



# TECHNICAL DATA SHEET

## HSR 3000

<b>Base material</b>	<b>Polyolefin</b>
<b>Color</b>	<b>Clear, Black, Red, Yellow, Blue, White, Green/Yellow striped, Grey</b>

### Typical Properties

Physical	Value	Standard	Test Method
Shrink ratio	3:1		
Tensile strength	18 N/mm <sup>2</sup> min.	-	IEC 60684-2-19
Elongation at break	400 % min.	-	IEC 60684-2-19
Longitudinal change	+0/ -5 %	-	IEC 60684-2-9
Concentricity	70 % min.	-	IEC 60684-2-3
Secant Modulus	75 N/mm <sup>2</sup>	-	IEC 60684-2-37
Relative Density	0.93 g/cm <sup>3</sup>	-	IEC 60684-2-4

Thermal	Value	Standard	Test Method
Continuous Operating Temperature	-55°C to +135°C	-	IEC 60684-2-37
Shrink Temperature	120°C min. 280 °C max.		
Heat Shock 175 °C / 4 hrs		-	IEC 60684-2-6
Tensile strength	18 N/mm <sup>2</sup> min.	-	IEC 60684-2-19
Elongation at break	400 % min.	-	IEC 60684-2-19
Heat Aging 136 °C / 168 hrs		-	IEC 60684-2-39
Elongation at break	350 % min.	-	IEC 60684-2-19
Low Temperature Flexibility	No cracking after bending	-	IEC 60684-2-14
Copper Corrosion	No corrosion	-	IEC 60684-2-33
Flammability (1000 °C)	Not self extinguishing	-	IEC 60684-2-26
Flame resistance (200 °C)	Good	-	IEC 60684-2-6

Electrical	Value	Standard	Test Method
Dielectric Strength	350 kV/cm	-	IEC 60684-2-21
Volume resistivity	1*10 <sup>15</sup> Ohm/cm	-	IEC 60684-2-23

Chemical	Value	Standard	Test Method
Chemical Resistance	Good	-	IEC 60684-2-36

Environmental	Value	Standard	Test Method
RoHS compliant	Yes	2002/95/EEC	N/a
Halogen free	Yes	BS 6853	N/a
Decabromo diphenylether (PBDE) Free	Yes		N/a

Technical Information provided consists of typical product data and should not be used for specification purposes. Unless otherwise specified in the test method, all tests are performed at room temperature.

#### Important note to the purchaser.

All statements, technical information and recommendations contained herein are based on tests 3M believes to be reliable, but their accuracy and completeness are not guaranteed.

The user shall be responsible for determining the suitability of the products for his particular application.

To discuss your application requirements please contact your representative

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Documentation



Product Guide - Table 1

Part Number	Application cable range (mm diameter)	Expanded ID (min.)		Recovered ID (max.)		Total Recovered Wall Thickness (nominal)		Recovered Adhesive Wall Thickness (nominal)	
		mm.		mm.		mm.		mm.	
1.5*) **)	0.6 – 1.2	1.5		0.5		0.45			
3.0	1.2 – 2.4	3.0		1.0		0.55			
6.0	2.4 – 5.2	6.0		2.0		0.65			
9.0	4 – 7	9.0		3.0		0.75			
18.0	7 – 16	18.0		6.0		0.75			
24.0**)	12 - 20	24.0		8.0		1.0			

\*) Not available in Green/yellow striped & grey

\*\*) Not available in grey

Storage Conditions

Temperature: min. -50 °C  
max. +50 °C

Moisture: max. 75 %

Packaging:

Standard mini reels  
On request larger reels, depending on size

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