



Plastic & polymer additives and solution supplier
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Technical Data Sheet

ProFlame® PNPO-G1

Halogen-free FR for polyolefins

PNPO-G1 is a halogen-free flame retardant, which develops its effectiveness through phosphorus / nitrogen synergism. When incorporated into thermoplastics, it exhibits high processing stability. PNPO-G1 doesn't contain ammonium polyphosphate (APP), It can replace ADEKA FP-2200S series with similar performance and lower cost.

Benefits

- Non-halogenated flame retardant with favorable environmental and health profile
- Suited for PP, PE, PP copolymers and PP blends for injection moulding and extrusion applications
- Low smoke density and low smoke gas corrosivity
- Good electrical and mechanical properties
- Excellent UV stability
- Good recyclability

Technical Data

Items	Spec
Appearance	White free-flowing powder
P content, %	18-22
1% TGA Temperature, °C	≥275
Average particle size, um	D50≤10
PH value	4.0-6.5
Volatile,%	≤0.5
Whiteness	≥90.0
Solubility in water, 25°C, g/100mL H2O	≤0.5

Recommended dosage

Polymer	CO-PP	69% HOMO-PP 7% TALC	58% HOMO-PP 20% Glass fibre	COMO-PP & HOMO-PP 10% BaSO4
Dosage,%	22	24	22	25
UL-94	V-0 (1.6mm)	V-0 (1.6mm)	V-0 (1.6mm)	V-0 (2.5mm)

Polymer	TPE	Polyether TPU	Polyester TPU	PE
Dosage,%	30-38	33-40	17-20	20-25
UL-94	V-0 (1.6mm)	V-0 (1.6mm)	V-0 (1.6mm)	V-0 (1.6mm)



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Processing instruction:

1. The optimum conditions for incorporating should be determined in each individual case. Care must be taken to ensure homogeneous dispersion of all components.
2. Both single- and twin-screw extruders are suitable for incorporating the product. The temperature of the polymer melt should not exceed 250°C.
3. Choosing proper filler and control dosage. Normally, the filler will reduce flame retardant efficiency.
4. When a water bath is used for cooling the strands, it is advisable to keep the passage through the water bath as short as possible to permit optimum evaporation of any entrained water.

Package & Storage:

Net weight 20-25KG Kraft bag with PE liner.

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

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Typical application

Material	Formula 1	Formula 2	Formula 3	Formula 4
CO-PP(7926)	78	0	0	0
Homo-PP(T305)	0	69	65	58
PNPO-G1	22	24	25	22
Glass Fibre	0	0	0	20
Talc	0	70	100	0
EBS Lubricant	0.3	0.3	0.3	0.3
Antioxidant 1010	0.2	0.2	0.2	0.2
Antioxidant 168	0.2	0.2	0.2	0.2
PTFE	0.2	0.2	0	0
Silicone oil NT201	0.2	0.2	0.2	0.2
UL94	V-0 1.6mm	V-0 1.6mm	V-0 3.2mm	V-0 1.6mm