



TECHNICAL DATA SHEET

HSR 3000

Base material	Polyolefin
Colour	Black
Environmental	RoHS compliant

Typical Properties

Physical	Value	Unit	Requirement	Test Method
Shrink ratio	3:1			
Tensile strength	25	N/mm ²	> 10	IEC 60684-2-19.1
Elongation at break	540	%	> 250	IEC 60684-2-19.2
Longitudinal change	-5 - 0	%	- 10 <> + 5	IEC 60684-2-9
Concentricity supplied (total wall)	80	%	> 65	IEC 60684-2-3
Concentricity fully recovered (outer wall)	90	%	> 85	IEC 60684-2-3
Secant Modulus	80	N/mm ²	50 <> 175	IEC 60684-2-19.4
Relative Density	0.92	g/cm ³	-	IEC 60684-2-4

Thermal	Value	Unit	Requirement	Test Method
Continuous Operating Temperature	-55 <> 135	°C		
Shrink Temperature	135 <> 280	°C		
Heat Shock			4 hrs @ 200 °C	IEC 60684-2-6
Tensile strength	25	N/mm ²	> 10	IEC 60684-2-19
Elongation at break	540	%	> 200	IEC 60684-2-19
Low Temperature Flexibility	Pass		4hr @ -55 °C No cracking after bending	IEC 60684-2-14
Copper Corrosion	Pass		No corrosion	IEC 60684-2-33
Flammability	Not self extinguishing		method C (30s, 75mm)	IEC 60684-2-26

Electrical	Value	Unit	Requirement	Test Method
Volume resistivity	10 ¹⁴	Ω.m	> 10 ¹² @ room temp.	IEC 60684-2-23
Breakdown Voltage	34	kV.mm	> 21	IEC 60684-2-21

Chemical	Value	Unit	Requirement	Test Method
Selected fluids according to table 5 of IEC 60684-3-212 @ 23 °C, 24 hrs	pass	N/mm ² / %	Tensile/ elongation > 7 / > 200	IEC 60684-2-36

Important note to the purchaser.

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.

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	Expanded ID (min.) [mm]	Recovered ID (max.) [mm]	Recovered Wall Thickness (nominal) [mm]
1.5	1.5	0.5	0.45
3.0	3.0	1.0	0.55
6.0	6.0	2.0	0.65
9.0	9.0	3.0	0.75
18.0	18.0	6.0	0.75
24.0	24.0	8.0	1.00

Storage Conditions

Temperature: min. -50 °C
max. +50 °C

Moisture: max. 75 %

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