



Zero Halogen Heat Shrink Sleeves

expressMARK ETZ sleeves are ideal for applications where limited fire hazard characteristics are critical. The zero halogen material coupled with low smoke and low toxic fume emissions make this product ideal for use in enclosed spaces such as mass transit, marine and industrial installations.



Temperature Ratings

Operating temp. range	-40°C to +105°C	-40°F to +221°F
Minimum recovery temp.	+135°C	+275°F
Maximum storage temp.	+40°C	+104°F

Specifications & Approvals

Military	SAE AS5942 MIL-STD-202F 215J
Industry	BS 6853(1999) - Vehicle category 1a

Ordering Information

Part Number	Type	Colour	Dimensions (mm)			Pack Size	Commonly used for Cable Range (mm ²)*	
			Diameter	x	Length		From	To
ETZ-9-024050-B	ETZ	WHITE	2.4	x	50	1000pcs		
ETZ-9-032050-B	ETZ	WHITE	3.2	x	50	1000pcs	0.50	to 1.00
ETZ-9-048050-B	ETZ	WHITE	4.8	x	50	1000pcs	1.00	to 4.00
ETZ-9-064050-B	ETZ	WHITE	6.4	x	50	1000pcs	4.00	to 6.00
ETZ-9-095050-B	ETZ	WHITE	9.5	x	50	1000pcs	6.00	to 16.00
ETZ-9-127050-B	ETZ	WHITE	12.7	x	50	1000pcs	16.00	to 35.00
ETZ-9-190050-B	ETZ	WHITE	19.0	x	50	1000pcs	35.00	to 120.00
ETZ-9-254050-A	ETZ	WHITE	25.4	x	50	250pcs	120.00	to 185.00
ETZ-9-381050-A	ETZ	WHITE	38.1	x	50	250pcs	185.00	to 400.00
ETZ-4-024050-B	ETZ	YELLOW	2.4	x	50	1000pcs		
ETZ-4-032050-B	ETZ	YELLOW	3.2	x	50	1000pcs	0.50	to 1.00
ETZ-4-048050-B	ETZ	YELLOW	4.8	x	50	1000pcs	1.00	to 4.00
ETZ-4-064050-B	ETZ	YELLOW	6.4	x	50	1000pcs	4.00	to 6.00
ETZ-4-095050-B	ETZ	YELLOW	9.5	x	50	1000pcs	6.00	to 16.00
ETZ-4-127050-B	ETZ	YELLOW	12.7	x	50	1000pcs	16.00	to 35.00
ETZ-4-190050-B	ETZ	YELLOW	19.0	x	50	1000pcs	35.00	to 120.00
ETZ-4-254050-A	ETZ	YELLOW	25.4	x	50	250pcs	120.00	to 185.00
ETZ-4-381050-A	ETZ	YELLOW	38.1	x	50	250pcs	185.00	to 400.00

(*B S6231Tri-Rated Cable)

Available in alternative sleeve lengths as follows

ETZ-X-XXX025-X	25mm	2 sleeves per 50mm strip
ETZ-X-XXX016-X	16mm	3 sleeves per 50mm strip
ETZ-X-XXX012-X	12mm	4 sleeves per 50mm strip

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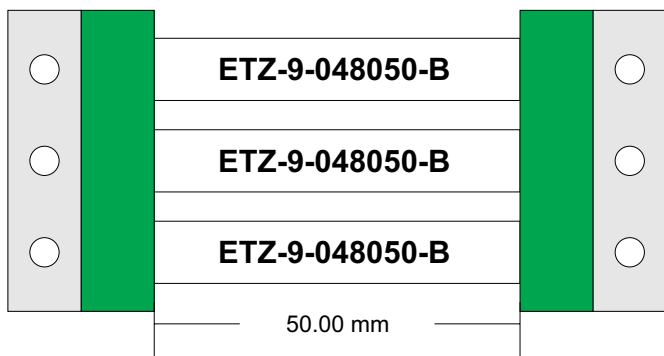
Want markers, but don't have a printer on site ?

e expressMARK can also offer a pre-print service
a available for all products - no minimum quantity
s simple, quick response time and all hassle free
y you send the data, we print the markers - **easy!**

