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Monday, December 9, 2024

XYRON™ 540Z

Asahi Kasei Corporation - Polyphenylene Ether + PS

General Information				
Product Description				
Modified PPE				
Unreinforced Flame retardant V-0				
General				
Material Status	Commercial: Active			
Availability	Africa & Middle East	• Europe		
Availability	 Asia Pacific 	North America		
Additive	 Flame Retardant 			
Features AKEP website	 Flame Retardant 	Halogen Free		
Automotive Specifications	PSA Peugeot-Citroën B62 0300			
Processing Method	Injection Molding			
Part Marking Code (ISO11469) (ISO 11469)	• >PPE+PS-FR(40)<			
Other Documentation				
Literature	Moldflow Data			
	 Molding Conditions 			
	• SDS			
	 Technical Handbook 			

ASTM & ISO Properties ¹				
Physical	Nominal Value	Unit	Test Method	
Density	1.10	g/cm³	ISO 1183	
Molding Shrinkage ² (2.00 mm)	0.60 to 0.80	%	Internal Method	
Water Absorption (24 hr, 23°C)	0.10	%	ISO 62	
Outdoor Suitability (Black)	f1		UL 746C	
Mechanical	Nominal Value	Unit	Test Method	
Tensile Stress (Yield, 23°C)	69.0	MPa	ISO 527	
Nominal Tensile Strain at Break (23°C)	12	%	ISO 527	
Flexural Modulus (23°C)	2500	MPa	ISO 178	
Flexural Stress (23°C)	107	MPa	ISO 178	
Impact	Nominal Value	Unit	Test Method	
Charpy Notched Impact Strength ³ (23°C)	19	kJ/m²	ISO 179	

Disclaimer:

These data may be changed because of improvement in properties.

- Be sure to read the relevant SDS before handling and use, and always follow the Important Precautions.

- Do not use plastics in any of the following orally- or medically-related applications. Orally-related applications: any part, device or component which may come into direct oral contact or into direct contact with drinking foods or beverages.
 For drinking water application, please consult Asahi Kasei Corporation.

- Medically-related applications: any part, device or component which may be used intracorporeally or which may in dialysis or other processes come into direct or indirect contact with body tissue, body fluids or transfusion fluids.

⁻ Data shown are typical values obtained by proper testing methods and should not be used for specification purpose. Please use these data for selecting the most appropriate grade suitable for specific usage.

