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Melapur[®] MC

Halogen free melamine based flame retardant for polyamides, PBT and TPU

Characterization

Melapur MC (melamine cyanurate) is a salt of melamine and cyanuric acid, suitable for flame retardating polyamides, PBT, thermoplastic polyurethanes (TPU) and other substrates.

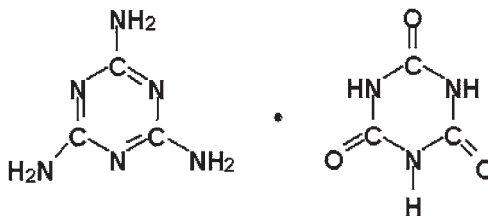
Chemical name

1,3,5-triazine-2,4,6 (1H,3H,5H)-trione, compound with 1,3,5 triazine-2,4,6 triamine (1:1)

CAS number

37640-57-6

Chemical formula



Molecular weight

255.2 g/mol

Applications

Melapur MC is used as an effective flame retardant, primarily for electrical & electronic applications (connectors, switches, housings, etc) made from polyamide or TPU.

In unfilled or mineral filled compounds it gives a UL94 V-0 rating; in glass filled system only a UL94 V-2 rating is possible.

Features/benefits

Addition levels of Melapur MC are relatively low, giving good economics, mechanical properties and lower specific gravity compared to compounds containing halogen/antimony flame retardant systems.

Being halogen free also results in significant advantages in terms of fire safety, i.e. lower smoke density, lower smoke toxicity and less corrosion. Lower corrosivity offers advantages both in the processing stage and in case of a fire. In the processing stage lifetime of barrels and moulds will be extended, resulting in decreased equipment costs.

Product forms

Melapur MC XL	Granule
Melapur MC50	White powder
Melapur MC25	White powder
Melapur MC15	White powder

Guidelines for use

PA 6 unfilled	UL94 V-0 at 10–12 wt %
PA 66 unfilled	UL94 V-0 at 6–8 wt %
PA 6 and PA66 mineral filled	UL94 V-0 at 13–15 wt %
PA6 and PA66 glass filled	UL94 V-2 at 15–20 wt %
	Glow wire 960 °C
	CTI > 500 Volt

Physical Properties

pH value (saturated sol., 20 °C)	5–6
Specific gravity	1,7 g/cm ³
Melt range	
Melapur MC 15	440 °C (sublimates)
Melapur MC 25	440 °C (sublimates)
Melapur MC 50	440 °C (sublimates)
Melapur MC XL	440 °C (sublimates)
Bulk density	
Melapur MC 15	0.24 g/ml
Melapur MC 25	0.18 g/ml
Melapur MC 50	0.41 g/ml
Melapur MC XL	0.45–0.70 g/ml
Angle of repose	
Melapur MC 15	45 °
Melapur MC 25	47 °
Melapur MC 50	52 °
Melapur MC XL	34 °

Solubility (20 °C): % w/w

Water	<0.01g/l
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Volatility (pure substance; TGA, heating rate 20 °C/min in air)

Weight Loss (%)	Temperature °C
1.0	305
2.0	320
5.0	340

Handling & Safety

Detailed information on handling and any precautions to be observed in the use of the product(s) described in this leaflet can be found in our relevant health and safety information sheet.

Note

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