



# Tornado 50 Verre-5

**BAVARIA®**  
Fire Fighting Solutions

## Fire extinguish granules

Hollow glass granules as a extinguishing agent is applicable for the fire classes A, B, D and F which was positively tested from the MPA Dresden in accordance with the DIN EN 3-7.

### Characteristics:

#### ■ Low bulk and grain density

The grain sizes between 0,5 - 5,0 mm build a dark coating and provide a dense sticking effect.

#### ■ Permanent cooling characteristic by lithium-ion battery or cells

Due to the high heat capacity, the granules has a cooling effect. Throughout this, the thermal reaction is going to be either reduced or increased. Even hours later, the granules is still having a cooling effect on the battery/cells. In case of a battery fire, the extinguish granules shall be left on the battery in a 10 cm cover.

#### ■ Low thermal and also electrical conductivity by a high melting point

The hollow glass granules is characterized by a low thermal conductivity and by an insulating electrical conductivity ability. Up to a temperature, more than 1050 °C, the little balls are going to melt and start to build a thermally insulating layer around the metal fire.

#### ■ Reduction of environmental and health hazards

It reduces the flammable and harmful reaction gases in a thermal runaway and also in the case of fire. Throughout this the re-ignition is going to be reduced, or even prevented. The environmental hazards by a battery/cell fire are enormously reduced. The granules is also suitable for binding the hydrofluoric acid and electrolyte which decreases the health and also the environmental risks.

#### ■ No consequential damages

The extinguishing granules causes no water damages or any other types of corrosions.

#### ■ Storable and stable

The hollow glass granules is hydrophobic and resistant to aging. Therefore it is maintenance-free and only generates a minor maintenance costs. The granules is thermally and chemically very stable.

Description of the agent: The hollow glass granules consists of 100% inorganic substances and it is assigned to the material class A1. The main ingredient of the agent is silicon dioxide. Because of its low density the granules is flowing on the surface of the flammable liquid, which ensures a strangling extinguishing effect. At the same time, thanks to its high absorbing ability of the heat energy, it also has a cooling effect and isolates throughout its excellent insulating ability the fire at its source. The hollow glass granulation made of silicon dioxide is environmentally friendly and causes no health damages at all. The agent is also reusable and is four times lighter as the gross density of water and approx. eight times lighter as sand.



### Application possibilities as an agent :

#### ■ Metal fires

The extinguishing granules is suitable for the extinguishing of all metal fires (aluminium, magnesium etc.). Even thermite fires with temperatures above 2000 °C could be easily controlled. The cooling effect is based on several components, firstly the energy extraction during the melting, also the high heat storage of the granules (cool effect) as well as the from this process resulting insulating and sealing coverage around the flames/object (strangling effect).

#### ■ Foundries, melting and hardening baths

Also applicable for the higher temperature range. Throughout the high embroidity the fire is extinguished.

#### ■ Production machines/testing laboratories

Even in the case of an enormous heat development, the break out of the fire is going to be prevented.

#### ■ Museums and archives

Hollow glass granules does not cause any extinguishing damages (water damages, corrosion) and therefore it's suitable for the usage in museums and archives, galleries, art exhibitions, banks and so on.



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Type	Item no.	Foot ring	Pressure gauge	LE	Rating DIN EN 3	Pieces per pallet	Weight in kg	Length x Width x Height in mm	Duration (s) Range of width (m) approx.	Approval
Tornado 50 Verre-5	15132	-	-	-	D	2	72,00	560x480x1110	60,0 / 4	BAV-P02/18

- Temperature: -20°C up to + 60°C
- External cartridge operated, with a 3 ltr. pressurized air cylinder
- Light weight of the extinguisher filled with 12,5 kg extinguishing granules.
- Attractive design and easy usage.
- Good metering and a gentle application of the extinguishing agent, throughout the constant low pressure of 2 bars through the built in pressure regulator.
- Possible interruption of the extinguishing process and a possible intermittent use throughout the ball valve.
- With a 4 m range of throw, the application could be made from a safe distance from the source of the danger.
- As standard, the extinguisher is delivered with a form stable 5 meter hose, with a wide diameter, which allows a smooth application and a maximum possible range of usage
- The cylinder is mounted on a chassis with two solid rubber wheels, mounted on galvanized steel rims. It guarantees not only an excellent stability but also flexibility.
- Closure made of chromed brass with an additional safety valve mounted.
- The large cylinder opening makes the maintenance easier.
- The polyester coating of the cylinder provides a more outstanding and long-lasting corrosion protection.
- Suitable for electrical objects up to 1.000 V with a min. dist. of 1m

