

XYRON® POLYPHENYLENE ETHER ENGINEERING THERMOPLASTIC

XYRON® IS A REGISTERED TRADEMARK OF ASAHI KASEI CORPORATION (JAPAN)

XYRON® 220Z

XYRON® 220Z is a high impact UL94 V-0 moulding grade of modified PPE (a Polyphenylene Ether and High Impact Polystyrene blend) and offers an exceptional balance of mechanical and electrical insulating properties, flame retardency, low moisture absorption, high dimensional stability, mouldability and low density. Typical applications include business machine housings, electrical appliance casings and extruded conduit profiles.

	CONDITIONS	UNITS	TYPICAL VALUES	TESTING METHODS
<u>1. Mechanical Properties</u>				
Notched Izod Impact Strength	12.7 x 3.2 mm	J/m	284	ASTM D256
Tensile Strength	12.7 x 3.2 mm @ 20 mm/min	MPa	42	ASTM D638
Elongation to Fail	12.7 x 3.2 mm @ 20 mm/min	%	50	ASTM D638
Flexural Strength	12.7 x 6.4 mm @ 2.8 mm/min	MPa	69	ASTM D790
Flexural Modulus	12.7 x 6.4 mm @ 2.8 mm/min	MPa	2350	ASTM D790
<u>2. Thermal Properties</u>				
Heat Deflection Temperature	12.7 x 6.4 mm @ 1.82 MPa	°C	90	ASTM D648
Coefficient of Linear Thermal Expansion		cm/cm/°C	7.5 exp-5	ASTM D696
<u>3. Electrical Properties</u>				
Volume Resistivity		Ohm.cm	1 exp16	ASTM D257
Dielectric Strength		MV/m	29	ASTM D149
Arc Resistance	Tungsten Electrode	s	80	ASTM D495
<u>4. Physical Properties</u>				
Specific Gravity		-	1.08	ASTM D792
Rockwell Hardness		R	110	ASTM D785
UL Flammability	1.6 mm	Rating	V-0	UL 94
Water Absorption	24 hours	%	0.1	ASTM D570
Reinforcement Level		%	-	n/a
Mould Shrinkage	3.0 x Ø100 mm disc	%	0.6±0.1	ASTM D955

All test results were obtained using natural material.

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Material Safety Data Sheet (MSDS): Code Xyron

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TYPICAL PROCESSING CONDITIONS

XYRON® 220Z

The following typical guidelines are offered as initial processing conditions for **XYRON® 220Z**. In practice, processing parameters may need to be varied to give commercially acceptable performance in conjunction with optimum physical properties. For specific technical advice on part design or processing conditions, contact the Marplex Technical Service Department.

Temperature of pellet bed in dehumidifying drier	80-90 °C
Minimum drying time at desired pellet bed temp	2-4 hours
Mould temperature	50 - 80 °C
Nozzle temperatures	Do not exceed stock temperature
Stock temperature	220 - 270 °C
Cylinder temperatures	Rear 225 - 245 °C
	Middle 235 - 255 °C
	Front 245 - 265 °C
Fill speed	Medium
Screw speed	40 - 60 rpm
Screw back pressure	0.1 - 0.5 MPa
Injection pressure	60 - 140 MPa
Clamp pressure	4 - 8 kN/cm ²

Comment(s):

- 1 Cleanliness of the dryer, machine hopper and machine screw/barrel/nozzle assembly are essential for processing Xyron® Modified PPE and producing contamination free moulded components.
- 2 Xyron® Modified PPE is not compatible with other polymers.
- 3 It is suggested that the pre-drying, die head, roller and material temperatures are manually confirmed using a hand held temperature measuring device.

Conversions: 1 MPa = 145 psi
= 10.2 kg/cm²
= 10 bar
°C = 5(°F-32)/9
1 kN/cm² = 0.65 ton/in²