MARPLEX

Marplex Australia Pty Ltd
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XYRON® POLYPHENYLENE ETHER
ENGINEERING THERMOPLASTIC

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

XYRON® G703V

XYRON® G703V is a flame retardant 30% glass fibre filled moulding grade of modified PPE (a Polyphenylene Ether and High Impact Polystyrene blend) and offers an exceptional balance of product flame retardancy, rigidity and strength, creep resistance, electrical insulation, low moisture absorption, high heat resistance, high dimensional stability, mouldability and low product density. Typical applications include business machine and telephone chassis units, industrial water pumping connectors and pressure vessel housings and high tolerance electrical connector assemblies.

	CONDITIONS	UNITS	TYPICAL VALUES	TESTING METHODS
1. Mechanical Properties				
Notched Izod Impact Strength	12.7 x 3.2 mm	J/m	78	ASTM D256
Tensile Strength	12.7 x 3.2 mm @ 5 mm/min	MPa	118	ASTM D638
Elongation to Fail	12.7 x 3.2 mm @ 5 mm/min	%	5	ASTM D638
Flexural Strength	12.7 x 3.2 mm @ 1.3 mm/min	MPa	147	ASTM D790
Flexural Modulus	12.7 x 3.2 mm @ 1.3 mm/min	MPa	6600	ASTM D790
2. Thermal Properties				
Heat Deflection Temperature	12.7 x 12.7 mm @ 1.82 Mpa	ºC	140	ASTM D648
	12.7 x 3.2 mm @ 1.82 Mpa	ºC	135	ASTM D648
Coefficient of Linear Thermal Expansion		cm/cm/℃	2.8 exp-5	ASTM D696
3. Electrical Properties				
Volume Resistivity		Ohm.cm	>10exp16	ASTM D257
Dielectric Strength		MV/m	40	ASTM D149
Arc Resistance	Tungsten Electrode	s	70	ASTM D495
4. Physical Properties				
Specific Gravity		-	1.30	ASTM D792
Rockwell Hardness		R	126	ASTM D785
UL Flammability	0.8 mm	Rating	V-1	UL 94
Water Absorption	24 hours	%	0.06	ASTM D570
Reinforcement Level		%	30	n/a
Mould Shrinkage	3.0 x Ø100 mm disc	%	0.2 - 0.3	ASTM D955

All test resuts were obtained using natural material. *Issued: January 2003*

Material Safety Data Sheet (MSDS): Code Xyron

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TYPICAL PROCESSING CONDITIONS

XYRON® G703V

The following typical guidelines are offered as initial processing conditions for XYRON® G703V
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		105 - 110 ºC
Minimum drying time at desired pellet bed temp		3 - 5 hours
Mould temperature		60 - 100 ºC
Nozle temperatures		Do not exceed stock temperature
Stock temperature		260 - 290 ºC
Cylinder temperatures	Rear	245 - 265 ºC
	Middle	255 - 275 ºC
	Front	265 - 285 ºC
Fill speed		Medium
Screw speed		40 - 60 rpm
Screw back pressure		Minimum
Injection pressure		60 - 140 MPa
Clamp pressure		4 - 8 kN/cm²

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.

4 Minimise screw back speed during recharge to limit glass fibre breakage.

Conversions:

1 MPa = 145 psi
= 10.2 kg/cm²
= 10 bar
ºC = 5(ºF-32)/9
1 kN/cm² = 0.65 ton/in²