

A: Product description

Proprietary synergistic no blooming flame retardant system based on Phosphorus and Bromine for use in Polyolefins.

B: Physical properties

Appearance: Fine powder
Odor: odorless
Color: off-white
Bulk density (Kg/m³): 1000
Bromine (%): 15.0-18.0
Particle size average : < 10 microns

C: Toxicology

Oral toxicity: 200 mg/kg < LD₅₀ (rat) < 2000 mg/kg
Classification Xn; R22, R41
Maximum allowable workplace concentration: not stipulated

D: Transport

ADR/RID: not restricted for transport.

E: Applications

Phoslite B352C additive flame retardant is a very effective solution for flameproofing Polyolefins (PP homo- and co-polymer, some selected TPO grades) and crystal Polystyrene

PP homo-polymer: typically Phoslite B352C additive is used at concentration of around 1% to provide flame retardancy (UL 94 V2 at 0.8 mm and 3.2 mm) to PP. This formulation shows the following results: LOI around 27, GWFI at 960°C (both at 3.2 and 1.6 mm) and GWIT at 750°C at 3.2 mm and 825°C at 1.6 mm.

Thanks to its very fine particle size, Phoslite B352C can be successfully used for flame-retarding PP films.

PP co-polymer: typically Phoslite B352C additive is used at concentration of around 2% to meet UL 94 V2 at 1.6 mm and 3.2 mm.

Fillers: Phoslite B352C additive is used to provide flame retardancy at UL 94 V2 level for thicknesses of 1.6 mm and 3.2 mm

- at concentration of around 1-1.5% in 30% glass fiber reinforced compounds
- at around 2% in homo-PP 20% - 30% talc filled (only high purity talcs do not affect final FR properties)
- at concentration of around 1-2% in 30% CaCO₃ (Calcium Carbonate) reinforced compounds

The additive leaves full freedom of colorability to the compounder and the moulder. Phoslite B352C does not increase equipment's corrosion, even without any extra addition of anti-acids and show an outstanding thermal stability.

Phoslite B352C does fully comply with the requirements of the RoHS and WEEE directives.

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

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F: Processing

Phoslite B352C additive is endowed with high thermal stability, therefore does overcome extrusion and moulding under standard PP processing conditions. Phoslite B352C does not interact with the common processing additives like: stabilisers, crosslinking agents, processing aids, inorganic fillers, pigments, etc. Acid scavengers like: synthetic hydrotalcite, metal hydrates are however not recommended, Ca stearate and Na benzoate may affect FR properties if present at high concentration level in the compound, i.e. > -500 - 2000 ppm.

G: Packaging

The product is available in 25 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 avoiding dust formation.

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.

PHOSLITE B — New highly effective flame retardants blends

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