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® VM303

XYRON® VM303 is an acoustic damping grade of modified PPE (a Polyphenylene Ether and High Impact Polystyrene blend) it is30% glass fibre and mineral reinforced to offer an exceptional balance of product flame retardancy, rigidity and strength, creep resistance, electrical insulation, low moisture absorption, high heat resistance, dimensional stability, mouldability, low product density and improved acoustic properties. Typical applications include housings for business machines and other appliances where combination of the above proprieties and low noise attenuation is desired.

	CONDITIONS	UNITS	TYPICAL VALUES	TESTING METHODS
1. Mechanical Properties				
Notched Izod Impact Strength	12.7 x 3.2 mm	J/m	69	ASTM D256
Tensile Strength	12.7 x 3.2 mm @ 5 mm/min	MPa	61	ASTM D638
Elongation to Fail	12.7 x 3.2 mm @ 5 mm/min	%	3	ASTM D638
Flexural Strength	12.7 x 3.2 mm @ 1.3 mm/min	MPa	110	ASTM D790
Flexural Modulus	12.7 x 3.2 mm @ 1.3 mm/min	MPa	5040	ASTM D790
2. Thermal Properties				
Heat Deflection Temperature	12.7 x 12.7 mm @ 1.82 Mpa	ºC	100	ASTM D648
	12.7 x 3.2 mm @ 1.82 Mpa	ºC	95	ASTM D648
Coefficient of Linear Thermal Expansion		cm/cm/℃	4.5 exp-5	ASTM D696
3. Electrical Properties				
Volume Resistivity		Ohm.cm	1 exp-16	ASTM D257
Surface Resistivity		Ohm	1 exp-16	ASTM D257
4. Physical Properties				
Specific Gravity		-	1.32	ASTM D792
UL Flammability	1.6 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	%	0.2-0.45	ASTM D955

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

Material Safety Data Sheet (MSDS): Code Xyron

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TYPICAL PROCESSING CONDITIONS

XYRON® VM303

The following typical guidelines are offered as initial processing conditions for XYRON® VM303
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		90 - 100 ºC
Minimum drying time at desired pellet bed temp		3 - 5 hours
Mould temperature		50 - 80 ºC
Nozzle temperatures		Do not exceed stock temperature
Stock temperature		250 - 280 ºC
Cylinder temperatures	Rear	235 - 255 ºC
	Middle	245 - 265 ºC
	Front	255 - 275 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