

# $^{10}\text{B}$ in the form of Boric Acid for nuclear industry



- B-10 enriched Boric Acid for use as a chemical shim for excess neutron absorption in the primary circuit of PWRs using high burnup or MOX fuel cores.
- In these PWRs neutron absorption of natural Boric Acid is insufficient. Solubility of Boric Acid limits the boron concentration in primary circuit water to be used as neutron poison.
- Today more and more enriched Boric Acid (>95% enriched in  $^{10}\text{B}$ ) is used by NPPs.

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# <sup>10</sup>B in the form of Boric Acid

## Specification

### Physical properties:

- Material <sup>10</sup>B – Boron-10 in the form of crystalline Boric Acid
- Enrichment <sup>10</sup>B ≥ 96at%

### Chemical Properties:

- Form B(OH)<sub>3</sub>
- Purity ≥ 99,95 wt%

## Impurities in ppm

As	≤ 0,5
Ca	≤ 1
Cl	≤ 5
F	≤ 1
Na	≤ 5
Pb	≤ 1
PO <sub>4</sub>	≤ 1
SO <sub>4</sub>	≤ 2
Insolubles in H <sub>2</sub> O	≤ 20

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