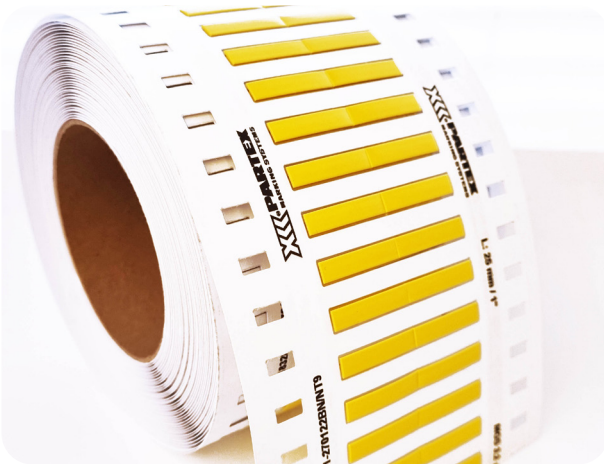




MG

MILITARY GRADE SELF EXTINGUISHING HEAT SHRINK TUBING

- Very flexible, high temperature and highly flame retardant polyolefin heat shrink tubing for insulation and identification marking.
- UL224 and CSA compliant.
- Flexible and fast mounting. Ideal for aerospace, military, rail, industrial and energy applications.
- Reduced marking costs as marking can be done on site with Partex marking machines.

General information

Design

MG is a flame retardant, crosslinked polyolefin tubing. Specific developed to be used within aerospace, military, rail, industrial, energy marking, insulation, wire bundling and mechanical protection.

Primary applications include marking, insulation and protection of cables, harnesses and electronic components.

Its flexibility enables fast mounting.

Marking equipment

MG is printable for on site production with Partex MK10 or EOS marking machines. See separate product information.

Technical specification

Material

Extruded, cross linked polyolefin

Shrink ratio 3:1

Colours (standard)

Yellow, white

Temperature range

Working temperature: -55°C to +135°C

Shrink temperature: $\geq 90^{\circ}\text{C}$

Compliances

Mark Permanence: SAE AS-5942

Print Resistance to solvents: MIL-STD-202G

Test method 215K

Fire propagations

ASTM D2671 Procedure B

NFPA 130

Toxicity

BSS-7239

Airbus standard

NSA937201 Table 7

UL224 125°C

Certificate E228117

CSA-C22.2

No. 198.1-06

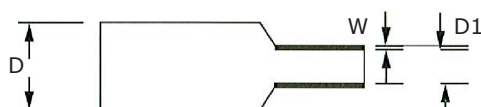
Material performance

AMS SAE DTL 23053/5 Class 1

MGD dimensions (nominal)

Article number	Size (mm)	Inside diameter (mm) before shrinking (D)	Inside diameter (mm) after shrinking (D1)	Wall thickness (mm) after shrinking (W)	Sleeve length (mm)	Packaging markers/reel
MGD024125LR*	2.40	2.50	0.8	0.43	12.5	4000
MGD024250LR*	2.40	2.50	0.8	0.43	25	2000
MGD024500LR*	2.40	2.50	0.8	0.43	50	1000
MGD032125LR*	3.20	3.40	1.00	0.43	12.5	4000
MGD032250LR*	3.20	3.40	1.00	0.43	25	2000
MGD032500LR*	3.20	3.40	1.00	0.43	50	1000
MGD048125LR*	4.80	5.00	1.6	0.43	12.5	4000
MGD048250LR*	4.80	5.00	1.6	0.43	25	2000
MGD048500LR*	4.80	5.00	1.6	0.43	50	1000
MGD064125LR*	6.40	6.50	2.00	0.56	12.5	4000
MGD064250LR*	6.40	6.50	2.00	0.56	25	2000
MGD064500LR*	6.40	6.50	2.00	0.56	50	1000
MGD095125LR*	9.50	10.00	3.00	0.56	12.5	2000
MGD095250LR*	9.50	10.00	3.00	0.56	25	1000
MGD095500LR*	9.50	10.00	3.00	0.56	50	500
MGD127125LR*	12.70	13.00	4.00	0.56	12.5	2000
MGD127250LR*	12.70	13.00	4.00	0.56	25	1000
MGD127500LR*	12.70	13.00	4.00	0.56	50	500
MGD190125LR*	19.10	19.30	6.00	0.80	12.5	2000
MGD190250LR*	19.10	19.30	6.00	0.80	25	1000
MGD190500LR*	19.10	19.30	6.00	0.80	50	500
MGD254125LR*	25.40	25.70	8.00	0.81	12.5	1200
MGD254250LR*	25.40	25.70	8.00	0.81	25	600
MGD254500LR*	25.40	25.70	8.00	0.81	50	300
MGD381250LR*	38.10	38.30	12.70	0.90	25	200
MGD381500LR*	38.10	38.30	12.70	0.90	50	100

