



## Sodium Perborate

### I. Description of the Product

Sodium Perborate monohydrate (Synonyms: sodium peroxyborate, sodium peroxoborate, PB1) is similar to sodium percarbonate as a famous oxygen bleach agent. Sodium perborate offers many of the functional benefits as liquid hydrogen peroxide in a stable solid form. The oxidative power of sodium perborate improves the cleaning, bleaching, stain removal and deodorizing performance of powder detergent formulations, all fabric dry bleaches, denture cleaners, automatic dishwasher detergents and various institutional and industrial laundry products.

Sodium perborate usually exists in two forms, tetrahydrated and monohydrated. Sodium perborate tetrahydrate is obtained by addition of hydrogen peroxide to a sodium metaborate solution at a temperature close to 20.degree. C. Sodium perborate monohydrate is produced by dehydrating sodium perborate tetrahydrate in a fluid bed with heated air. Sodium perborate releases nascent oxygen at elevated temperatures, and so acts as a hydrogen peroxide bleach. The monohydrated form is essentially showing three advantages in comparison with the tetrahydrated form: a higher content of available oxygen, a higher heat stability and a higher dissolution rate into water. Sodium perborate has been in detergent and personal care formulations for many years. Its oxidative power improves the cleaning, bleaching, stain removal and deodorizing performance of powder detergent formulations, all fabric dry bleaches, denture cleaners, automatic dishwasher detergents and various institutional and industrial laundry products. It's main disadvantage is that the bleaching action only takes place at elevated temperatures. To release it's bleaching action at lower temperatures, an activator must be added.

### II. Applications of the Product

Used in active oxygen-type laundry bleaches, plastic destaining and dishwashing compounds, coffee-stain removers, denture cleaners, neutralizers for cold-wave preparations, and the preparation of oxidizing solutions for bleaching or other purposes. It can also be used as a source of oxygen at elevated temperatures.

### III. Quality Terms





Product Properties	Standard Specifications	
	Monohydrate	Tetrahydrate
Available Oxygen, %	≥15.1	≥10.0
Bulk Density, g/l	550-640	550-800
Wet Stability, %	≥85	≥80
PH value (1% Solution)	9.5-10.5	9.5-10.5
Ferric, %	≤0.002	≤0.002
CAS No.	10332-33-9	10486-00-7
Molecular Weight	99.81	153.88
Molecular Formula	NaBO <sub>3</sub> .H <sub>2</sub> O	NaBO <sub>3</sub> .4H <sub>2</sub> O
Appearance	White free flowing crystalline powder	
Packing	25 kg PP-PE Bag	

#### IV. Storage Points for Attention

- Store in a dry area.
- Protect from direct sunlight.
- Store away from heat sources.
- Keep away from incompatible products (see section 10).
- Store in vented containers.
- Store in temperatures less than 40°C (104°F).
- Keep in container fitted with safety valve or vent.
- Container must be used exclusively for the product.

#### V. Usage Points for Attention

- Clean and dry process and other piping and equipment before using this product.
- Never return unused product to storage container.
- Keep away from incompatible products.
- Containers and equipment used to handle the product should be used exclusively
- for that product.
- Avoid contact with water or humidity.





## VI. First-aid Measures

**General Recommendations:** Do not dry soiled clothing near an open flame or incandescent heat source.

♀ **Inhalation:**

- Remove the subject from dusty environment.
- Consult a physician in case of respiratory symptoms.

**Eyes:**

- Flush eyes as soon as possible with running water for 15 minutes, while keeping the eyelids open.
- Consult an ophthalmologist in all cases.

**Skin:**

- Remove contaminated shoes, socks and clothing; wash the affected skin with running water.
- Clean clothing.
- Consult a physician in case of persistent pain or redness.

**Ingestion:** Consult a physician immediately in all cases.

**If the subject is completely conscious:**

- Rinse and administer fresh water.
- Do not induce vomiting.

**If the subject is unconscious:**

- NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON.
- Loosen collar and tight clothing, lay the victim on his/her left side.
- Keep warm (blanket).

♀ **Medical Treatment/Notes to Physician:** See Section 4.1 above.





## VII. Shipping Information

Proper Shipping Name: sodium perborate

UN: 3371

Packing group: PG III

TDG Classification: 5.1

■ Please read the **MSDS** for this chemical before using!

