

MCA[®] PPM Triazine 770

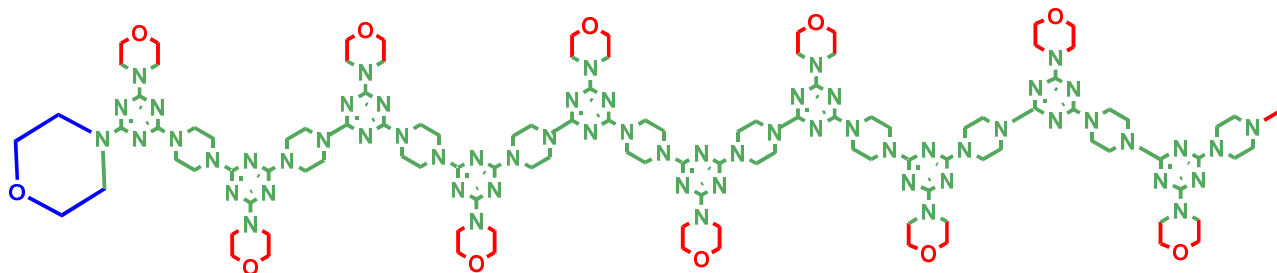
Product Description:

MCA[®] AP-PPMT 770 is a “**Ready-to-Use**” synergistic blend of ammonium polyphosphate with the proprietary¹⁾ polymeric, halogen-free nitrogen synergist **MCA[®] PPM-Triazine HF** and an additional **carbon-booster** for fire retardation by **intumescence**; derived from phosphorus nitrogen synergism. In the event of fire the plastic material containing such a fire retardant system foams, cross-links and forms a solid char at the surface acting as a fire shield. The protective layer also imparts a heat-insulation effect, reduces oxygen permeability and prevents dripping of molten polymer, if and wherever it can occur. Such systems are also characterized by low smoke density, and low toxic fumes.

MCA[®] AP-PPMT 770, containing inert large molecular weight MCA[®] PPM-Triazine HF, is particularly recommended where state-of-the-art commercial blends of ammonium polyphosphate with small molecular weight nitrogen synergists fail either in processing or in performance such as due to sublimation, liberation of toxic ammonia by self-condensation, mould deposits, and plate-out from or interaction with the polymer itself.

Ref. 1 : European (and World-Wide) Patent Application Nrs. EP 08008717.4 and EP 08015381

Chemical Formula (MCA[®] PPM-Triazine HF):



Molecular formula (MCA[®] PPM-Triazine HF): [C₁₁H₁₆N₆O]_n.C₄H₉NO

Molecular weight (MCA[®] PPM-Triazine HF): Approx. 2755

CAS Number (MCA[®] PPM-Triazine HF): 93058-67-4/1078142-02-5

Chemical Name (MCA[®] PPM-Triazine HF):

Poly-[2,4-(piperazine-1,4-yl)-6-(morpholine-4-yl)-1,3,5-triazine]/ Piperazin;
Polymer with morpholine-2,4,6-trichloro-1,3,5-triazine reaction product

Physical Properties:

Appearance:	Free-flowing, off-white crystalline powder
Odour:	None
Melting point:	Infusible (> 290°C)
Specific gravity (25°C):	1.72 g/cm ³
Cl content:	< 0.1%
Water content:	< 0.5%
Water solubility:	Insoluble
Aggregated particles (average):	12µm
TGA:	< 2% weight-loss up to 300°C

Chemical Properties:

Chemically inert and blendable with almost all additives, and particularly the HALS light stabilizers

Recommended Applications:

MCA[®] AP-PPMT 770 is recommended for use in polypropylene and other high-temperature polymers: A total loading of 20-25% is enough to achieve LOI > 30% & UL 94 V0 (in addition to realizing other benefits such as low smoke density and less toxic fumes)

MCA[®] AP-PPMT 770 can also be used in polyurethane foams. It is recommended to make and use a dispersion of MCA[®] AP-PPMT 770 either in polyol or isocyanate for the application. To prevent the solids from settling, the MCA[®] AP-PPMT 770 suspensions should be stirred or circulated by pump. The following classifications can be achieved:

The mixing and processing methods customary in powder processing of polymers are adequate for the incorporation of MCA[®] AP-PPMT 770.

Casting resins based on epoxy resins or unsaturated polyester resins achieve the classification UL 94-V0 with MCA[®] AP-PPMT 770.

Safety and Handling:

For regulatory details such as the classification and labelling as dangerous substances or goods please refer to the corresponding Material Safety Data Sheet.

Transport and Storage:

ADR:	no restrictions.
ADNR:	no restrictions
RID:	no restrictions
IATA:	no restrictions
IMDG :	no restrictions

Packaging:

MCA[®] AP-PPMT 770 is delivered in 25 kg paper bags.