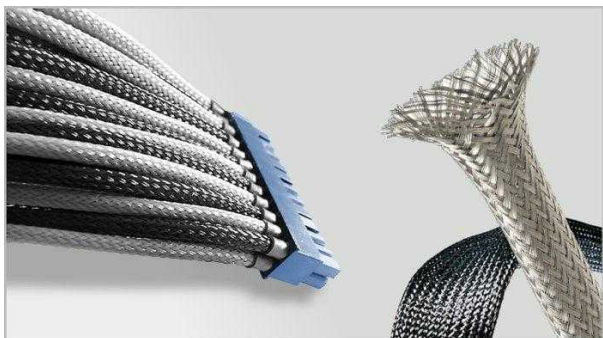


CBS PES

Multipurpose highly expandable polyester braided sleeve for protecting, strengthening or bundling of various electrical wires and cables, fluid pipes and hoses.

Features

1. Highly expandable so easy to apply (push back effect)
2. Very good chemical and abrasion resistance
3. Flammability resistance according to FMVSS 302 and DIN 5510 (2)
4. Halogen free
5. Operating temperature -40°C to +150°C



Dimensions

Nominal diameter mm	Polyester	
	Minimal diameter mm	Maximal diameter mm
3	3	6
4	4	8
5	3	10
6	7	12
8	6	15
10	8	18
12	10	22
15	13	25
18	15	28
20	15	30
25	24	38
30	23	49
40	34	60
50	45	80

Approvals and classification:

DIN 5510-2 (class S4/SR2/ST2), DIN 5510-2 Smoke toxicity (pass),
EN 45545-2 : 07/2009 (hazard level HL3)

Standard colours



black grey

Standard packaging

Reel, dispenser box, roll-off box

Properties Automotive

Description	Test method	Typical value
Abrasion resistance	LV 312-3 6.5.4	class >F for coverage > 90%
Operating temperature range	LV 312-3 6.7.2	-40°C - +150°C (3.000 h)
Short-term heat ageing	LV 312-3 6.7.3 (240h / 175°C)	No visual change. No tears, breaks, brittleness or other damages
Flammability		class A
Tensile properties	LV 312-3 6.3.3	Tensile strength 28,2N
Tensile properties	LV 312-3 6.3.3	Tensile strain at break 34,6%
Emission	VDA 277	Mean value max. 14,9µg C/g
Thermodesorption	VDA 278	VOC 1 ppm FOG 41 ppm
Fogging	DIN 75201-B	Mean value 0,31 mg
Odor test	VDA 270 V 1-2-3	pass
Resistance to solvents	VW 80000 10	no visual changes after exposition

Properties Industry / Railway

Description	Test method	Typical value
Flammability	DIN 5510-2	Class S4/SR2/S12
Smoke toxicity	DIN 5510-2	FED (t _{zul} = 30 min) 0,06
Toxicity index	NF X 70-100 : 2001	I.T.C. = 10,96
Smoke toxicity	NF-X 70-100	CIT _{NLP} = 0,12 HL3
Smoke density	EN ISO 5659-2	Max(D _s) = 171 HL2
Oxygen index	EN ISO 4589-2	30 Vol-% HL3