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Surface Resistivity 1.0E+16 ohms IEC 60093 Volume Resistivity (23°C) 1.0E+16 ohms · cm IEC 60093 Dielectric Constant 1.0E+16 ohms · cm IEC 60093 5.20 GHz 2.70 SPDR 100 Hz 2.90 IEC 60250 1 MHz 2.90 IEC 60250 Dissipation Factor 5.20 GHz 4.0E-3 5.20 GHz 3.0E-3 IEC 60250 1 MHz 3.0E-3 IEC 60250	Thermal	Nominal Value	Unit	Test Method
CLTE ISO 11359-2 Flow : -30 to 65°C 6.0E-5 cm/cm/°C Transverse : -30 to 65°C 6.9E-5 cm/cm/°C Heat Deflection Temperature - (1.8 MPa, Unannealed) 120 °C ASTM D648 Electrical Nominal Value Unit Test Method Surface Resistivity 1.0E+16 ohms IEC 60093 Volume Resistivity (23°C) 1.0E+16 ohms cm IEC 60093 Dielectric Constant 2.70 SPDR 5.20 GHz 2.70 SPDR 100 Hz 2.90 IEC 60250 1 MHz 2.90 IEC 60250 Dissipation Factor 3.0E-3 IEC 60250 5.20 GHz 4.0E-3 SPDR 100 Hz 3.0E-3 IEC 60250 1 MHz 4.0E-3 IEC 60250 1 MHz 4.0E-3 IEC 60250 1 MHz 4.0E-3 IEC 60250 1 MHz Ul 94 V-0 75m V-0 IL 94	Deflection Temperature Under Load			ISO 75-2/A
Flow : -30 to 65°C 6.0E-5 cm/cm/°C Transverse : -30 to 65°C 6.9E-5 cm/cm/°C Heat Deflection Temperature - (1.8 MPa, Unannealed) 120 °C ASTM D648 Electrical Nominal Value Unit Test Method Surface Resistivity (23°C) 1.0E+16 ohms IEC 60093 Volume Resistivity (23°C) 1.0E+16 ohms IEC 60093 Dielectric Constant 2.70 SPDR 5.20 GHz 2.90 IEC 60250 1 MHz 2.90 IEC 60250 Dissipation Factor 2.90 IEC 60250 5.20 GHz 3.0E-3 IEC 60250 1 MHz 3.0E-3 IEC 60250 Dissipation Factor 3.0E-3 IEC 60250 1 MHz 4.0E-3 IEC 60250 1 MHz 4.0E-3 IEC 60250 1 MHz UL 94 0.75 mm 0.75 mm V-0 IL 94 0.75 mm SVB IL 94	1.8 MPa, Unannealed	112	°C	
Transverse : -30 to 65°C 6.9E-5 cm/cm/°C Heat Deflection Temperature - (1.8 MPa, Unannealed) 120 °C ASTM D648 Electrical Nominal Value Unit Test Method Surface Resistivity 1.0E+16 ohms IEC 60093 Volume Resistivity (23°C) 1.0E+16 ohms IEC 60093 Dielectric Constant 2.70 SPDR 5.20 GHz 2.70 SPDR 100 Hz 2.90 IEC 60250 1 MHz 2.90 IEC 60250 Dissipation Factor 5.20 GHz SPDR 5.20 GHz 3.0E-3 IEC 60250 1 MHz 3.0E-3 IEC 60250 1 MHz 3.0E-3 IEC 60250 1 MHz 4.0E-3 SPDR 100 Hz 3.0E-3 IEC 60250 1 MHz 4.0E-3 UL 94 0.75 mm V-0 UL 94 0.75 mm V-0 1.5 m	CLTE			ISO 11359-2
Heat Deflection Temperature - (1.8 MPa, Unannealed) 120 °C ASTM D648 Electrical Nominal Value Unit Test Method Surface Resistivity 1.0E+16 ohms IEC 60093 Volume Resistivity (23°C) 1.0E+16 ohms IEC 60093 Dielectric Constant 2.70 SPDR 5.20 GHz 2.70 SPDR 100 Hz 2.90 IEC 60250 1 MHz 2.90 IEC 60250 Dissipation Factor 5.20 GHz 3.0E-3 IEC 60250 100 Hz 3.0E-3 IEC 60250 IEC 60250 100 Hz 3.0E-3 IEC 60250 IEC 60250 1 MHz 4.0E-3 SPDR IEC 60250 1 MHz 4.0E-3 IEC 60250 IEC 60250 1 MHz 4.0E-3 IEC 60250 IEC 60250 1 MHz UL 94 0.75 mm UL 94 IEC 60250 1.5 mm 5VB IEC 60250 IEC 60250 IEC 60250	Flow : -30 to 65°C	6.0E-5	cm/cm/°C	
Image: Surface Resistivity Nominal Value Unit Test Method Surface Resistivity 1.0E+16 ohms IEC 60093 Volume Resistivity (23°C) 1.0E+16 ohms ·cm IEC 60093 Dielectric Constant 2.70 SPDR 5.20 GHz 2.70 SPDR 100 Hz 2.90 IEC 60250 1 MHz 2.90 IEC 60250 Dissipation Factor 3.0E-3 SPDR 5.20 GHz 4.0E-3 SPDR 100 Hz 3.0E-3 IEC 60250 Dissipation Factor 3.0E-3 IEC 60250 1 MHz 4.0E-3 IEC 60250 1 MHz 4.0E-3 UL 94 0.75 mm V-0 1.5 mm	Transverse : -30 to 65°C	6.9E-5	cm/cm/°C	
