MARPLEX

Marplex Australia Pty Ltd
ABN 78 004 691 614 ACN 004 691 614

IUPITAL® ACETAL COPOLYMER
ENGINEERING THERMOPLASTIC

IUPITAL® IS A REGISTRED TRADEMARK OF MITSUBISHI ENGINEERING PLASTICS CORPORATION

IUPITAL® F20-51

IUPITAL® F20-51 is the weather resistant medium viscosity (medium melt flow) grade in the Iupital® range and is suited for general purpose injection moulding applications which require an exceptional UV resistance. Consequently, Iupital® F20-51 is only available in a black colour. Typical applications include outside industrial water pump casings, domestic and industrial sprinkler systems and exterior automotive components such as mirror stays and window winders.

	CONDITIONS	**UNITS**	**TYPICAL VALUES**	**TESTING METHODS**
1. Mechanical Properties				
Notched Izod Impact Strength	12.7 x 3.2 mm	J/m	54	ASTM D256
Tensile Strength	12.7 x 3.2 mm @ 20 mm/min	MPa	59.8	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	88.3	ASTM D790
Flexural Modulus	12.7 x 6.4 mm @ 2.8 mm/min	MPa	2600	ASTM D790
Shear Strength	2.0 mm	MPa	54.9	ASTM D732
Tensile Impact Strength	1.6 mm	kJ/m²	110	ASTM D1822
2. Thermal Properties				
Heat Deflection Temperature	12.7 x 6.4 mm @ 1.82 MPa	ºC	110	ASTM D648
	12.7 x 6.4 mm @ 0.46 MPa	ºC	158	ASTM D648
Melting Temperature		ºC	165	DSC
Coefficient of Linear Thermal Expansion		cm/cm/°C	13 exp-5	ASTM D696
4. Physical Properties				
Melt Flow Rate	190ºC, 2.16 kg	g/10 min	9.0	ASTM D1238
Specific Gravity		-	1.41	ASTM D792
Rockwell Hardness		M	80	ASTM D785
UL Flammability	0.8 mm	Rating	HB	UL 94
Water Absorption	24 hours	%	0.22	ASTM D570
Reinforcement Level		%	-	n/a
Mould Shrinkage	3.0 x Ø100 mm disc	%	2.0±0.4	ASTM D955

(+) 18816996168
Ponciplastics.com

TYPICAL PROCESSING CONDITIONS

IUPITAL® F20-51

The following typical guidelines are offered as initial processing conditions for IUPITAL® F20-51
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 ºC
Minimum drying time at desired pellet bed temp		2 - 3 hours
Mould temperature		50 - 90 ºC
Nozzle temperature		Do not exceed stock temperature
Stock temperature		190 - 210 ºC
Cylinder temperatures	Rear	165 - 185 ºC
	Middle	175 - 195 ºC
	Front	185 - 205 ºC
Fill speed		Medium - Fast
Screw speed		40 - 60 rpm
Screw back pressure		0.1 - 0.5 MPa
Injection pressure		60 - 130 MPa
Clamp pressure		3 - 5 kN/cm²

Comment(s):

1 Cleanliness of the dryer, machine hopper and machine screw/barrel/nozzle assembly are essential for processing Iupital® Polyacetal and producing contamination free moulded components.

2 Iupital® Polyacetal is not compatible during moulding with other polymers.

3 It is suggested that the pre-drying, moulding die and material temperatures are manually confirmed using a hand held temperature measuring device.

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

(+) 18816996168
Ponciplastics.com