

# Cosmic DAP K77/6220F

Diallyl Phthalate  
Cosmic Plastics, Inc.

Message:

DESCRIPTION  
Cosmic K77 / 6220F is a short glass fiber filled, flame retardant premium diallyl iso-phthalate molding compound which is supplied in a granular form. It pours easily, can be preformed, and molds easily in standard compression, transfer or injection equipment.

FEATURES  
K77 / 6220F has good impact strength, excellent electrical properties and very high heat service properties.

APPLICATIONS  
The high strength of this material makes it ideal for switches, terminals, housings, structural parts and insulators.

General Information		
Filler / Reinforcement	Glass Fiber	
Features	Flame Retardant	
	Good Electrical Properties	
	Good Impact Resistance	
	Good Moldability	
	High Heat Resistance	
	High Strength	
	Isophthalic	
Uses	Housings	
	Insulation	
	Structural Parts	
	Switches	
Agency Ratings	ASTM D 5948, Type SDG-F	
	ASTM D 5948, Type SIG-F	
	MIL M-14, Type SDG-F	
	MIL M-14, Type SIG-F	
Forms	Granules	
Processing Method	Compression Molding	
	Injection Molding	
	Resin Transfer Molding	
Physical	Nominal Value	Unit
Specific Gravity	1.78	g/cm <sup>3</sup>
Bulk Factor	2.5	
Molding Shrinkage - Flow	0.10 to 0.40	%
Dimensional Stability	< 0.010	%

Water Absorption <sup>1</sup> (Equilibrium, 50°C)	0.25	%	
<b>Mechanical</b>	<b>Nominal Value</b>	<b>Unit</b>	
Tensile Strength	41.4 to 68.9	MPa	
Flexural Strength	89.6 to 103	MPa	
Compressive Strength	165 to 179	MPa	
<b>Impact</b>	<b>Nominal Value</b>	<b>Unit</b>	
Notched Izod Impact	27 to 67	J/m	
<b>Thermal</b>	<b>Nominal Value</b>	<b>Unit</b>	
CLTE - Flow (-40 to 100°C)	1.5E-5	cm/cm/°C	
Heat Distortion	260	°C	
Dielectric Breakdown			
Dry	64000	V	
Wet	60000	V	
<b>Electrical</b>	<b>Nominal Value</b>	<b>Unit</b>	<b>Test Method</b>
Surface Resistivity			
-- <sup>2</sup>	1.0E+10	ohms	
-- <sup>3</sup>	> 1.0E+16	ohms	
Volume Resistivity			
-- <sup>4</sup>	1.0E+10	ohms · cm	
-- <sup>5</sup>	> 1.0E+16	ohms · cm	
Dielectric Strength <sup>6</sup>			
Dry	16	kV/mm	
Wet	16	kV/mm	
Dielectric Constant			
1 kHz <sup>7</sup>	4.30		
1 kHz <sup>8</sup>	4.20		
1 MHz <sup>9</sup>	4.20		
1 MHz <sup>10</sup>	3.90		
Dissipation Factor			
1 kHz <sup>11</sup>	0.010		
1 kHz <sup>12</sup>	7.0E-3		
1 MHz <sup>13</sup>	0.015		
1 MHz <sup>14</sup>	0.014		
Arc Resistance	180	sec	
<b>Flammability</b>	<b>Nominal Value</b>	<b>Unit</b>	<b>Test Method</b>
Flame Rating (1.59 mm)	V-0		UL 94
<b>Injection</b>	<b>Nominal Value</b>	<b>Unit</b>	
Processing (Melt) Temp	135 to 170	°C	
Injection Pressure	3.45 to 55.2	MPa	
<b>NOTE</b>			
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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