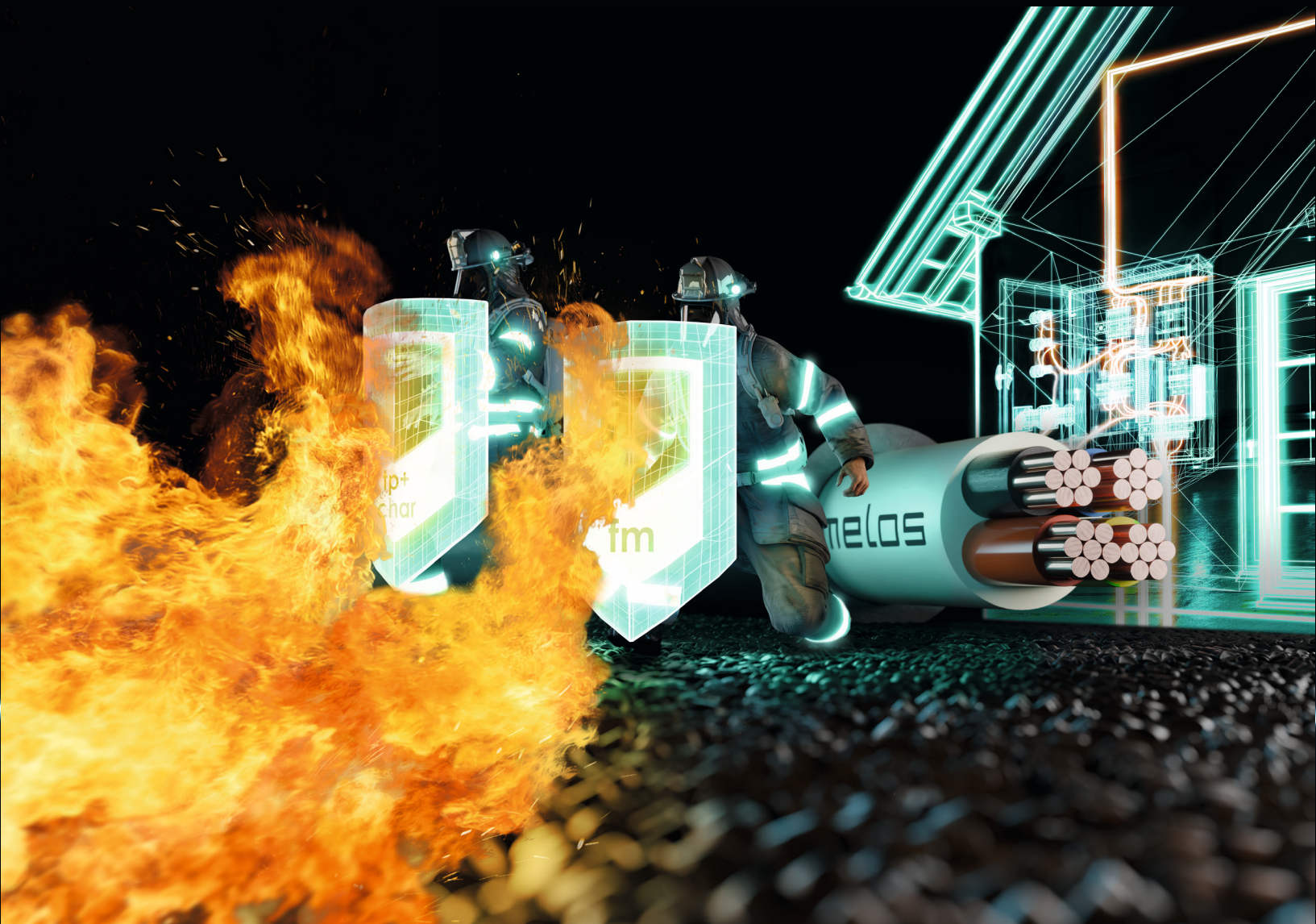


melos

Highlight flyer

SUPERIOR FIRE BEHAVIOR AND CPR RESULTS

Fire protection through flame retardant, halogen-free thermoplastic sheathing and bedding compounds



