

# Borates in Detergents, Cleaners and Personal Care Products

Many different borates can be used to produce laundry detergents, household or industrial cleaners, and personal care products. The choice depends on the type, composition and quality of the final products, as well as the other ingredients. Borates function in detergents, cleaners and personal care products to:

- Carry active oxygen for bleaching
- Stabilize enzymes
- Enhance stain removal
- Provide alkaline buffering
- Boost surfactant performance
- Soften water
- Control viscosity or rheology
- Emulsify waxes or oils

Applications for laundry detergents, cleaners and personal care products include:

#### Laundry detergents

Borates are used in a variety of household and industrial laundry detergent formulations. In powdered detergent, they can be directly incorporated to boost cleaning power or added as sodium perborate for bleaching action. They are also used in liquid detergents



– enzymes for stain removal need to be stabilized in liquids, and borates have proven exceptionally effective for this.

#### Cleaning products

Borates or perborates are used in many household and industrial products for cleaning metals, glass, sinks, bathtubs, toilets, floors and machinery. They can also be found in automatic dishwashing detergents and powdered or liquid hand soaps.

#### Personal care products

Borates or perborates work in many personal care products such as cosmetic creams, skin lotions, hair shampoos, dyes and gels, eye drops, bath salts, and denture cleaners.

#### About the formulation

For detergents, cleaners and personal care products manufacturers rely on the products listed below:



**Neobor® Borax Pentahydrate**

**Optibor® Boric Acids**

**Dehybor® Anhydrous Borax**

**Borax Decahydrate**

**Enhanced Borates**



### **About the company**

Rio Tinto Borax supplies nearly half the world's demand for borates from its principal mine in California. The company offers an integrated approach to mining, refining, and distributing borates, as well as:

- Strategic Inventory Placement and long-term contracts with shippers to ensure supply reliability.
- Acknowledged world leadership in borate chemistry and technology development that translates to unparalleled technical support for customers.
- Consistent product quality supported by ISO 9000 registered Quality Management Systems, statistical process control and Certificates of Analysis.

### **About the products**

Borates are naturally-occurring mineral salts, essential for plant life and part of a healthy diet for people. Borate products have an excellent reputation for safety – and a long track-record of being safe when used as directed.

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