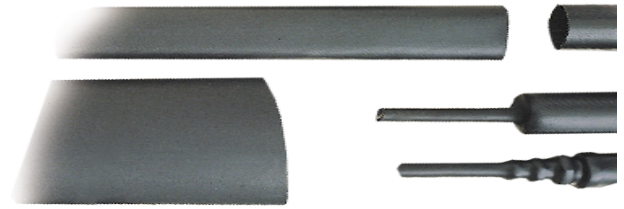


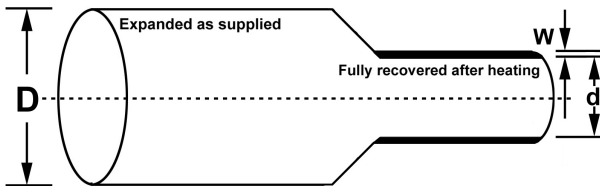
Heavy Wall, High Ratio Crosslinked Polyolefin

HRA



Features

- ~6:1 Shrink Ratio
- Accommodates a wide range of connectors and configurations
- Optional Thermoplastic Adhesive Liner (order ref, IHRA)
- Continuous Operating Temperature: -55°C to +110°C
- Shrink Temperature 120°C



ORDER REF. NO.	EXPANDED	RECOVERED		STANDARD LENGTHS
	INTERNAL DIAMETER	INTERNAL DIAMETER	WALL THICKNESS	
HRA	mm	mm	mm	m
19/3	19.0	3.2	3.2	1.2m
33/6	33.0	5.5	3.4	1.2m
44/8	44.4	7.4	3.6	1.2m
50/9	50.8	8.3	4.3	1.2m
70/12	69.8	11.7	4.8	1.2m
89/17	88.9	17.1	4.8	1.2m
120/20	119.4	22.9	4.8	1.2m

* Other lengths available on request

Chemical Properties		
Fluid Resistance	MIL-DTL-23053	Good to excellent
Copper Corrosion	ASTM D-2671	No Corrosion
Water Absorption	ASTM D-570	0.1%
Fungus Resistance	ASTM G-21	No Growth
Adhesive		
Adhesive Lap Shear (1in./min @ 23°C)	ASTM D-1002	125 psi (.875 Mpa)
Adhesive Softening Point	ASTM E-28	92°C/-5°C
Adhesive Peel Strength (300mm/min @23°C) -to steel aluminium, P.E. -PVC	ASTM D-1000	35pli 20pli
Adhesive Blocking (30°C)	ASTM D-1146	No Blocking
Water Penetration	ASTM 706	No Penetration after 236hrs. of continuous immersion

STANDARD COLOURS
<p>black</p>
Special colours available on request

Property	Test Method	Performance (Typical)
Tensile Strength	ASTM D-412/ ISO 37	2100psi (14.5 Mpa)
Elongation	ASTM D-412/ ISO 37	600%
Longitudinal Change	ASTM D-2671	+1%, -10%
Specific Gravity	ASTM D-792	1.10
Hardness	ASTM D-2240	50D
Elongation after Heat Ageing (168hrs @175°C)	ASTM D-2671	500%
Heat Shock (4hrs @ 225°C)	ASTM D-2671	No cracking or flowing
Low Temperature Flexibility (4hrs @ -55°C)	ASTM D-2671	No cracking
Electrical Properties		
Dielectric Strength	ASTM D-149, IEC 243	500V/Mil (20kV/mm)
Dielectric Voltage Withstand (2500V, 60Hz, 1 min)	UL 486-D	No Breakdown
Volume Resistivity	ASTM D-257	10 ¹⁶ Ohm-cm

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