

Cosmic DAP D44/6160

Diallyl Phthalate
Cosmic Plastics, Inc.

Message:

DESCRIPTION
Cosmic D44 / 6160 is a mineral filled, special 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.

FEATURES
D44 / 6160 exceeds all mineral compounds available today in mechanical and electrical properties. It has an extremely low water absorption, high dielectric strength, and low dissipation factor along with high tensile strength, exceptional arc resistance and excellent resistance to high temperatures.

APPLICATIONS
Switches, terminals, insulators, housings, cups and cases where exposure to high humidity is encountered. Also useful for encapsulation of electrical and electronic components.

| General Information | | |
|---|------------------------------------|-------------------|
| Filler / Reinforcement | Mineral | |
| Features | Arc Resistant | |
| | High Heat Resistance | |
| | High Tensile Strength | |
| | Low to No Water Absorption | |
| | Orthophthalic | |
| Uses | Cups | |
| | Electrical/Electronic Applications | |
| | Housings | |
| | Insulation | |
| | Switches | |
| Agency Ratings | ASTM D 5948, Type MDG | |
| | MIL M-14, Type MDG | |
| Forms | Granules | |
| Processing Method | Compression Molding | |
| | Encapsulating | |
| | Injection Molding | |
| | Resin Transfer Molding | |
| Physical | Nominal Value | Unit |
| Specific Gravity | 1.74 | g/cm ³ |
| Bulk Factor | 2.3 | |
| Molding Shrinkage - Flow | 0.30 to 0.70 | % |
| Dimensional Stability | < 0.080 | % |
| Water Absorption ¹ (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 |
| Surface Resistivity | | |
| -- ² | 6.0E+9 | ohms |
| -- ³ | > 1.0E+16 | ohms |
| Volume Resistivity | | |
| -- ⁴ | 6.0E+9 | ohms · cm |
| -- ⁵ | > 1.0E+16 | ohms · cm |
| Dielectric Strength ⁶ | | |
| Dry | 15 | kV/mm |
| Wet | 14 | kV/mm |
| Dielectric Constant | | |
| 1 kHz ⁷ | 4.70 | |
| 1 kHz ⁸ | 4.50 | |
| 1 MHz ⁹ | 4.40 | |
| 1 MHz ¹⁰ | 4.20 | |
| Dissipation Factor | | |
| 1 kHz ¹¹ | 0.010 | |
| 1 kHz ¹² | 9.0E-3 | |
| 1 MHz ¹³ | 0.017 | |
| 1 MHz ¹⁴ | 8.0E-3 | |
| Arc Resistance | 135 | sec |
| 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

