# 汽车专用改性塑料系列
# Automotive special modified plastics series

| 材料特征 Material characteristics | | | | 增韧型 Toughened | | | | 填充型 Filling | |
|---|---|---|---|---|---|---|---|---|---|
| 测试项目<br>Test item | 测试方法<br>Test method | 测试条件<br>Test condition | 单位<br>Unit | PA6 | PA6 | PA66 | PA66 | PA66-M15 | PA66-M30 |
| 密度<br>Density | DIN 53479 | 23℃ | g/cm3 | 1.12 | 1.11 | 1.12 | 1.09 | 1.22 | 1.35 |
| 拉伸强度<br>Tensile strength | DIN 53455 | 50mm/min | Mpa | 70 | 55 | 75 | 60 | | 65 |
| 断裂伸长率<br>Elongation at break | DIN 53455 | 50mm/min | % | 60 | 100 | | | | 3 |
| 屈服伸长率<br>Elongation at yield | DIN 53455 | 50mm/min | % | | | 5 | 5 | | |
| 弯曲强度<br>Bending strength | DIN 53452 | 14mm/min | Mpa | 90 | 85 | 90 | 80 | 105 | 95 |
| 弯曲模量<br>Bending modulus | DIN 53452 | 14mm/min | Mpa | 2200 | 1800 | 2200 | 1800 | 2500 | 5000 |
| 简支梁缺口冲击强度<br>Charpy Notched Impact Strength | DIN 53453 | 23℃ | kJ/m2 | 5 | 50 | 4 | 70 | 7.5 | 5 |
| 简支梁冲击强度<br>Charpy impact strength | DIN 53453 | 23℃ | kJ/m2 | 不断<br>non-breaking | 不断<br>non-breaking | 不断<br>non-breaking | 不断<br>non-breaking | 不断non-breaking | 50 |
| 硬度<br>Hardness | DIN 53456 | 23℃ | Mpa | 115 | 85 | 110 | 90 | 100 | 140 |
| 热变形温度<br>Distortion temperature | DIN 53461 | 1.82MPa | ℃ | 60 | 55 | 65 | 55 | 70 | 75 |
| 维卡软化点<br>Vicat softening point | DIN 53460 | 5kg | ℃ | | | | | | |
| 热老化性能(150℃)<br>Thermal aging property (150℃) | DIN 53497 | 150℃ | H | | | | | | |
| 填充物含量<br>Filling content | EN60 | 600℃ | % | | | | | 15 | 30 |
| 燃烧特性<br>Combustion characteristic | TL1010 | | mm/min | 40 | 45 | 35 | 40 | 40 | 40 |
| 成型收缩率<br>Molding shrinkage | | | % | 0.9-1.1 | 0.7-0.9 | 1.6-1.8 | 1.2-1.4 | 0.8-1.2 | 0.5-0.7 |

| 符合标准 Up to standard | | | | TL50125-001 | TL50125-002 | TL50127-001 | TL50127-003 | TL52288 | TL52288 |
|---|---|---|---|---|---|---|---|---|---|
| 推荐成型加工参数<br>Recommended molding parameters | | | | | | | | | |
| 干燥温度<br>Drying temperature | | | ℃ | 90-100 | 90-100 | 85-95 | 85-95 | 90-100 | 90-100 |
| 干燥时间<br>Drying time | | | h | 2.0-4.0 | 2.0-4.0 | 2.0-4.0 | 2.0-4.0 | 2.0-4.0 | 2.0-4.0 |
| 成型温度<br>Forming Temperature | | | ℃ | 225-245 | 220-240 | 250-290 | 240-280 | 250-280 | 250-280 |
| 喷嘴温度<br>Nozzle Temperature | | | ℃ | 240 | 235 | 265 | 255 | 265 | 265 |
| 模具温度<br>Mold temperature | | | ℃ | 30-80 | 30-80 | 30-80 | 30-80 | 30-80 | 30-80 |
| 典型用途 Typical use | 脚踏板，汽车轮毂盖、发动机罩盖及发动机零件、机壳机套、进气歧管、汽缸圈和座罩，电子配件、烟灰缸、导轨、机械零件等。<br>Pedals, hubcaps, hood covers and engine parts, casing and sleeve, intake manifold, cylinder ring and seat cover, electronic accessories, ashtrays, guide rails, mechanical parts, etc. | | | | | | | | |

上表中数据为产品实测性能，真实可靠，采用注射成型样片得到，仅供参考，不能作为材料标准值。可以根据客户的要求制作各类产品或在相应的范围内调整。
The data in the table above is the measured performance of the product, real and reliable, obtained by injection molding sample, for reference only, can not be used as the standard value of the material. Various products can be made according to customer requirements or adjusted within the corresponding range.

