TISA-FLEX® EMI-PFR

EMI AND MECHANICAL SLEEVING

-40°C +150°C

FEATURES AND ASSETS:

- **Very high EMI shielding from 10 kHz to 1 GHz**
- **Excellent abrasion resistance**
- **Non flammable (UL 94-V0)**
- **Very high flexibility**
- **Vibrations protection**
- **Impacts protection**
- **Lightweight**
- **Every assembling configurations possible** (connectors)

TYPICAL APPLICATIONS:

- **EMI shielding cables**
- **Automotive**
- **Aeronautic**
- **Shilpbuilding**
- **Rolling stock and rail vehicles**

ISO 14001
ISO 9001
ISO/TS 16949
BUREAU VERITAS Certification

ISO 13485
BUREAU VERITAS Certification

RoHS · WEEE · COMPLIANT

TRESSE INDUSTRIE

SPECIFICATIONS :

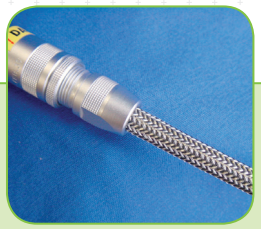
Tisaflex® EMI-PFR is a braided tubular sheath of tinned copper mixed with PBT monofilament.

This sleeve is particularly designed for shielding and abrasion protection of bundles of electrical cables.

Because of its two components, **Tisaflex® EMI-PFR** takes its technology to screened cables: the mechanical and electrical functions are clearly separated.

The EMI shielding is provided by the thin tinned copper strands while flexibility, abrasion resistance, etc... are provided by the PBT monofilament.

The diameter differences between copper strands and PBT yarns, allow, in case of abrasion, an optimum protection of tinned copper and shielding.
PBT will be attack first.



Its shape makes it easy to install while taking up significant differences in cross sections, elbows, etc.

For effective shielding, both ends must be grounded and termination can be made by clip, ferrule, and connectors.

Tisaflex® EMI-PFR can cover all diameters from 4 to over 35 mm, is used in a lot of industries which need cable shielding protection like automotive (hybrid car, xenon lamp...), shipbuilding, rail vehicle, aeronautic.

Supplied in coils or cut to length, **Tisaflex® EMI-PFR** is an efficient and esthetic solution to protect your electrical cables.

Tisaflex® EMI-PFR is a patented product.

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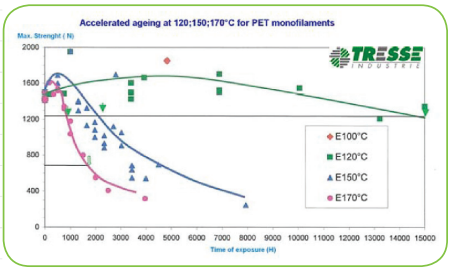
TISA-FLEX® EMI-PFR

FEATURE	METHOD, STANDARD, REGULATIONS	VALUE
Chemical nature of monofilament		PBT + flamme retardant additive CAS N°: 26062-94-2 Diameter : 0.254 mm
Chemical nature of conductive strands	NFC 31-111 ASTM B33	Tinned copper grade A or B Diameter : 0.1 mm
Melting point		255°C
Continuous working temperature		from -40°C to +150°C
Peak temperature		175°C
Accelerated ageing	Arrhenius model	Estimated time-to-fail for a strength at 500N See graph below
Flammability Toxicity and harm from smoke	- FMVS S302 - UL 94 - NF F 16-101	- V < 100 mm/min (for 1mm thickness) - V0 - I1 – F0
RoHS	2002/95/EC Directive	Complies
Environment	European regulations	Complies
Shielding effectiveness	- IEC 61000-4-21 - Optical covering - CISPR 25	- 45 to 67 dB - > 95% - 10 kHz to 1 GHz

REFERENCES	USE **			CONSTRUCTION		SHIELDING	
	MIN (mm.)	MAX (mm.)	Tolerance (mm.)	Nominal wall thickness (mm/)	Weight (kg/km)	Approximative linear resistance (mΩ/m)	Shielding effectiveness Load 50 Ω (dB) [300 MHz;1 GHz]*
EMI-PFR04	4	6,5	+/- 1	0,50	21,50	15,10	45 to 51
EMI-PFR05	5	7	+/- 1	0,50	27	12,70	50 to 51
EMI-PFR06	5	10	+/- 1	0,50	28,50	11,30	55 to 62
EMI-PFR08	7	11,5	+/- 1,5	0,50	35,70	8,70	52 to 57
EMI-PFR10	8	13	+/- 1,5	0,50	43,50	7,80	63 to 67
EMI-PFR12	10	15	+/- 2	0,50	48	6,50	58 to 65
EMI-PFR14	12	18	+/- 2	0,50	58	5,40	45 to 47
EMI-PFR16	14	20	+/- 2	0,50	72,50	4,60	56 to 62
EMI-PFR18	16	22	+/- 3	0,50	78,60	4,20	52 to 62
EMI-PFR20	18	25	+/- 4	0,50	100	4,05	51 to 62
EMI-PFR35	30	40	+/- 4	0,50	120	2,20	52 to 74

* According to IEC61000-4-21 reverberation chamber test methods, all results and curves available on request.

** Recommended range of use.



These references are those of our standard **Tisaflex® EMI-PFR** range. Please contact us for any other construction, parameter, material, packaging, colour, etc.

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