

A: Product description

Proprietary phosphorus based halogen free, flame retardant

B: Physical properties

Appearance:	Fine powder
Color	White
Odour:	Slight
Phosphorus (%)	~ 36%
Density (gr/cc)	~ 1,8 gr/cc
Particle size:	D ₅₀ : ~ 3 -7 µm
Bulk density:	~ 450 kg/m ³
Water solubility (20°C)	~ 2 gr / 100 cc

C: Toxicology

Classification Xn; R11
Maximum allowable workplace concentration: not stipulated

D: Transport

Not regulated

E: Applications

Phosnic B85A2X is a very effective solution for flameproofing PBT, PET-G, Copolyesters, natural and glass fibres reinforced, showing outstanding mechanical and flame retardant properties. PET applications are not suggested.

PBT: typically Phosnic B85A2X is used at 17% to 20% to provide flame retardancy (UL 94 V0 at 3.2 - 1.6 mm) to 30% Glass Fibers Reinforced, 21% to 24% for unreinforced PBT.

Synergistic effect are known with some other flame retardants like Melamine Cyanurate.

Additional application data and further developments can be discussed with Italmatch Chemicals Technical Development Center.

F: Processing

Phosnic B85A2X does not interact with the common processing additives like: stabilisers, crosslinking agents, processing aids, pigments, antidripping. Pre-drying of polymers before compounding and moulding is always recommended. Fillers or Flame retardants with residual acidity as Melamine Polyphosphate may decompose Phosnic B85A2X violently. Antimony trioxide (Sb₂O₃) is not compatible. Extruder contamination from previously processed Sb₂O₃ containing materials give black colour, or even violent decomposition if present in large quantities.

Maximum melt temperature is around 275°C, for short times. Low melt temperatures and short permanent times are always highly recommended. Use efficient in line vacuum system and aspiration devices on strands.

When the melt is maintained at too high temperatures for too long time due to wrong manipulations, decomposition of the FR may arise with gas emission or even flames. In this case, purge the plasticizing unit with a natural polymer. Purging with the FR compound itself is less effective and require longer time.

G: Packaging

The product is available in 15 Kg plastic bags.

H: Storage and handling

The product is stable if maintained in the original bags and in a dry place at room temperature.

Keep the product away from strong oxidizing substances and hot alkaline solutions.

Handle the product in compliance with good industrial practice.

The information provided is based on our present knowledge and given as guidance for product use. The loading reported should be only regarded as guidance, however experimental check is needed on the polymer used and the flame retardancy class desired. The data reported do not constitute a guarantee. Quality of product is guaranteed under Italmatch Chemicals General Conditions of Sale. Existing property rights, if any, must be observed.

PHOSNIC – Halogen free powder flame retardants