



Plastic & polymer additives and solution supplier
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Technical Data Sheet

ProFlame[®] PN3136

Halogen-free flame retardant for TPE

ProFlame-PN3136 is a formulated eco-friendly halogen-free flame retardant mainly based on phosphorus and nitrogen. With special surface coating treatment, PN3136 has good compatibility with the substrate, little influence to the physical properties of the final product, excellent flame-retarding performance, and in compliance with EU RoHS regulation.

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, no dripping
7. halogen-free, no harm to the environment and human body

Technical Data:

Items	Spec
Appearance	White free-flowing powder
Decomposition Temperature, °C (TGA 1%)	≥320
Moisture,%	≤0.5
Average particle size (um, D50)	≤5.0
Bulk Density, g/cm ³	1.35-1.45

Usage:

Recommended dosage is 25-30%. It has good compatibility with the matrix and excellent flame retardant performance, and can meet the test requirements of VW-1, UL-94, V-0, etc. No hydrolysis, no precipitation, good processability.

PN3136 needs to be used together with PPO or carbonic resin CR1800. PN3136 and CR1800 together can be used in production of white halogen-free TPE, but processing temperature should be under 200°C.

Package:

PN3136 is delivered in paper-plastic composite bag, net weight 20 or 25±0.1kg.

Storage and transportation:

Minimum shelf life is 12 months stored in a dry and ventilated warehouse.

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Typical Application

Material	Formula
SEBS 6154	180
White Oil	140
PN3136	280
PPO	165
PP 5090T	90
PE 5220G	125
Silicone masterbatch	17
Antioxidant B215	3
Total	1000

Properties

UL1581	VW-1		
Hardness	86A	$\sigma/113^{\circ}\text{C}\times 7\text{days}$	12Mpa
Density	1.06	$\Delta/113^{\circ}\text{C}\times 7\text{days}$	244%
Elongation at break	246%	$\sigma/85^{\circ}\text{C}\times 7\text{days}$	11Mpa
Tensile Strength	11.8 Mpa	$\Delta/85^{\circ}\text{C}\times 7\text{days}$	244%