



Plastic & polymer additives and solution supplier  
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# Technical Data Sheet

## ProFlame<sup>®</sup> ZHS

ProFlame-ZHS flame retardant synergist inhibits the development of flames and smoke, and is safe for human health and the environment. ProFlame-ZHS is a zinc hydroxystannate that has both a condensed phase and vapour phase action during the rapid degradation of polyvinyl chloride and polymer materials containing halogenated and antimony additives. In halogen-free flame retardant polymer materials it can act to increase the char consistency and strength.

ProFlame-ZHS is insoluble in water and releases 15w% of water starting at 220 °C. At higher temperatures (400 °C - 600 °C), zinc and tin ions can be volatilised or liberated from their structure to exert catalytic activity. ProFlame-ZHS is part of a family of n-type wide bandgap semiconductors with a high concentration of free electrons in the conduction band, thus leading to high optical transmissions in combination with electrical conductivity.

**Chemical name:** Zinc hydroxystannate

**CAS NO.:** 12027-96-2

**Molecular weight:** 286.15

**Chemical formula:** ZnSnO<sub>3</sub>.3H<sub>2</sub>O or ZnSn(OH)<sub>6</sub>

### Technical Data:

Items	Spec
Appearance	White powder
Purity,%	≥99.0
Sn content, %	≥40.00
Zn content, %	≥21.00
Cl content, %	≤0.30
Moisture,%	≤0.50
Decomposition temperature ,°C	≥180
Particle size D90,mm	≤0.01
Density, g/cm <sup>3</sup>	3.3

### Usage:

- ▶ ZHS can replace Molybdenum Trioxide in PVC FRLS cable compound
- ▶ ZHS was developed initially for use on halogen containing polymer formulation, especially flexible PVC for wires and cables
- ▶ ZHS can provide Oxygen Index as well as Smoke Suppressant properties
- ▶ By adding Antimony Trioxide you get oxygen index but smoke increases, while by adding ZHS you get oxygen index as well as smoke suppressant properties

### Package & Storage

ZHS is delivered in drum with inner bag, net weight 25.0±0.1kg .

Store in a dry and ventilated warehouse. Minimum shelf life is 12 months under proper stored condition.

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