

# Cosmic DAP D45

Diallyl Phthalate  
Cosmic Plastics, Inc.

Message:

DESCRIPTION  
Cosmic D45 is a mineral filled, flame retardant, general purpose diallyl ortho phthalate molding compound which is supplied in a granular form.

FEATURES  
D45 is the most economical of all diallyl phthalates, yet it retains a high dimensional stability, arc resistance and excellent dielectric strength.

APPLICATIONS  
Structural parts, housings, terminals, insulators and other applications requiring strength and economy.

General Information		
UL YellowCard	E64213-101060080	
Filler / Reinforcement	Mineral	
Features	Arc Resistant	
	Flame Retardant	
	General Purpose	
	Good Dimensional Stability	
	Orthophthalic	
Uses	General Purpose	
	Housings	
	Insulation	
	Structural Parts	
Agency Ratings	ASTM D 5948, Type MDG-F	
	MIL M-14, Type MDG-F	
Forms	Granules	
Processing Method	Injection Molding	
Physical	Nominal Value	Unit
Specific Gravity	1.74	g/cm <sup>3</sup>
Bulk Factor	2.3	
Molding Shrinkage - Flow	0.30 to 0.70	%
Dimensional Stability	< 0.080	%
Water Absorption <sup>1</sup> (Equilibrium, 50°C)	0.40	%
Mechanical	Nominal Value	Unit
Tensile Strength	31.0 to 41.4	MPa
Flexural Strength	68.9 to 82.7	MPa
Compressive Strength	138 to 193	MPa
Impact	Nominal Value	Unit
Notched Izod Impact	19 to 27	J/m

Thermal	Nominal Value	Unit	
CLTE - Flow (-40 to 100°C)	4.5E-5	cm/cm/°C	
Heat Distortion	260	°C	
Dielectric Breakdown			
Dry	54000	V	
Wet	48000	V	
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity			
-- <sup>2</sup>	6.0E+9	ohms	
-- <sup>3</sup>	> 1.0E+16	ohms	
Volume Resistivity			
-- <sup>4</sup>	6.0E+9	ohms · cm	
-- <sup>5</sup>	> 1.0E+16	ohms · cm	
Dielectric Strength <sup>6</sup>			
Dry	15	kV/mm	
Wet	14	kV/mm	
Dielectric Constant			
1 kHz <sup>7</sup>	4.70		
1 kHz <sup>8</sup>	4.50		
1 MHz <sup>9</sup>	4.40		
1 MHz <sup>10</sup>	4.20		
Dissipation Factor			
1 kHz <sup>11</sup>	0.010		
1 kHz <sup>12</sup>	9.0E-3		
1 MHz <sup>13</sup>	0.017		
1 MHz <sup>14</sup>	8.0E-3		
Arc Resistance	135	sec	
Flammability	Nominal Value	Unit	Test Method
Flame Rating (0.794 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

The information and data on this page are provided by manufacturers and document providers. SHANGHAI SUSHENG assumes no legal liability. It is strongly recommended to verify all technical data with material suppliers before final material selection. All rights belong to the original authors. If any infringement occurs, please contact us immediately.

#### Recommended distributors for this material

### Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519

Phone: +86 13424755533

Email: sales@su-jiao.com

No. 215, Lianhe North Road, Fengxian District, Shanghai, China