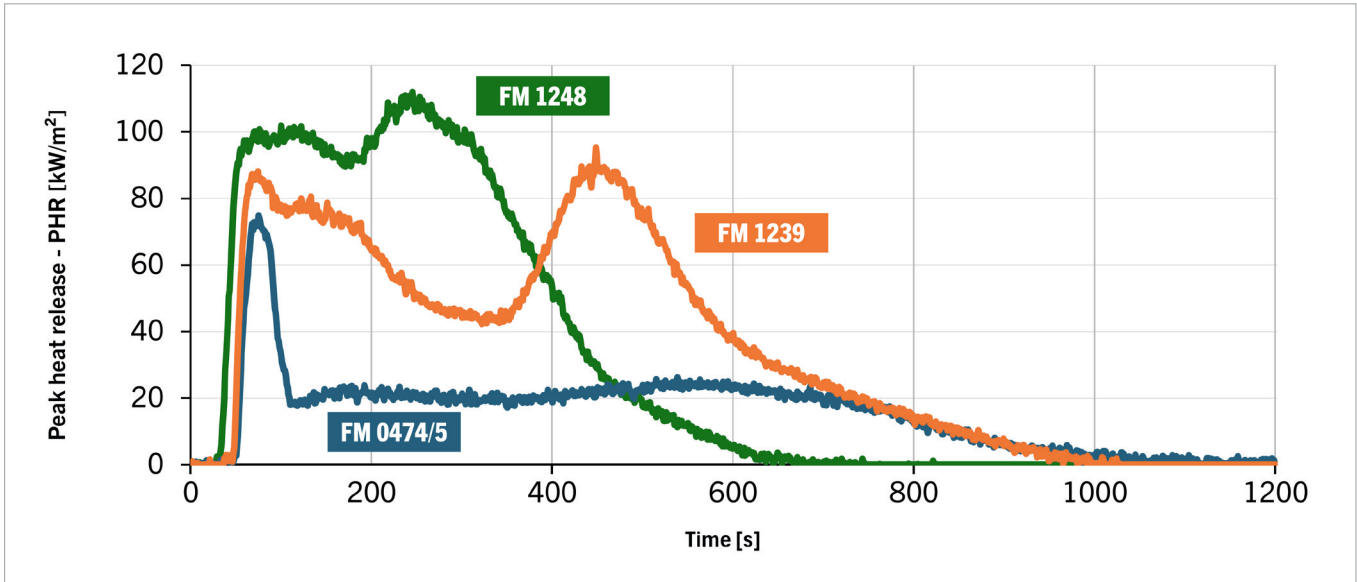


CPR BEDDING COMPOUNDS

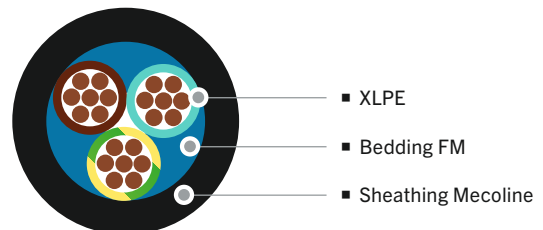
Different tests show the fire behavior of Melos HFFR bedding compounds

CONE CALORIMETER TEST RESULTS AT 50 kW/m²

PROPERTIES	TIME TO IGNITION (TI) IN Sec	TOTAL HEAT RELEASE (THR) IN MJ/m ²	LIMITING OXYGEN INDEX (LOI) IN %	TEMPERATURE INDEX IN °C
● FM 0474/5	57	20.1	63	330
● FM 1239	53	44.1	55	300
● FM 1248	42	39.1	45	290

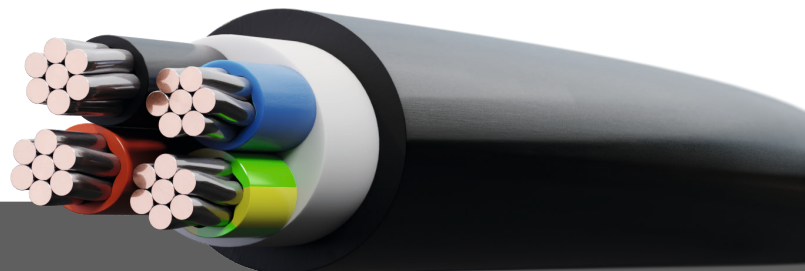


Recommended for CPR-Class	Time [s] Bedding Compounds	Sheathing Compound
B2ca	FM 0474/5 or FM 0728	Mecoline S TP 1035 F
Cca	FM 1239 or FM 1248	Mecoline S TP 1021 F
Dca	FM 1249	Mecoline S TP 1021 F



