



Plastic & polymer additives and solution supplier  
 E:info@novistagroup.com I: www.novistagroup.com

# Technical Data Sheet

## ProFlame® PNPO-G3

**PNPO-G3** is a halogen-free flame retardant, which develops its effectiveness through phosphorus / nitrogen synergism. When incorporated into thermoplastics, which can meet the requirement of UL94-V0(0.75-1.6mm), GWIT 750°C, GWFI 960°C. Meanwhile, PNPO-G3 can pass 70°C\*168hrs water immersion test (UL746C) and meet ROHS and REACH environmental regulations. It has higher flame retardant efficiency than PNPO-G1/G2.

### Benefits

- Compared with bromine-antimony flame retardant, the product density is lower and the comprehensive cost of formula is lower
- With high thermal decomposition temperature, excellent heat aging resistance and excellent UV stability, it can adapt to a wide range of processing technology and application
- Compared with traditional ammonium polyphosphate flame retardant, it has excellent precipitation resistance and better hydrolysis resistance
- Low smoke density and low smoke gas corrosivity, good recyclability

### Technical Data

Items	Spec
Appearance	White free-flowing powder
P content, %	20-22
1% TGA Temperature, °C	≥260
D50 particle size, um	≤10
Volatile, %	≤1.0
Whiteness	≥90
Bulk density, g/cm <sup>3</sup>	0.35-0.60

### Recommended dosage

Polymer	Usage guide
PP	UL94 V-0(1.5mm) - 20-26 wt%
	UL94 5VA(2.0mm) - 30-35 wt%
PP+30%GF	UL94 V-0(1.5mm) - 20-23wt%
	UL94 5VA(2.0mm) - 28-30wt%
PE	UL94 V-0(1.5mm) - 28-35 wt%
TPE	UL94 V-0(2.0mm) - 30-35 wt%

**Remark:** For Non-glass-fiber system, it is recommended to add 0.2-0.4% anti-dripping agent.



Plastic & polymer additives and solution supplier  
E:info@novistagroup.com | : www.novistagroup.com

### **Processing instruction:**

(1) On the premise of ensuring the dispersion of flame retardants and uniform blending, the processing temperature of the twin screw should not be too high. Avoid causing a small amount of decomposition of flame retardants, resulting in slight foaming. Do not add a sieve during the extrusion process, as it may cause foaming. At the same time, a certain degree of vacuum must be maintained during the twin screw extrusion process.

(2) Do not use substances in the system that have adverse effects on flame retardancy. For example, Cl containing pigments such as phthalocyanine green can lead to flame retardant failure. When the amount of carbon black exceeds 0.5%, the flame retardancy decreases. Inorganic fillers (such as glass fiber, calcium carbonate, talc, Barium sulfate, etc.) will affect the flame retardancy. Adding additive containing Br and Cl can lead to the failure of flame retardants.

(3) Use a weak shear screw combination to avoid material decomposition caused by excessive shear heat (refer to the recommended screw combination adjustment).

### **Package & Storage:**

Net weight 25KG Composite paper bag.

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

+86-536-8206760 [info@novistagroup.com](mailto:info@novistagroup.com) [www.novistagroup.com](http://www.novistagroup.com)

---

The information presented herein is believed to be accurate and reliable, but is presented without guarantee or responsibility on the part of Novista Group and its subsidiaries. It is the responsibility of the user to comply with all applicable laws and regulations and to provide for a safe workplace. The user should consider any health or safety hazards or information contained herein only as a guide, and should take those precautions which are necessary or prudent to instruct employees and to develop work practice procedures in order to promote a safe work environment. Further, nothing contained herein shall be taken as an inducement or recommendation to manufacture or use any of the herein materials or processes in violation of existing or future patent.