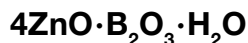


# Firebrake® 415



**Zinc Borate**

CAS Number 149749-62-2

*Firebrake*® 415 is a unique proprietary\* zinc borate compound with multifunctional fire retardant applications in a variety of polymers. It has an unusually high dehydration onset temperature of

**Applications**

*Firebrake*® 415 can be used as a flame retardant and smoke suppressant in a variety of polymers. It is particularly useful in systems such as nylon or polysulfones that require high processing temperatures, where enhanced thermal stability has been noted in some cases. It has an extremely low tendency to absorb surface moisture, which makes it suitable for processing conditions sensitive to water release. *Firebrake*® 415 is also an excellent smoke suppressant for systems such as flexible PVC.

**Storage**

*Firebrake*® 415 is a fine powder that shows little tendency to cake or absorb significant amounts of moisture when stored under normal atmospheric conditions.

\*Protected by US and international patents.

**Chemical and physical properties**

**Typical properties**

Refractive index	1.65
Median particle size (Laser Diffraction)	5 microns
Weight Loss (TGA)	0.4% max. to 415°C
Thermal stability	Stable to >415°C
Bulk density	ca. 0.37 g/cm <sup>3</sup> (23 lb/ft <sup>3</sup> )
Specific gravity	3.7

**Chemical composition**

Boric oxide (B <sub>2</sub> O <sub>3</sub> ), %	15.9 - 18.2
Zinc oxide (ZnO), %	77.0 - 81.0

**Notice:** Although the data listed are typical, they are not production specifications. To obtain exact production specifications, contact Rio Tinto Minerals. The data presented are based upon tests that Rio Tinto Minerals believes to be reliable and are offered in good faith as typical of normal production, but Rio Tinto Minerals makes no warranty or representation of any kind, express or implied, regarding the information given or the product described, including any warranty of suitability for a particular purpose.

