Technical data sheet

Mecoline IS TP 1035 F UV

Halogen-free, thermoplastic, highly flame retardant insulation and sheathing compound for low and medium voltage cables

■ Compound class	■ Compound category	■ Flame retardant
Insulation / sheathing	TP	ATH

■ Standards

BS 6724	BS 7655 section 6.1 LTS 2	DIN EN 50525-3-11 TI 6, TM 7
DIN EN 50363-7 TI 6, TI7	DIN EN 50363-8 TM7	IEC 60092- 360 SHF 1
VDE 0207 part 24 HM2, HM4	VDE 0250 part 215 HM5	VDE 0276 part 604 HM 4

■ Operating temperature [C°]	■ Oil resistance level
-30 to 90	★

■ Typical applications

Halogen-free, low smoke, thermoplastic, highly flame retardant compound for the insulation and sheathing of low and medium voltage cables in General Installation applications.

General Installation

Shipboard

■ Features

Flame retardant

Halogen-free

Low smoke

Weather / UV resistant

PHYSICAL PROPERTIES

■ Physical properties	Unit	Typical value	Test method
Density*	g/cm³	**1,47**	DIN EN ISO 1183-1A
Hardness*	Shore D	**50**	DIN ISO 48-4
Melt Flow Index (150°C; 21,6kg)	g/10 min	**9,9**	DIN EN ISO 1133
■ Water absorption *	**Unit**	**Typical value**	**Test method**
Water absorption after 240h at 70°C	mg/cm²	**0,2**	DIN EN 60811-402

MECHANICAL PROPERTIES **

■ Thermoplastic	Unit	Typical value	Test method
Tensile strength	N/mm²	**12,5**	IEC 60811-501
Elongation at break	%	**190**	IEC 60811-501
Tear strength	N/mm	**8,2**	BS 6469:99.1

■ After ageing in air oven 168h at 100°C **	Unit	Typical value	Test method
Variation in tensile strength	%	**3,7**	IEC 60811-401
Variation in elongation at break	%	**6,2**	IEC 60811-401
■ After ageing in air oven 168h at 110°C **	Unit	Typical value	Test method
Variation in tensile strength	%	**6,5**	IEC 60811-401
Variation in elongation at break	%	**5,2**	IEC 60811-401

THERMAL PROPERTIES **

■ Heat tests	Unit	Typical value	Test method
Hot pressure test: penetration 6h at 90°C	%	**15**	IEC 60811-508

RESISTANCE **

■ IRM 902 4h at 70°C	Unit	Typical value	Test method
Variation in tensile strength	%	**-9,8**	IEC 60811-404
Variation in elongation at break	%	**-0,5**	IEC 60811-404
Variation in weight	%	**0**	IEC 60811-404
■ IRM 902 20h at 50°C	Unit	Typical value	Test method
Variation in tensile strength	%	**-9,9**	IEC 60811-404
Variation in elongation at break	%	**0,9**	IEC 60811-404
Variation in weight	%	**7**	IEC 60811-404
■ UV weathering – ISO 4892-2 720h	Unit	Typical value	Test method
Variation in tensile strength	%	**+7,1**	IEC 60811-401
Variation in elongation at break	%	**-16,8**	IEC 60811-401

BURNING PROPERTIES *

■ Main burning properties	Unit	Typical value	Test method
LOI	%	**45**	ASTM D 2863 A
Halogen content	%	**0**	IEC 754-1
■ Acid gas emission	Unit	Typical value	Test method
Corrosivity: pH	-	**5,94**	DIN EN 60754-2
Conductivity	µS/mm	**0,41**	DIN EN 60754-2

* pressed plaques, 155°C / 5 min.
** extruded tapes

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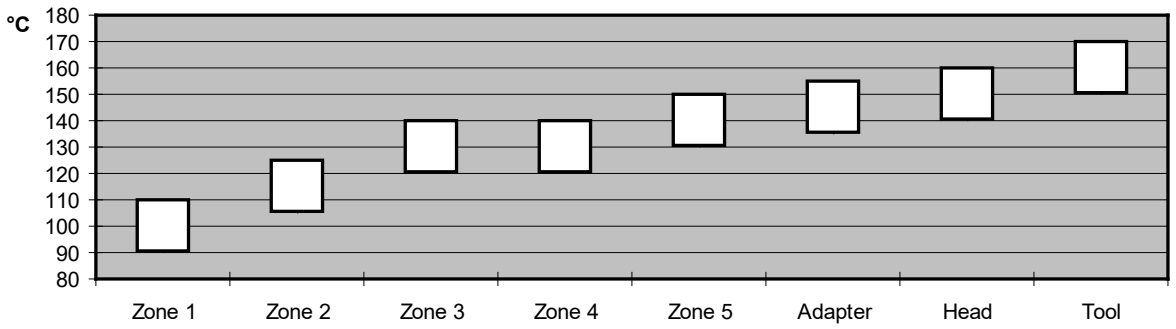
PROCESSING GUIDE

■ **Extruder Type**	Standard extruders for elastomeric or thermoplastic processing.
■ **Screw configuration**	Low compression screw with L/D of 20 to 25 and compression ratio of 1:1.2
■ **Tooling**	pressure, semi-compression or tube possible
■ **Temperature profile extruder**	The profile shown below may vary slightly depending on extruder type, head design & output.



■ **Maximum mass temperature**	170 – 180°C
■ **Drying**	Predrying of Mecoline Compounds is normally not necessary provided the compound has been stored in sealed bags under cool (max. 30°C) and dry conditions. If Mecoline Compounds are used from open bags, predrying 4–6h at a temperature of 60–70°C is recommended.

STORAGE INFORMATION

■ **Form & packaging**	Pellets in sizes 2.8mm & 5.5mm Moisture-resistant bags (25kg) & octabins (alu-innerliner, max. 1250kg)
■ **Shelf life**	1 year after production