*=color (4=yellow, 9=white)

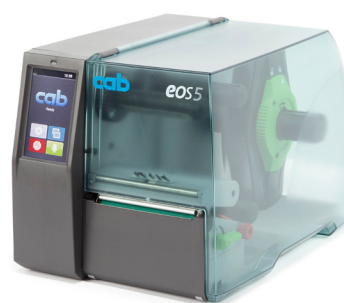


Print-on-Site



MK10

Printer for high volume on site marking production. See separate product information.



EOS

Printer for on site marking production. See separate product information.

Properties

Properties PHYSICAL	Data	Test Method
Tensile Strength	> 11.0/mm ²	ASTM D 638
Elongation at break	≥ 200%	ASTM D 638
Longitudinal Change	≤ 5% to ≤10%	ASTM D 2671
Water absorption	0,20%	ASTM D 570
Specific gravity	1,40 g/cm ³	ASTM D 792
Properties ELECTRICAL	Data	Test Method
Dielectric Strength	20.0 kV/mm ²	ASTM D 2671
Volume Resistivity	10 ¹⁴ Ω /cm	ASTM D 257
Properties CHEMICAL	Data	Test Method
Chemical resistance	Good	AMS-DTL-23053/5
Copper corrosion	No corrosion	ASTM D 2671 B
Fungus resistance	No growth	AMS-DTL-7444
Properties THERMAL	Data	Test Method
Heat shock 4 hours at 250°C	No dripping, cracking or flowing	ASTM D 2671
Heat aging 168 hours at 175°C	Elongation ≥ 200%	ASTM D 638
Flammability . Flame spread index	Pass » rounded average= 10 - specified max = 30	ASTM E 162-16
Low temperature flexibility	No cracking, no break, no detachment of coating	1h at - 55°C ASTM D2671C
Optical density of smoke (Dm))	Pass	ASTM E-662
Smoke index - visible smoke release	Mj/m ² = 38,10	ASTM E 1354
Properties FIRE PROPAGATION	Data	Test Method
Fire resistance	Pass	ASTM D 2671 procedure B
Flammability	Pass	UL224
Properties ENVIRONMENTAL UV STABILITY	Data	Test Method
UV-B	Pass - No damage to the marker and print legible after 20 rubs in accordance with AS3349/SAE AS 81531.	ASTM G154 - Machine setup Temp 50-60°C (140°F) Cycle 8 h light 4h condensation UV wavelength 280-400nm Test duration 1000 h of exposure.

Fire behavior standard classification for identification products

Standards	Classification	Usage
NFPA 130	National Fire Protection Association	Usage Permitted upon agreement with end user

Compliance on fire behavior for identification products

Standards	Flame Propagation Flame Spread Index	Smoke Optical Density	TEST METHOD
			Heat and Visible Smoke Release / Toxicity
NFPA130	ASTM E 162	ASTM E 662	ASTM E 1354

Fire Propagation

Normatives	Flammability Spread Index	Smoke Optical Density	Heat and Visible Smoke Release / Toxicity
NFPA130	Pass	Pass	Pass

Fire behavior standard classification usage

Standards	Classification	Usage
NFPA 130	National Fire Protection Association	Usage Permitted upon agreement with end user