# Clariant Nylon 6/6 PA-133G13

## Polyamide 66

### **Clariant Corporation**

engineering/industrial accessories

#### Message:

Clariant Nylon 6/6 PA-133G13 is a polyamide 66 (nylon 66) material, which contains a 13% glass fiber reinforced material. This product is available in North America and is processed by injection molding. The main features of Clariant Nylon 6/6 PA-133G13 are: flame retardant/rated flame high strength Hard Good toughness heat stabilizer Typical application areas include: safety equipment Wire and cable House

| General Information                |   |       |             |  |  |
|------------------------------------|---|-------|-------------|--|--|
| Filler / Reinforcement             | Glass fiber reinforced material, 13% filler by weight |       |             |  |  |
| Additive                           | heat stabilizer                                       |       |             |  |  |
| Features                           | Rigidity, high  |       |             |  |  |
|                                    | High strength   |       |             |  |  |
|                                    | Thermal Stability                                     |       |             |  |  |
|                                    | Good toughness  |       |             |  |  |
|                                    |   |       |             |  |  |
| Uses                               | Safety helmet   |       |             |  |  |
|                                    | Wheels  |       |             |  |  |
|                                    | Electrical housing                                    |       |             |  |  |
|                                    | Fasteners   |       |             |  |  |
| Agency Ratings                     | UL 94   |       |             |  |  |
| Forms                              | Particle  |       |             |  |  |
| Processing Method                  | Injection molding                                     |       |             |  |  |
| Physical                           | Nominal Value   | Unit  | Test Method |  |  |
| Specific Gravity                   | 1.17  | g/cm³ | ASTM D792   |  |  |
| Molding Shrinkage - Flow (3.18 mm) | 1.0   | %     | ASTM D955   |  |  |
| Water Absorption (24 hr)           | 0.90  | %     | ASTM D570   |  |  |
| Hardness                           | Nominal Value   | Unit  | Test Method |  |  |
| Rockwell Hardness                  |   |       | ASTM D785   |  |  |
| Class m                            | 90  |       | ASTM D785   |  |  |
| Class r                            | 118   |       | ASTM D785   |  |  |
| Mechanical                         | Nominal Value   | Unit  | Test Method |  |  |
| Tensile Strength                   | 124   | MPa   | ASTM D638   |  |  |

| Tensile Elongation (Break)        | 4.0           | %        | ASTM D638   |
|-----------------------------------|---------------|----------|-------------|
| Flexural Modulus                  | 3620          | MPa      | ASTM D790   |
| Flexural Strength                 | 114           | MPa      | ASTM D790   |
| Impact                            | Nominal Value | Unit     | Test Method |
| Notched Izod Impact (3.18 mm)     | 130           | J/m      | ASTM D256   |
| Thermal                           | Nominal Value | Unit     | Test Method |
| Deflection Temperature Under Load |               |          | ASTM D648   |
| 0.45 MPa, not annealed            | 246           | °C       | ASTM D648   |
| 1.8 MPa, not annealed             | 216           | °C       | ASTM D648   |
| CLTE - Flow                       | 5.4E-5        | cm/cm/°C | ASTM D696   |
| Electrical                        | Nominal Value | Unit     | Test Method |
| Volume Resistivity                | 1.0E+14       | ohms∙cm  | ASTM D257   |
| Dielectric Strength               | 21            | kV/mm    | ASTM D149   |
| Flammability                      | Nominal Value | Unit     | Test Method |
| Flame Rating                      | НВ            |          | UL 94       |
| Injection                         | Nominal Value | Unit     |             |
| Drying Temperature                | 79.4          | °C       |             |
| Drying Time                       | 2.0 - 4.0     | hr       |             |
| Suggested Max Moisture            | 0.20          | %        |             |
| Rear Temperature                  | 266 - 293     | °C       |             |
| Middle Temperature                | 266 - 293     | °C       |             |
| Front Temperature                 | 266 - 293     | °C       |             |
| Processing (Melt) Temp            | 266 - 288     | °C       |             |
| Melt Temperature (Aim)            | 274           | °C       |             |
| Mold Temperature                  | 65.6 - 93.3   | °C       |             |
| Injection Rate                    | Fast          |          |             |
| Back Pressure                     | 0.345 - 0.689 | MPa      |             |
|                                   |               |          |             |
| Screw Speed                       | 20 - 100      | rpm      |             |

Injection Pressure: Use minimum pressure to achieve 95% fill during the boost inj. pressure phase.Hold Pressure: 30% to 75% of injection pressure.Mold Temp. Target: 180°FScrew Speed Target: 75 RPM

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# 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

