

Cosmic DAP D72/6120F

Diallyl Phthalate
Cosmic Plastics, Inc.

Message:

DESCRIPTION
Cosmic D72 is a short glass fiber filled, flame retardant, general purpose diallyl ortho phthalate molding compound which is supplied in a free flowing granular form. It can be easily molded in compression, transfer, or injection equipment and can be readily preformed. It has passed NASA outgassing tests.

FEATURES
D72 has a high dielectric strength, low dissipation factor along with excellent flexural and tensile strength.

APPLICATIONS
Switches, terminals, insulators, cups, cases and other applications requiring flame resistance and strength. Also useful for encapsulation of electrical and electronic components. Suitable for thin-walled parts.

General Information		
UL YellowCard	E64213-100815573	
Filler / Reinforcement	Glass Fiber	
Features	Flame Retardant	
	General Purpose	
	High Tensile Strength	
	Orthophthalic	
Uses	Cups	
	Electrical/Electronic Applications	
	General Purpose	
	Insulation	
	Switches	
	Thin-walled Parts	
Agency Ratings	ASTM D 5948, Type SDG-F	
	MIL M-14, Type SDG-F	
Forms	Granules	
Processing Method	Compression Molding	
	Encapsulating	
	Injection Molding	
	Resin Transfer Molding	
Physical	Nominal Value	Unit
Specific Gravity	1.82	g/cm ³
Bulk Factor	2.5	
Molding Shrinkage - Flow	0.10 to 0.40	%
Dimensional Stability	< 0.010	%

Water Absorption ¹ (Equilibrium, 50°C)	0.25	%	
Mechanical	Nominal Value	Unit	
Tensile Strength	41.4 to 68.9	MPa	
Flexural Strength	89.6 to 103	MPa	
Compressive Strength	165 to 179	MPa	
Impact	Nominal Value	Unit	
Notched Izod Impact	27 to 64	J/m	
Thermal	Nominal Value	Unit	
CLTE - Flow (-40 to 100°C)	1.6E-5	cm/cm/°C	
Heat Distortion	260	°C	
Dielectric Breakdown			
Dry	62000	V	
Wet	60000	V	
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity			
-- ²	1.0E+10	ohms	
-- ³	> 1.0E+16	ohms	
Volume Resistivity			
-- ⁴	1.0E+10	ohms · cm	
-- ⁵	> 1.0E+16	ohms · cm	
Dielectric Strength ⁶			
Dry	15	kV/mm	
Wet	13	kV/mm	
Dielectric Constant			
1 kHz ⁷	4.30		
1 kHz ⁸	4.20		
1 MHz ⁹	4.20		
1 MHz ¹⁰	4.00		
Dissipation Factor			
1 kHz ¹¹	0.011		
1 kHz ¹²	7.0E-3		
1 MHz ¹³	0.015		
1 MHz ¹⁴	0.013		
Arc Resistance	145	sec	
Flammability	Nominal Value	Unit	Test Method
Flame Rating (3.18 mm)	V-0		UL 94
Injection	Nominal Value	Unit	
Processing (Melt) Temp	135 to 190	°C	
Injection Pressure	3.45 to 55.2	MPa	
NOTE			
1.	48 hrs		
2.	30 days @ 100% RH @ 70°C		

3.	As Is
4.	30 days @ 100% RH @ 70°C
5.	As Is
6.	Method B (Step-by-Step)
7.	Wet
8.	Dry
9.	Wet
10.	Dry
11.	Wet
12.	Dry
13.	Wet
14.	Dry

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