



CT09-12

Flexible, low-smoke, halogen-free, flame retardant thermoplastic compound for cable insulation and sheathing.

This is a very flexible flame-retardant low-smoke thermoplastic compound. The compound meets the requirements of limited toxic and corrosive fume emission, being designed to meet the general requirements of BS7655 Section 6.1 type LTS 1.

Test	Test method	Unit	Typical value
Physical properties and mechanical properties			
Density	BS 2782 Pt. 6 Mtd 620A-D	g/cm ³	1.46
Tensile strength	IEC 60811-1-1	N/mm ²	11.5
Elongation at break	IEC 60811-1-1	%	270
Tear Strength	BS 6469	N/mm	10
Hardness (N)	Shore A	-	96
Hardness (N)	Shore D	-	56
Typical ageing behaviour after 168 hours at 100°C			
Tensile strength	IEC 60811-1-2	% variation	-5
Elongation at break	IEC 60811-1-2	% variation	-12
Typical water immersion behaviour after 168 hours at 70°C			
Tensile strength	IEC 60811-1-2	% variation	-25
Elongation at break	IEC 60811-1-2	% variation	-12
Thermo mechanical properties			
Hot pressure deformation at 80°C	IEC 60811-3-1	%	30
Cold bend test at -30°C	IEC 60811-1-4	-	pass
Elongation at break at -30°C	IEC 60811-1-4	%	60 (pass)
Cold impact at -30°C	IEC 60811-1-4	-	pass
Fire & smoke properties			
Oxygen Index	BS ISO 4589-2	%	32
Temperature Index	BS ISO 4589-3	°C	270

© AEI Compounds Limited, Sandwich Industrial Estate, Sandwich, Kent, CT13 9LY

Telephone +44 (0) 1304 616171

Facsimile +44 (0) 1304 616170

Email sales@aeicompounds.co.uk

Website www.aeicompounds.com

A division of



CT09-12

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 is not allowed to rise above 170°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 CT09-12.

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

CT09-12 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.

© AEI Compounds Limited, Sandwich Industrial Estate, Sandwich, Kent, CT13 9LY

Telephone +44 (0) 1304 616171

Facsimile +44 (0) 1304 616170

Email sales@aeicompounds.co.uk

Website www.aeicompounds.com

A division of



Whilst this document has been prepared in good faith, AEI Compounds Limited accepts no liability of any kind to any person in respect of its contents or any use made thereof. Neither must it be assumed that any use will not infringe any patent. This document shall not form part of any contract with a customer.