



Mineral Fire Suppression Media

Packaging Filler and Extinguishing Agent

CellBlockEX[®]

FIRE/HEAT/SMOKE SUPPRESSANT

CellBlockEX for Fire Prevention and Suppression

There is only one CellBlockEX® – the **True Blue** dry fire-suppressant capable of halting thermal propagation in devices, batteries, or cells. CellBlockEX is a multi-functional environmentally friendly, proprietary mineral fire suppressant comprised of spheres with an open cellular pore structure. It is the core of our products.

How it Works

Oxygen Displacement

Covering the battery fire load with a sufficient layer of CellBlockEX displaces available oxygen from the fire, starving it from external fuel.

Phase Change and Isolation

CellBlockEX melts at ~1500° F, well within the range of a lithium battery fire. The phase change from solid to semi-liquid acts as a heat sink, dissipating energy, while forming an impervious hard shell around the fire load. The formed crystalline capsule around the battery prevents ignition of surrounds areas of energy density, including adjacent cells or batteries in proximity.

Flammable Gas Disruption

Due to the nature of the CellBlockEX's multicellular structure, the flammable gas is forced into physically separated micro-pores, breaking it into smaller concentrations beneath the ignition threshold, thus disrupting flammability of the gas.

Sorbency of Fire Gases

CellBlockEX's micro-porous structure and dry surface bind to large flammable molecules and vapors reducing their total volume, limiting their contribution to environmental ignition or toxicity.

Features

- Clean - zero toxicity or contaminants, environmentally safe, and harmless to health
- Non-combustible and non-conductive
- Engineered functionality for Li-ion batteries fires
- Lightweight - approximately ¼ the density of sand
- Extinguishes flames without the mess or dangers of water, vermiculite, pumice or sand
- Unaffected by humidity
- Reusable under manufacturer's specifications
- Multi-functional - suitable for class A, B, D and K fire loads, i.e. metal fires, lithium-ion battery fires and combustible liquids



CellBlockEX is available in 28 lb. bags* and 700 lb. Supersacks.

*Approximate weight; packed by volume

CellBlockEX[®] crushes Vermiculite



CellBlockEX

CellBlockEX is 100% recycled material and is made from post-consumer-recycled glass that's destined for the land-fill prior to being diverted to one of two manufacturing plants worldwide.

CellBlockEX is an active fire suppressant and has been proven to halt propagation in thermal events.

CellBlockEX is a manufactured material and is capable of maintaining a consistent physical property specification regardless of where in the world the material is ordered from, or delivered to. It achieves the same exact dimensions every time.

CellBlockEX's smooth spherical shape safely covers and encloses products and packaging without degradation when exposed to vibration and friction in the shipping process.

CellBlockEX contains no crystalline silica or asbestos.



Vermiculite

Vermiculite is a product of mining operations which are harmful to the environment, as well as to human health.

Vermiculite is non-combustible, but lacks the ability to extinguish class-D fires or halt propagation.

Packaged Vermiculite is inconsistent from region to region. As a mined material, the physical properties including density, porosity, water content, etc., vary from region-to-region making it difficult to accurately calculate performance.

Vermiculite's angular and irregular geometry can degrade packaging and present a greater opportunity to damage products during transport.

The dust present on Vermiculite has been identified as containing crystalline silica and asbestos, known carcinogens. Vermiculite also has a very low compressive strength. The more handling it endures the more it breaks down and the more respirable dust particles are generated.



CellBlockEX is sustainably produced.

CellBlockEX[®] Technical Data

Granulate size	1 - 4 mm	0.039" - 0.157"
Bulk density	224 kg/m ³	14 lb/ft ³
Compressive strength	1.7 MPa	247 psi
Thermal conductivity	0.06 W/(m-K)	R2/in
Water absorption% by mass	17%	
pH value	9-11	
Softening point	700°C	1300°F
Acid soluble sulphates	0.06%	
Total sulphur	0.03%	
Main component	silicon dioxide	
Color	cream white [Y-45-50]	