

Ryton® R-4-240NA

polyphenylene sulfide

Ryton® R-4-240NA and R-4-240BL 40% glass fiber reinforced polyphenylene sulfide compounds provide

enhanced mechanical strength and toughness compared to other polyphenylene sulfide compounds.

General

Material Status	• Commercial: Active
Availability	• Asia Pacific • Europe • Latin America • North America
Filler / Reinforcement	• Glass Fiber, 40% Filler by Weight
Features	• Good Strength • Good Toughness
Uses	• Automotive Applications
RoHS Compliance	• RoHS Compliant
Appearance	• Natural Color
Forms	• Pellets
Processing Method	• Injection Molding

Physical

	Typical Value	Unit	Test method
Density / Specific Gravity	1.66		ASTM D792
Molding Shrinkage			
Flow : 3.20 mm	0.20	%	
Across Flow : 3.20 mm	0.50	%	
Water Absorption (24 hr, 23°C)	0.020	%	ASTM D570

Mechanical

	Typical Value	Unit	Test method
Tensile Strength			
--	172	MPa	ASTM D638
--	185	MPa	ISO 527-2
Tensile Elongation			
Break	1.9	%	ASTM D638
Break	2.0	%	ISO 527-2
Flexural Modulus			
--	13800	MPa	ASTM D790
--	14000	MPa	ISO 178
Flexural Strength			
--	262	MPa	ASTM D790
--	275	MPa	ISO 178
Compressive Strength	265	MPa	ASTM D695
Poisson's Ratio	0.39		ISO 527

Impact

	Typical Value	Unit	Test method
Notched Izod Impact			
3.18 mm	91	J/m	ASTM D256
--	10	kJ/m ²	ISO 180/A

Ryton® R-4-240NA

polyphenylene sulfide

Impact	Typical Value	Unit	Test method
Unnotched Izod Impact			
3.18 mm	800	J/m	ASTM D4812
--	45	kJ/m ²	ISO 180
Hardness	Typical Value	Unit	Test method
Rockwell Hardness			ASTM D785
M-Scale	99		
R-Scale	120		
Thermal	Typical Value	Unit	Test method
Deflection Temperature Under Load			ASTM D648
1.8 MPa, Unannealed	265	°C	
CLTE			ASTM E831
Flow : -50 to 50°C	2.0E-5	cm/cm/°C	
Flow : 100 to 200°C	1.5E-5	cm/cm/°C	
Transverse : -50 to 50°C	4.0E-5	cm/cm/°C	
Transverse : 100 to 200°C	9.0E-5	cm/cm/°C	
Thermal Conductivity	0.31	W/m/K	
UL Temperature Rating	200 to 220	°C	UL 746B
Electrical	Typical Value	Unit	Test method
Surface Resistivity	1.0E+16	ohms	ASTM D257
Volume Resistivity	1.0E+16	ohms·cm	ASTM D257
Dielectric Strength	22	kV/mm	ASTM D149
Dielectric Constant			ASTM D150
25°C, 1 kHz	3.90		
25°C, 1 MHz	4.00		
Dissipation Factor			ASTM D150
25°C, 1 kHz	2.0E-3		
25°C, 1 MHz	2.0E-3		
Arc Resistance	130	sec	ASTM D495
Comparative Tracking Index (CTI)	150	V	UL 746
Insulation Resistance ¹ (90°C)	1.0E+12	ohms	
Flammability	Typical Value	Unit	Test method
Flame Rating (1.6 mm)	• •	V-0 5VA	UL 94
Oxygen Index	54	%	ASTM D2863

Ryton® R-4-240NA

polyphenylene sulfide

Notes

Typical properties: these are not to be construed as specifications.

¹ 95%RH, 48 hr

www.solvay.com

SpecialtyPolymers.EMEA@solvay.com | Europe, Middle East and Africa

SpecialtyPolymers.Americas@solvay.com | Americas

SpecialtyPolymers.Asia@solvay.com | Asia and Australia

Safety Data Sheets (SDS) are available by emailing us or contacting your sales representative. Always consult the appropriate SDS before using any of our products.

Neither Solvay Specialty Polymers nor any of its affiliates makes any warranty, express or implied, including merchantability or fitness for use, or accepts any liability in connection with this product, related information or its use. Some applications of which Solvay's products may be proposed to be used are regulated or restricted by applicable laws and regulations or by national or international standards and in some cases by Solvay's recommendation, including applications of food/feed, water treatment, medical, pharmaceuticals, and personal care. Only products designated as part of the Solviva® family of biomaterials may be considered as candidates for use in implantable medical devices. The user alone must finally determine suitability of any information or products for any contemplated use in compliance with applicable law, the manner of use and whether any patents are infringed. The information and the products are for use by technically skilled persons at their own discretion and risk and does not relate to the use of this product in combination with any other substance or any other process. This is not a license under any patent or other proprietary right.

All trademarks and registered trademarks are property of the companies that comprise the Solvay Group or their respective owners.

© 2020 Solvay Specialty Polymers. All rights reserved.

