

## 塑美达™ ESD 4080

Polyphthalamide (PPA)  
Carbon Fiber  
Electrically Conductive  
ESD Protection

### General 常规

Material Status 材料状况 • Commercial: Active

Availability 有效性 • CHINA

Primary Additive 主添加剂

Uses  
用途

- Automotive Electronics  
• 汽车电子
- Automotive Under the Hood  
• 汽车引擎盖室
- Cell Phones 手机
- Electrical/Electronic Applications  
• 电子/电器应用
- General Purpose 通用
- Housings 住宅
- Industrial Applications 工业用途
- Machine/Mechanical Parts 机器零件
- Metal Replacement 金属替代
- Power/Other Tools 动力/其他工具
- Thick-walled Parts • 厚壁零件
- Valves/Valve Parts • 阀门/阀门零件
- Gear/Sliding parts • 齿轮/滑动件
- Connector • 连接器/接插件

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				
--	1.28	--		ASTM D792
--	1.28	--	g/cm <sup>3</sup>	ISO 1183/A
Molding Shrinkage成型收缩率				ASTM D955
Flow流动方向	0.10 - 0.20	--	%	
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	17185		MPa	ASTM D638
Tensile Strength (Break)拉伸强度 (断裂)	233		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	330		MPa	ASTM D790
Flexural Modulus弯曲模量	15115		MPa	ASTM D790
Impact冲击性能	Dry	Conditioned	Unit	Test method
Notched Izod Impact缺口冲击强度	52		J/m	ASTM D256
Unnotched Izod Impact无缺口冲击强度	534		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				UL 94
Electrical电性能	Dry	Conditioned	Unit	Test method
Volume Resistivity体积电阻	< 1E6		ohm.cm	ASTM D 257
Surface Resistivity表面电阻	< 1E10		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	107 °C			
Drying Time干燥时间	4 - 6 hrs			
Suggested Max Moisture建议最大含水率				
Processing (Melt) Temp熔体温度	302 - 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.