Surface Resistivity 1.0E+16 ohms IEC 60093 Volume Resistivity (23°C) 1.0E+16 ohms orm IEC 60093 Dielectric Constant 2.70 SPDR 5.20 GHz 2.70 SPDR 100 Hz 2.90 IEC 60250 1 MHz 2.90 IEC 60250 Dissipation Factor 5.20 GHz 4.0E-3 SPDR 100 Hz 3.0E-3 IEC 60250 IEC 60250 Dissipation Factor 3.0E-3 IEC 60250 IEC 60250 1 MHz 4.0E-3 IEC 60250 IEC 60250 Teammability Nominal Value UL 94 UL 94 0.75 mm V-0 IL 94 IL 94 1.5 mm 5VB IL 94 IL 94	Heat Deflection Temperature - (1.8 MPa, Unannealed)	120	°C	ASTM D648
Volume Resistivity (23°C) 1.0E+16 ohms·cm IEC 60093 Dielectric Constant 2.70 SPDR 5.20 GHz 2.70 IEC 60250 100 Hz 2.90 IEC 60250 1 MHz 2.90 IEC 60250 Dissipation Factor 5.20 GHz 4.0E-3 SPDR 100 Hz 3.0E-3 IEC 60250 IEC 60250 1 MHz 4.0E-3 IEC 60250 IEC 60250 Teammability Nominal Value Ul 94 Ul 94 0.75 mm V-0 IL 94 IL 94 1.5 mm 5VB IEC 60250 IEC 60250	Electrical	Nominal Value	Unit	Test Method
Dielectric Constant 2.70 SPDR 5.20 GHz 2.70 SPDR 100 Hz 2.90 IEC 60250 1 MHz 2.90 IEC 60250 Dissipation Factor 4.0E-3 SPDR 5.20 GHz 4.0E-3 IEC 60250 100 Hz 3.0E-3 IEC 60250 100 Hz 3.0E-3 IEC 60250 1 MHz 4.0E-3 IEC 60250 1 MHz UL 94 UL 94 0.75 mm V-0 UL 94 1.5 mm 5VB SVB	Surface Resistivity	1.0E+16	ohms	IEC 60093
5.20 GHz 2.70 SPDR 100 Hz 2.90 IEC 60250 1 MHz 2.90 IEC 60250 Dissipation Factor 4.0E-3 SPDR 5.20 GHz 4.0E-3 SPDR 100 Hz 3.0E-3 IEC 60250 1 MHz 3.0E-3 IEC 60250 1 MHz 4.0E-3 IEC 60250 1 MHz 4.0E-3 IEC 60250 1 MHz 4.0E-3 IEC 60250 1 MHz Ul y4 Ul y4 0.75 mm V-0 Ul y4 1.5 mm 5VB SVB	Volume Resistivity (23°C)	1.0E+16	ohms∙cm	IEC 60093
100 Hz 2.90 IEC 60250 1 MHz 2.90 IEC 60250 Dissipation Factor 3.0E-3 SPDR 5.20 GHz 4.0E-3 IEC 60250 100 Hz 3.0E-3 IEC 60250 1 MHz 4.0E-3 IEC 60250 1 MHz 4.0E-3 IEC 60250 1 MHz 4.0E-3 IEC 60250 1 MHz 0.75 mm V-0 1.5 mm 5VB 5VB	Dielectric Constant			
1 MHz 2.90 IEC 60250 Dissipation Factor 4.0E-3 SPDR 5.20 GHz 4.0E-3 IEC 60250 100 Hz 3.0E-3 IEC 60250 1 MHz 4.0E-3 IEC 60250 1 MHz 4.0E-3 UL 94 Flame Rating UL 94 0.75 mm V-0 1.5 mm 5VB	5.20 GHz	2.70		SPDR
Dissipation Factor 4.0E-3 SPDR 5.20 GHz 4.0E-3 IEC 60250 100 Hz 3.0E-3 IEC 60250 1 MHz 4.0E-3 IEC 60250 Flammability Nominal Value Unit Test Method Flame Rating UL 94 0.75 mm V-0 5VB	100 Hz	2.90		IEC 60250
5.20 GHz 4.0E-3 SPDR 100 Hz 3.0E-3 IEC 60250 1 MHz 4.0E-3 IEC 60250 I MHz 4.0E-3 IEC 60250 I MHz Vol Vol Flame Rating UL 94 0.75 mm V-0 1.5 mm 5VB	1 MHz	2.90		IEC 60250
100 Hz 3.0E-3 IEC 60250 1 MHz 4.0E-3 IEC 60250 Flammability Nominal Value Unit Test Method 0.75 mm V-0 1.5 mm 5VB	Dissipation Factor			
1 MHz 4.0E-3 IEC 60250 Flammability Nominal Value Unit Test Method Flame Rating UL 94 0.75 mm V-0 1.5 mm 5VB	5.20 GHz	4.0E-3		SPDR
Flammability Nominal Value Unit Test Method Flame Rating UL 94 0.75 mm V-0 1.5 mm 5VB	100 Hz	3.0E-3		IEC 60250
Flame Rating UL 94 0.75 mm V-0 1.5 mm 5VB	1 MHz	4.0E-3		IEC 60250
0.75 mm V-0 1.5 mm 5VB	Flammability	Nominal Value	Unit	Test Method
1.5 mm 5VB	Flame Rating			UL 94
	0.75 mm	V-0		
2.5 mm 5VA	1.5 mm	5VB		
	2.5 mm	5VA		

Processing Information			
Injection	Nominal Value Unit		
Drying Temperature - Hot Air Dryer	90 to 100 °C		
Drying Time - Hot Air Dryer	2.0 to 4.0 hr		
Processing (Melt) Temp	240 to 300 °C		
Mold Temperature	50 to 80 °C		

Notes

¹ Typical properties: these are not to be construed as specifications.

² 150x150x2 mm

³ 4 mm

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