DESCRIPTION:	Thin wall, zero-halogen, low smoke, low toxicity, radiation cross-linked, UV stabilised polyolefin heat-shrinkable tubing, assembled as cut sleeves organized in a ladder format.
USE:	Identification of cables in applications where LFH characteristics are critical. The zero halogen material coupled with low smoke and low toxic fume emissions make this product ideal for use in enclosed spaces such as mass transit, marine and industrial installations.
SERVICE TEMPERATURE:	30°C to +105°C (-22°F to +221°F). Minimum shrink temperature: 135°C (275°F)
COLOURS:	White or yellow standard. Other colours available upon request with MOQ conditions.
FLAMMABILITY:	Self-extinguishing (ASTM D2671 Procedure B)
OXYGEN INDEX:	34% minimum (BS EN ISO 4589-2 [1996]).
SMOKE EMISSION:	0.017 maximum (BS 6853 [1999] Annex D.8.3).
TOXIC FUME:	< 1 (BS 6853 [1999] Annex B – Mass based test method - NF X 70-100)
LUL TOXIC FUME:	No Halogens, no P, S, or N sources above trace level (LUL E1042:A6 [2002]).
TENSILE STRENGTH:	7MPa minimum
UV RESISTANCE:	Tensile Strength >90% & Ultimate elongation >40% of original value after 1000 hours. (base polymer) (ASTM G53: UVA [100% dry cycle] ; UVB [8 hours dry/4 hours wet cycle])
PRINT PERMANENCE:	Adheres to SAE-AS81531 4.6.2 (50 rubs). Fluid resistance to MIL-STD-202F method 215J
FLUID RESISTANCE:	See below table for test results
THREAT	TEST / EFFECT
Xylene/butylacetate/cyclohexan	(one mix [Paint Stripper]) - 10 wipes dry tissue - PRINT LEGIBLE
Locomotive Diesel	10 wipes dry tissue - PRINT LEGIBLE
Tunnel Dust / White Spirits	LUL C3349 (72 hours, 20 strokes dry tissue) - PRINT LEGIBLE
Water	LUL C3349 (72 hours, 20 strokes dry tissue) - PRINT LEGIBLE
Tunnel Dust / Oil (50%/50%)	LUL C3349 (72 hours, 20 strokes dry tissue) - PRINT LEGIBLE
Tunnel Dust / Water (50%/50%)	LUL C3349 (72 hours, 20 strokes dry tissue) - PRINT LEGIBLE
Diesel	LUL C3349 (72 hours, 20 strokes dry tissue) - PRINT LEGIBLE
Grease	LUL C3349 (72 hours, 20 strokes dry tissue) - PRINT LEGIBLE
Glycol rail de-icer (50% water)	LUL C3349 (72 hours, 20 strokes dry tissue) - PRINT LEGIBLE
Cleaning Solvent	LUL C3349 (72 hours, 20 strokes dry tissue) - PRINT LEGIBLE
Surface Cleaner (PGP500)	LUL C3349 (72 hours, 20 strokes dry tissue) - PRINT LEGIBLE
Graffiti Remover Gel	LUL C3349 (72 hours, 20 strokes dry tissue) - PRINT LEGIBLE
Chewing Gum Remover Gel	LUL C3349 (72 hours, 20 strokes dry tissue) - PRINT LEGIBLE
IRM 902 Oil	pr EN50343 (24 hours at 50°C (122°F) 10 wipes) - PRINT LEGIBLE
Hydrochloric acid 5% solution	pr EN50343 (1 minute at 23°C (73°F) 10 wipes) - PRINT LEGIBLE
Sodium Hydroxide 5% solution	pr EN50343 (1 minute at 23°C (73°F) 10 wipes) - PRINT LEGIBLE
Heat Ageing	pr EN50343 (240 hours at 120°C, 10 wipes) - PRINT LEGIBLE
Aircraft Fuel (ISO1817 Liquid B)	24 hours at 40°C (104°F), then 25 strokes dry tissue; IEC 60684-2 - PRINT LEGIBLE
Silicone Fluid (S1714)	24 hours at 50°C (122°F), then 25 strokes dry tissue; IEC 60684-2 - PRINT LEGIBLE
Propan-2-ol	24 hours at 23°C (73°F), then 25 strokes dry tissue; IEC 60684-2 - PRINT LEGIBLE

Product Layout Example

*4MPa TS & 90% UE retained



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