



CT08-93

Enhanced fire performance, low-smoke, halogen-free, thermoplastic compound for cable insulation and sheathing.

This is an enhanced fire performance low-smoke thermoplastic compound designed to comply with the requirements of EN 50290-2-27 for type HM2 and HD 604 for type HM4.

CT08-93 has superior char forming characteristics when exposed to fire giving excellent performance in vertical cable tray tests such as IEC 60332-3 and EN 50399.

Test	Test method	Unit	Typical value
Physical properties and mechanical properties			
Density	BS 2782 Pt. 6 Mtd 620A-D	g/cm ³	1.50
Melt flow rate (21.6kg at 150°C)	AEI method	g/10min	8.5
Tensile strength	IEC 60811-1-1	N/mm ²	12.5
Elongation at break	IEC 60811-1-1	%	160
Typical ageing behaviour after 168 hours at 100°C			
Tensile strength	IEC 60811-1-2	% variation	+10
Elongation at break	IEC 60811-1-2	% variation	-15
Thermo mechanical properties			
Hot pressure deformation at 90°C	IEC 60811-3-1	%	40
Cold bend test at -30°C	IEC 60811-1-4	-	pass
Elongation at break at -30°C	IEC 60811-1-4	%	50 (pass)
Fire & smoke properties			
Oxygen Index	BS ISO 4589-2	%	32
Temperature Index	BS ISO 4589-3	°C	>300
Halogen gas evolution	IEC 60754-1	%	<0.5

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CT08-93

Recommended processing and handling conditions

Extruder

An extruder with an L/D ratio (length/diameter) of 15-24 and an extruder screw with a compression ratio 1.5:1 or less are recommended.

Extruder temperature conditions

It is important that the melt temperature profile is not allowed to increase above 165°C.

As a guide the following temperature profile is recommended:-

Zone 1	Zone 2	Zone 3	Zone 4	Head	Die
120°C	130°C	140°C	150°C	160°C	160°C

This profile will vary slightly depending on extruder type, head design and output.

Screw water temperature Depends upon screw design, but should be 30-50°C

Recommended screen pack 50 (mesh apertures per linear inch) or 300 micron

Head and tool design

The head and tools should be so designed as to allow streamlined of material. To obtain the optimum in physical properties in the case of tubing tools, the smallest possible draw down ratio is recommended to avoid internal stress.

Masterbatches

Addition of approved colour masterbatches, including black, up to a maximum of 1%, has no detrimental effect on the properties of CT08-93.

It is recommended that all masterbatches should be thoroughly dried at 60°C for 8 hours or at 80°C for 4 hours.

Storage and shelf life

CT08-93 has an unlimited shelf life. However, the following precautions should be observed:-

- Packaging should remain sealed
- Avoid temperature above 25°C.
- Avoid storage outside and in direct sunlight.

Form and packaging

Form – pellets

Packaging – the following possibilities are available:-

- Moisture resistant sacks containing 25kg.
- Boxes with a moisture resistant heat sealed liner containing approximately 125kg, 500kg or 1000kg.

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