

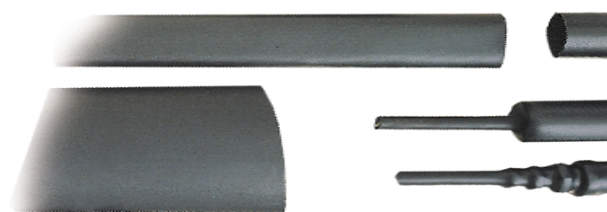
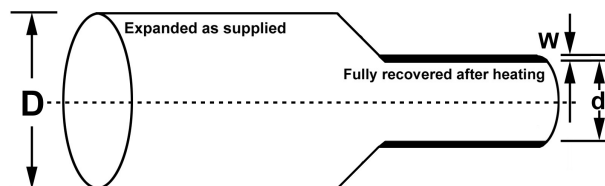
Heavy Wall, High Ratio Crosslinked Polyolefin

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. HRA	EXPANDED	RECOVERED		STANDARD LENGTHS
	INTERNAL DIAMETER	INTERNAL DIAMETER	WALL THICKNESS	
	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

black



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

All information contained in this leaflet is believed to be reliable. We advise however that customers should separately evaluate the suitability of the products for their particular application. Heatshrink Solutions Limited give no guarantees in respect of the accuracy or sufficiency of the information presented and disclaim any liability regarding its use. In no instance will we be liable for any eventual, indirect, or consequential damage or damages arising from the sale, resale, transfer, use or misuse of the product.