MATERIAL SELECTION FOR CPR

Melos code	Shore hardness	Viscosity MFI [g/10 min] ML (1+4) 100°C [MU]	Density [g/cm ³]	 Coilable for 2-step-process	LOI [%]	Tensile strength [N/mm ²]	Elongation at break [%]	Base polymer	Recommended for CPR class	Remarks & standards
XLPE/HFFR	Non flame-retardant bedding compounds for XLPE Insulation and HFFR sheathing									
FM 1249	80 A	30	1.96			0.5	20	TPE-O	Dca	Not flame retardant
XLPE/HFFR	Flame-retardant bedding compounds for XLPE insulation and HFFR sheathing									
FM 1248	80 A	30	1.91		45			TPE-O	Dca Cca	
FM 1239	70 A	30	1.87	■	55			TPE-O	Cca	
FM 0474/5	74 A	32	1.82		63			TPE-O	B2ca	Very flame retardant
FM 0728	65 A	45	1.81	■	67	1.5	20	TPE-O	B2ca	Excellent flame retardant & coilable
FM 0849	87 A	5.8 <small>150°C/ 21.6 kg</small>	1.74		81			TPE-O	Cca B2ca	High line speed



WATCH NOW ON YOUTUBE

„Firefighter Duo -Melos leads the way to superior fire behavior and CPR results“

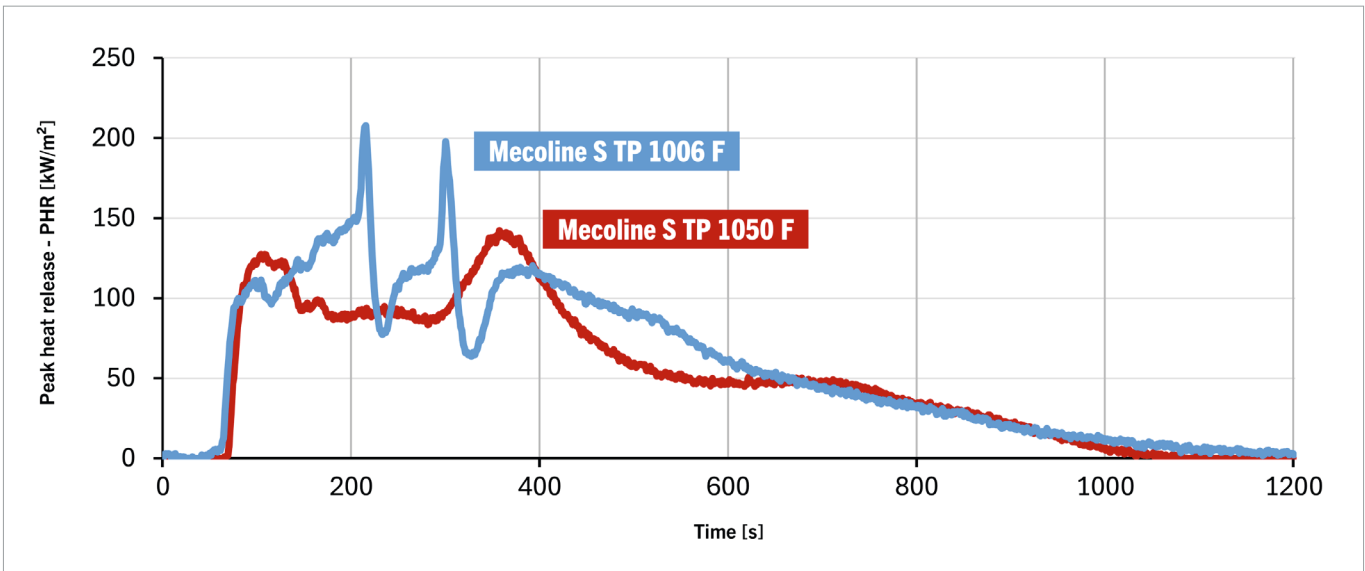


CPR SHEATHING COMPOUNDS

Thermoplastic sheathing compounds for improved burning properties

CONE CALORIMETER TEST RESULTS AT 50 kW/m²

PROPERTIES	TIME TO IGNITION (TI) IN Sec	TOTAL HEAT RELEASE (THR) IN MJ/m ²	LIMITING OXYGEN INDEX (LOI) IN %
● Mecoline S TP 1006 F	68	68	45
● Mecoline S TP 1050 F	73	58	51

