

塑美达™ VLF 84009

Polyphthalamide (PPA)

Long Glass Fiber

Heat Stabilized

General常规

|                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |         |
|----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|
| Material Status材料状况  | • Commercial: Active                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |         |
| Availability         | 有效性                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | • CHINA |
| Primary Additive主添加剂 | 50 %                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |         |
| Uses<br>用途           | <div><div><ul style="list-style-type: none"><li>• Automotive Electronics</li><li>• 汽车电子</li><li>• Automotive Under the Hood</li><li>• 汽车引擎盖室</li><li>• Cell Phones手机</li><li>• Electrical/Electronic Applications<br/>电子/电器应用</li><li>• General Purpose通用</li><li>• Housings住宅</li></ul></div><div><ul style="list-style-type: none"><li>• Industrial Applications工业用途</li><li>• Machine/Mechanical Parts机器零件</li><li>• Metal Replacement金属替代</li><li>• Power/Other Tools动力/其他工具</li><li>• Thick-walled Parts •厚壁零件</li><li>• Valves/Valve Parts •阀门/阀门零件</li><li>• Gear/Sliding parts•齿轮/滑动件</li><li>• Connector•连接器/接插件</li></ul></div></div> |         |

|                        |                              |
|------------------------|------------------------------|
| RoHS Compliance RoHS标准 | • RoHS Compliant 符合          |
| Appearance外观           | • Black黑色 • Natural Color自然色 |
| Forms形态                | • Pellets颗粒                  |
| Processing Method加工方式  | • Injection Molding 注塑       |

| Physical物理性能                   | Dry干态 | Conditioned | Unit              | Test method标准 |
|--------------------------------|-------|-------------|-------------------|---------------|
| Density 密度/ Specific Gravity比重 |       |             |                   |               |
| --                             | 1.65  | --          |                   | ASTM D792     |
| --                             | 1.65  | --          | g/cm <sup>3</sup> | ISO 1183/A    |

|                        |             |    |   |           |
|------------------------|-------------|----|---|-----------|
| Molding Shrinkage成型收缩率 |             |    |   | ASTM D955 |
| Flow流动方向               | 0.10 - 0.30 | -- | % |           |
| Across Flow垂直流动方向      |             | -- | % |           |

|                                                 |  |    |   |           |
|-------------------------------------------------|--|----|---|-----------|
| Water Absorption 吸水率 <sup>1</sup> (24 hr, 23°C) |  | -- | % | ASTM D570 |
|-------------------------------------------------|--|----|---|-----------|

| Mechanical机械性能 | Dry | Conditioned | Unit | Test method |
|----------------|-----|-------------|------|-------------|
|----------------|-----|-------------|------|-------------|

|                                   |           |  |     |           |
|-----------------------------------|-----------|--|-----|-----------|
| Tensile Modulus拉伸模量               | 17875     |  | MPa | ASTM D638 |
| Tensile Strength (Break)拉伸强度 (断裂) | 268       |  | MPa | ASTM D638 |
| Tensile Elongation (Break)拉伸断裂伸长率 | 1.0 - 2.0 |  | %   | ASTM D638 |
| Flexural Strength弯曲强度             | 385       |  | MPa | ASTM D790 |
| Flexural Modulus弯曲模量              | 18565     |  | MPa | ASTM D790 |

| Impact冲击性能                   | Dry  | Conditioned | Unit | Test method |
|------------------------------|------|-------------|------|-------------|
| Notched Izod Impact缺口冲击强度    | 346  |             | J/m  | ASTM D256   |
| Unnotched Izod Impact无缺口冲击强度 | 1068 |             | J/m  | ASTM D256   |

| Thermal热性能                           | Dry         | Conditioned | Unit | Test method |
|--------------------------------------|-------------|-------------|------|-------------|
| Deflection Temperature Under Load    |             |             |      |             |
| 0.45 MPa, Annealed, 3.18 mm          |             |             | °C   | ASTM D648   |
| 1.82 MPa, Annealed, 3.18 mm          | 272         |             | °C   | ASTM D648   |
| Flame Rating <sup>2</sup> (1.6 mm)防火 | HB @ 1.5 mm |             |      | UL 94       |

| Electrical电性能           | Dry | Conditioned | Unit    | Test method |
|-------------------------|-----|-------------|---------|-------------|
| Volume Resistivity体积电阻  |     |             | ohm.cm  | ASTM D 257  |
| Surface Resistivity表面电阻 |     |             | ohm.cm  | ASTM D 257  |
| Dielectric strength介电强度 |     |             | kV/mm   | ASTM D149   |
| Dielectric constant介电常数 |     |             | (1 MHz) | ASTM D150   |
| Dielectric loss介电损耗     |     |             | (1 MHz) | ASTM D150   |

| Injection注塑工艺 | Dry | Unit |
|---------------|-----|------|
|---------------|-----|------|

|                               |              |
|-------------------------------|--------------|
| Drying Temperature干燥温度        | 121 °C       |
| Drying Time干燥时间               | 4 hrs        |
| Suggested Max Moisture建议最大含水率 |              |
| Processing (Melt) Temp熔体温度    | 304 - 329 °C |
| Mold temperature 模具温度         | 135 - 163 °C |
| Injection pressure注塑压力        | 65 - 120 MPa |

This information is intended to be used only as a guideline for designers and processors of modified thermoplastics. Because design and processing is complex, a set solution will not solve all problems. Observation on a "trial and error" basis may be required to achieve desired results. Data are obtained from specimens molded under carefully controlled conditions from representative samples of the compound described herein. Properties may be materially affected by molding techniques applied and by the size and shape of the item molded. No assurance can be implied that all molded articles will have the same properties as those listed.