal resistance.

**Industrial Cleaning Agents and metalworking fluids** as a pH buffer and corrosion inhibitor.

### 4. Packaging & Storage

**Packaging:** 25kg kraft paper bags or jumbo bags.

**Storage:** Store in a dry, cool, well-ventilated place. Avoid moisture exposure.

**Shelf Life:** At least 24 months under recommended storage conditions.

## 5. Safety & Handling

Avoid inhalation or prolonged skin contact.

Use personal protective equipment when handling.

Refer to SDS (Safety Data Sheet) for full safety and hazard information.

