

# Staramide AK8

Polyamide 66  
Eurostar Engineering Plastics

Message:  
Staramide AK8 is a 40 % Mineral Filled Polyamide 66 Injection Molding Resin

| General Information                           |                              |                   |                 |
|-----------------------------------------------|------------------------------|-------------------|-----------------|
| Filler / Reinforcement                        | Mineral,40% Filler by Weight |                   |                 |
| RoHS Compliance                               | RoHS Compliant               |                   |                 |
| Processing Method                             | Injection Molding            |                   |                 |
| Physical                                      | Nominal Value                | Unit              | Test Method     |
| Density                                       | 1.45                         | g/cm <sup>3</sup> | ISO 1183        |
| Molding Shrinkage - Flow <sup>1</sup>         | 0.90 to 1.3                  | %                 | Internal Method |
| Water Absorption (Equilibrium, 23°C, 50% RH)  | 0.90                         | %                 | ISO 62          |
| Hardness                                      | Nominal Value                | Unit              | Test Method     |
| Rockwell Hardness (L-Scale)                   | 92                           |                   | ISO 2039-2      |
| Mechanical                                    | Nominal Value                | Unit              | Test Method     |
| Tensile Modulus                               | 5200                         | MPa               | ISO 527-2/1     |
| Tensile Stress (Break)                        | 75.0                         | MPa               | ISO 527-2/5     |
| Tensile Strain (Break)                        | 10                           | %                 | ISO 527-2/5     |
| Flexural Modulus <sup>2</sup>                 | 5200                         | MPa               | ISO 178         |
| Flexural Stress                               | 135                          | MPa               | ISO 178         |
| Impact                                        | Nominal Value                | Unit              | Test Method     |
| Charpy Notched Impact Strength <sup>3</sup>   |                              |                   | ISO 179/1eA     |
| -30°C                                         | 6.0                          | kJ/m <sup>2</sup> |                 |
| 23°C                                          | 7.0                          | kJ/m <sup>2</sup> |                 |
| Charpy Unnotched Impact Strength <sup>4</sup> |                              |                   | ISO 179/1eU     |
| -30°C                                         | > 100                        | kJ/m <sup>2</sup> |                 |
| 23°C                                          | > 100                        | kJ/m <sup>2</sup> |                 |
| Notched Izod Impact Strength <sup>5</sup>     |                              |                   | ISO 180/1A      |
| -30°C                                         | 7.0                          | kJ/m <sup>2</sup> |                 |
| 23°C                                          | 7.0                          | kJ/m <sup>2</sup> |                 |
| Thermal                                       | Nominal Value                | Unit              | Test Method     |
| Heat Deflection Temperature <sup>6</sup>      |                              |                   |                 |
| 0.45 MPa, Unannealed, 100 mm Span             | 231                          | °C                | ISO 75-2/Be     |
| 1.8 MPa, Unannealed, 100 mm Span              | 170                          | °C                | ISO 75-2/Ae     |
| Vicat Softening Temperature                   |                              |                   |                 |
| --                                            | 252                          | °C                | ISO 306/B50     |
| --                                            | 251                          | °C                | ISO 306/B120    |

|                                         |                      |             |                    |
|-----------------------------------------|----------------------|-------------|--------------------|
| Ball Pressure Test <sup>7</sup> (125°C) | Pass                 |             | IEC 60695-10-2     |
| CLTE                                    |                      |             | ISO 11359-2        |
| Flow : 23 to 60°C                       | 6.0E-5               | cm/cm/°C    |                    |
| Transverse : 23 to 60°C                 | 6.0E-5               | cm/cm/°C    |                    |
| <b>Electrical</b>                       | <b>Nominal Value</b> | <b>Unit</b> | <b>Test Method</b> |
| Electric Strength (3.20 mm, in Oil)     | 18                   | kV/mm       | IEC 60243-1        |
| <b>Flammability</b>                     | <b>Nominal Value</b> | <b>Unit</b> | <b>Test Method</b> |
| Burning Rate                            |                      |             | FMVSS 302          |
| 2.00 mm                                 | 6.0                  | mm/min      |                    |
| 3.00 mm                                 | 2.0                  | mm/min      |                    |
| Glow Wire Flammability Index (2.00 mm)  | 650                  | °C          | IEC 60695-2-12     |
| Oxygen Index                            | 32                   | %           | ISO 4589-2         |
| <b>Injection</b>                        | <b>Nominal Value</b> | <b>Unit</b> |                    |
| Drying Temperature                      | 75.0 to 85.0         | °C          |                    |
| Drying Time                             | 4.0 to 6.0           | hr          |                    |
| Suggested Max Moisture                  | 0.20                 | %           |                    |
| Rear Temperature                        | 260 to 280           | °C          |                    |
| Middle Temperature                      | 270 to 280           | °C          |                    |
| Front Temperature                       | 270 to 290           | °C          |                    |
| Processing (Melt) Temp                  | 270 to 290           | °C          |                    |
| Mold Temperature                        | 60.0 to 90.0         | °C          |                    |
| <b>NOTE</b>                             |                      |             |                    |
| 1.                                      | Tensile Bar          |             |                    |
| 2.                                      | 2.0 mm/min           |             |                    |
| 3.                                      | 80*10*4 sp=62mm      |             |                    |
| 4.                                      | 80*10*4 sp=62mm      |             |                    |
| 5.                                      | 80*10*4              |             |                    |
| 6.                                      | 120*10*4             |             |                    |
| 7.                                      | 125°C ±2°C           |             |                    |

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