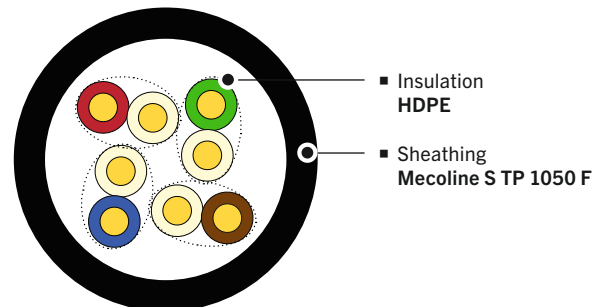


BURNING TEST RESULTS WITH MECOLINE S TP 1050 F

Criteria	Measured value	Evaluation criteria according to EN 13501-6 for class B2 _{ca}
FS Flame spread	0.87 m	≤ 1.50 m
THR _{1200s} Total heat release	5.5 MJ	≤ 15 MJ
HRR _{max} Max. heat release rate	16.5 kW	≤ 30 kW
SPR _{max} Max. smoke production rate	0.041 m ² /s	≤ 0.25 m ² /s
TSP _{1200s} Total smoke production	15.1 m ²	≤ 50 m ²
FIGRA Fire growth rate	130.2 Ws ⁻¹	≤ 150 Ws ⁻¹
Burning droplets	d0	No droplets

Tested construction:







Cat. 5e U/UTP 4x2x24 AWG LS0H



Class B2_{ca-s1a,d0,a1}
according to EN 50399



MATERIAL SELECTION FOR CPR

MELOS CODE	Operating temperature [°C]	Shore hardness	Tensile strength [N/mm ²]	Elongation at break [%]	LOI [%]	Density [g/cm ³]	Viscosity MF1(g/10 min) Mooney (MU)	Oil resistance level	Special features	Standards	Recommended for CPR Class
MECOLINE S TP 1006 F	-25 to 90	50 D	10.3	179	45	1.56	160°C/ 21.6 kg 5.0	★★		+ HM2, HM4, HM5, TM7 + BS 6724, BS 7655 LTS2 + SHF1 + CEI 20-11 M1, NF C 32-323	C _{ca} without bedding
MECOLINE S TP 1021 F	-30 to 80	48 D	10.8	226	42	1.48	150°C/ 21.6 kg 9.0	★		+ HM2, HM5, TM7 + BS 7655 LTS1 / LTS3 + SHF1	D _{ca} with bedding FM 1248 C _{ca} with bedding FM 1239
MECOLINE S TP 1028 F	-25 to 80	47 D	10.9	193	36	1.50	150°C/ 21.6 kg 11.5	★		+ HM2, HM5, TM7 + BS 7655 LTS1 / LTS3 + SHF1	D _{ca} with bedding FM 1248
MECOLINE IS TP 1032 F	-30 to 90	52 D	10.5	196	38	1.49	150°C/ 21.6 kg 8.2	★		+ HM2, HM4, HM5, TM7, T16, T17 + BS 7655 LTS1 / LTS2 / LTS3 / LTS4 + SHF1 + CEI 20-11 M1	D _{ca} with bedding FM 1248 C _{ca} with bedding FM 1239
MECOLINE IS TP 1035 F	-30 to 90	50 D	12.5	190	45	1.47	150°C/ 21.6 kg 9.9	★		+ HM2, HM4, HM5, T16, T17, TM7 + BS 6724, BS 7655 LTS2 + SHF1	B _{2ca} with bedding FM 0474/5 or FM 0728
MECOLINE S TP 1050 F	-30 to 90	53 D	10.1	175	51	1.57	150°C/ 21.6 kg 8.0	★		+ HM2, HM4, HM5, TM7 + BS 7655 LTS1 / LTS2 / LTS3 / LTS4 + SHF1	B _{2ca} without bedding



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WWW.MELOS.COM/CABLE-COMPOUNDS



Tobias Bunke
tobias.bunke@melos-gmbh.com
Mobile: +49 170 9781 294



Tim Schnettler
tim.schnettler@melos-gmbh.com
Mobile: +49 151 5547 27 38



Dennis Scherf
dennis.scherf@melos-gmbh.com
Mobile: +49 151 1506 6894

R&D MANAGER



Jens Templin
jens.templin@melos-gmbh.com
Mobile: +49 171 5687 502



Sebastian Kahmann
sebastian.kahmann@melos-gmbh.com
Mobile: +49 151 1506 68 92

ORDER PROCESSING



Frank Dennenwaldt
frank.dennenwaldt@melos-gmbh.com
Mobile: +49 151 1742 49 03



Sami Shili
sami.shili@melos-gmbh.com
Mobile: +49 151 2476 108 33



Angela Ehrich
angela.ehrich@melos-gmbh.com
Mobile: +49 151 4237 6173

