



Plastic & polymer additives and solution supplier
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Technical Data Sheet

ProFlame® PN59

Halogen-free flame retardant for PET/PBT

ProFlame-PN59 is a formulated eco-friendly halogen-free flame retardant mainly based on phosphorus and nitrogen. PN59 is mainly used in polyester fibre and injection molding. The polyester compounds exhibit very good physical and electrical properties with PN59.

Advantages:

1. Achieving FR performance by both gas phase and solid phase mechanism
2. good colorability
3. no hydration, no blooming
4. good processability
5. good physical and electrical properties
6. low smoke, no-toxic
7. halogen-free, no harm to the environment and human body

Technical Data:

Items	Spec
Appearance	White free-flowing powder
P content, %	18-21
Decomposition Temperature, °C (TGA 1%)	≥350
Moisture,%	≤0.5
Melting point,°C	≥200
Specific gravity, g/cm ³	1.45

Usage:

The recommended dosage of PN59 for PET fibers is 5-10 %. PN59 has to be incorporated in the PET compound before the spinning process.

In PBT, a dosage of 10-15% (by wt.) PN59 together with 10-15% nitrogen synergists like melamine polyphosphate or melamine cyanurate is usually sufficient to obtain the UL 94 V-0 classification for electrical components (at 1.6mm as well as 0.8 mm thicknesses).

Processing instructions:

1. Before incorporating PN59, it is important to predry the polyester as usual. If possible, the resulting moisture content should be below 0.05% (by wt.) for PBT and 0.005% for PET.
2. Predrying of PN59 is not necessary. However, predrying (e.g. 4 h at 120 °C) is recommended, if even very low moisture contents must be avoided.

Package:

PN59 is delivered in paper-plastic compound bag, net weight 20 or 25±0.1kg per bag.



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Storage and transportation:

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

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