# 汽车专用改性塑料系列
# Automotive special modified plastics series

| 材料特征 Material characteristics | | | | 玻纤增强型 Glass fiber reinforced | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 测试项目<br>Test item | 测试方法<br>Test method | 测试条件<br>Test condition | 单位<br>Unit | PA6+GF10 | PA6+GF15 | PA6+GF20 | PA6+GF25 | PA6+GF30 | PA6+GF10M20 |
| 密度<br>Density | DIN 53479 | 23℃ | g/cm3 | 1.18 | 1.23 | 1.27 | 1.32 | 1.36 | 1.38 |
| 拉伸强度<br>Tensile strength | DIN 53455 | 50mm/min | Mpa | 110 | 120 | 128 | 140 | 160 | 110 |
| 断裂伸长率<br>Elongation at break | DIN 53455 | 50mm/min | % | 4 | 4 | 3.5 | 3.5 | 3.5 | 4 |
| 屈服伸长率<br>Elongation at yield | DIN 53455 | 50mm/min | % | | | | | | |
| 弯曲强度<br>Bending strength | DIN 53452 | 14mm/min | Mpa | 135 | 150 | 185 | 205 | 235 | 130 |
| 弯曲模量<br>Bending modulus | DIN 53452 | 14mm/min | Mpa | 4500 | 4800 | 6000 | 6500 | 7500 | 4800 |
| 简支梁缺口冲击强度<br>Charpy Notched Impact Strength | DIN 53453 | 23℃ | kJ/m2 | 4.5 | 6 | 8.5 | 12 | 14 | 6 |
| 简支梁冲击强度<br>Charpy impact strength | DIN 53453 | 23℃ | kJ/m2 | 40 | 45 | 65 | 80 | 85 | 45 |
| 硬度<br>Hardness | DIN 53456 | 23℃ | Mpa | 160 | 185 | 210 | 215 | 220 | 205 |
| 热变形温度<br>Distortion temperature | DIN 53461 | 1.82MPa | ℃ | 160 | 180 | 195 | 200 | 205 | 190 |
| 维卡软化点<br>Vicat softening point | DIN 53460 | 5kg | ℃ | | | | | | |
| 热老化性能(150℃)<br>Thermal aging property (150℃) | DIN 53497 | 150℃ | H | | | | | | |
| 填充物含量<br>Filling content | EN60 | 600℃ | % | 10 | 15 | 20 | 25 | 30 | 30 |
| 燃烧特性<br>Combustion characteristic | TL1010 | | mm/min | 40 | 40 | 35 | 30 | 30 | 30 |
| 成型收缩率<br>Molding shrinkage | | | % | 0.6-1.0 | 0.5-1.0 | 0.5-0.7 | 0.4-0.6 | 0.3-0.5 | 0.5-0.9 |

| 符合标准 Up to standard | | | | TL50125-003 | TL50125-004 | TL50125-005 | TL50125-006 | TL50125-007 | TL50125-012 |
|---|---|---|---|---|---|---|---|---|---|
| 推荐成型加工参数<br>Recommended molding parameters | | | | | | | | | |
| 干燥温度<br>Drying temperature | | | ℃ | 90-100 | 90-100 | 90-100 | 100-120 | 100-120 | 100-120 |
| 干燥时间<br>Drying time | | | h | 2.0-4.0 | 2.0-4.0 | 2.0-4.0 | 2.0-4.0 | 2.0-4.0 | 2.0-4.0 |
| 成型温度<br>Forming Temperature | | | ℃ | 230-260 | 230-260 | 245-270 | 245-270 | 245-270 | 245-270 |
| 喷嘴温度<br>Nozzle Temperature | | | ℃ | 245 | 250 | 255 | 255 | 255 | 255 |
| 模具温度<br>Mold temperature | | | ℃ | 30-80 | 30-80 | 30-80 | 30-80 | 30-80 | 30-80 |
| 典型用途 Typical use | 脚踏板，汽车轮毂盖、发动机罩盖及发动机零件、机壳机套、进气歧管、汽缸圈和座罩，电子配件、烟灰缸、导轨、机械零件等。<br>Pedals, hubcaps, hood covers and engine parts, casing and sleeve, intake manifold, cylinder ring and seat cover, electronic accessories, ashtrays, guide rails, mechanical parts, etc. | | | | | | | | |

上表中数据为产品实测性能，真实可靠，采用注射成型样片得到，仅供参考，不能作为材料标准值。可以根据客户的要求制作各类产品或在相应的范围内调整。
The data in the table above is the measured performance of the product, real and reliable, obtained by injection molding sample, for reference only, can not be used as the standard value of the material. Various products can be made according to customer requirements or adjusted within the corresponding range.

# 汽车专用改性塑料系列
# Automotive special modified plastics series

| 材料特征 Material characteristics | | | | 玻纤增强型 Glass fiber reinforced | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 测试项目<br>Test item | 测试方法<br>Test method | 测试条件<br>Test condition | 单位<br>Unit | PA6+GF15M25 | PA66+GF15 | PA66+GF20 | PA66+GF25 | PA66+GF30 | PA66+GF35 | PA66+GF10M20 | PA66+GF15M25 |
| 密度<br>Density | DIN 53479 | 23℃ | g/cm3 | 1.42 | 1.23 | 1.28 | 1.32 | 1.36 | 1.4 | 1.37 | 1.41 |
| 拉伸强度<br>Tensile strength | DIN 53455 | 50mm/min | Mpa | 115 | 120 | 128 | 145 | 175 | 185 | 115 | 125 |
| 断裂伸长率<br>Elongation at break | DIN 53455 | 50mm/min | % | 3.5 | 4 | 3.5 | 3.5 | 3.5 | 3.5 | 4 | 4 |
| 屈服伸长率<br>Elongation at yield | DIN 53455 | 50mm/min | % | | | | | | | | |
| 弯曲强度<br>Bending strength | DIN 53452 | 14mm/min | Mpa | 165 | 175 | 205 | 235 | 255 | 265 | 150 | 190 |
| 弯曲模量<br>Bending modulus | DIN 53452 | 14mm/min | Mpa | 5500 | 5300 | 7500 | 8000 | 8650 | 9500 | 5000 | 5500 |
| 简支梁缺口冲击强度<br>Charpy Notched Impact Strength | DIN 53453 | 23℃ | kJ/m2 | 8 | 7 | 10 | 12 | 12.5 | 13 | 6 | 6.5 |
| 简支梁冲击强度<br>Charpy impact strength | DIN 53453 | 23℃ | kJ/m2 | 60 | 40 | 70 | 75 | 80 | 90 | 50 | 55 |
| 硬度<br>Hardness | DIN 53456 | 23℃ | Mpa | 210 | 200 | 220 | 240 | 255 | 255 | 210 | 220 |
| 热变形温度<br>Distortion temperature | DIN 53461 | 1.82MPa | ℃ | 200 | 235 | 240 | 245 | 250 | 250 | 210 | 215 |
| 维卡软化点<br>Vicat softening point | DIN 53460 | 5kg | ℃ | | | | | | | | |
| 热老化性能(150℃)<br>Thermal aging property (150℃) | DIN 53497 | 150℃ | H | | | | | | | | |
| 填充物含量<br>Filling content | EN60 | 600℃ | % | 40 | 15 | 20 | 25 | 30 | 35 | 30 | 40 |
| 燃烧特性<br>Combustion characteristic | TL1010 | | mm/min | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 |
| 成型收缩率<br>Molding shrinkage | | | % | 0.4-0.7 | 0.6-1.2 | 0.6-1.0 | 0.5-0.8 | 0.3-0.8 | 0.3-0.8 | 0.3-0.8 | 0.3-0.8 |

| 符合标准 Up to standard | | | | TL50125-013 | TL50127-004 | TL50127-005 | TL50127-006 | TL50127-007 | TL50127-008 | TL50127-012 | TL50127-013 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 推荐成型加工参数<br>Recommended molding parameters | | | | | | | | | | | |
| 干燥温度<br>Drying temperature | | | ℃ | 100-120 | 90-100 | 90-100 | 100-120 | 100-120 | 100-120 | 100-120 | 100-120 |
| 干燥时间<br>Drying time | | | h | 2.0-4.0 | 2.0-4.0 | 2.0-4.0 | 2.0-4.0 | 2.0-4.0 | 2.0-4.0 | 2.0-4.0 | 2.0-4.0 |
| 成型温度<br>Forming Temperature | | | ℃ | 245-270 | 240-280 | 240-280 | 250-290 | 250-290 | 250-290 | 250-290 | 250-290 |
| 喷嘴温度<br>Nozzle Temperature | | | ℃ | 255 | 255 | 255 | 265 | 270 | 270 | 270 | 270 |
| 模具温度<br>Mold temperature | | | ℃ | 30-80 | 30-80 | 30-80 | 30-80 | 30-80 | 30-80 | 30-80 | 30-80 |
| 典型用途 Typical use | 脚踏板，汽车轮毂盖、发动机罩盖及发动机零件、机壳机套、进气歧管、汽缸圈和座罩，电子配件、烟灰缸、导轨、机械零件等。<br>Pedals, hubcaps, hood covers and engine parts, casing and sleeve, intake manifold, cylinder ring and seat cover, electronic accessories, ashtrays, guide rails, mechanical parts, etc. | | | | | | | | | | |

上表中数据为产品实测性能，真实可靠，采用注射成型样片得到，仅供参考，不能作为材料标准值。可以根据客户的要求制作各类产品或在相应的范围内调整。
The data in the table above is the measured performance of the product, real and reliable, obtained by injection molding sample, for reference only, can not be used as the standard value of the material. Various products can be made according to customer requirements or adjusted within the corresponding range.