

# LNP™ STAT-KON™ QEL329 compound

Polyamide 610  
SABIC Innovative Plastics

Message:

LNP STAT-KON\* QEL329 is a compound based on Nylon 6/10 resin containing 10% Carbon Fiber, 15% PTFE. Added features of this material include:  
Electrically Conductive, Wear Resistant, Flame Retardant.  
Also known as: LNP\* STAT-KON\* Compound QCL-4032 FR-1  
Product reorder name: QEL329

| General Information       |                                   |       |                      |
|---------------------------|-----------------------------------|-------|----------------------|
| UL YellowCard             | E121562-101358125                 |       |                      |
| Filler / Reinforcement    | Carbon Fiber,10% Filler by Weight |       |                      |
| Additive                  | PTFE Lubricant (15%)              |       |                      |
| Features                  | Electrically Conductive           |       |                      |
|                           | Flame Retardant                   |       |                      |
|                           | Good Wear Resistance              |       |                      |
|                           | Lubricated                        |       |                      |
| Processing Method         | Injection Molding                 |       |                      |
| Physical                  | Nominal Value                     | Unit  | Test Method          |
| Specific Gravity          | 1.44                              | g/cm³ | ASTM D792, ISO 1183  |
| Molding Shrinkage         |                                   |       |                      |
| Flow : 24 hr              | 0.20 to 0.40                      | %     | ASTM D955, ISO 294-4 |
| Across Flow : 24 hr       | 0.70 to 0.90                      | %     | ASTM D955            |
| Across Flow : 24 hr       | 0.70 to 0.80                      | %     | ISO 294-4            |
| Water Absorption          |                                   |       |                      |
| 24 hr, 50% RH             | 0.13                              | %     | ASTM D570            |
| Equilibrium, 23°C, 50% RH | 0.13                              | %     | ISO 62               |
| Mechanical                | Nominal Value                     | Unit  | Test Method          |
| Tensile Modulus           |                                   |       |                      |
| -- <sup>1</sup>           | 8830                              | MPa   | ASTM D638            |
| --                        | 9580                              | MPa   | ISO 527-2/1          |
| Tensile Strength          |                                   |       |                      |
| Break                     | 117                               | MPa   | ASTM D638            |
| Break                     | 126                               | MPa   | ISO 527-2            |
| Tensile Elongation        |                                   |       |                      |
| Break                     | 2.5                               | %     | ASTM D638            |
| Break                     | 2.4                               | %     | ISO 527-2            |
| Flexural Modulus          |                                   |       |                      |
| --                        | 5990                              | MPa   | ASTM D790            |
| --                        | 7010                              | MPa   | ISO 178              |

|                                                |                  |                                                 |                        |
|------------------------------------------------|------------------|-------------------------------------------------|------------------------|
| Flexural Strength                              |                  |                                                 |                        |
| --                                             | 172              | MPa                                             | ASTM D790              |
| --                                             | 185              | MPa                                             | ISO 178                |
| Coefficient of Friction                        |                  |                                                 | ASTM D3702 Modified    |
| vs. Itself - Dynamic                           | 0.47             |                                                 |                        |
| vs. Itself - Static                            | 0.37             |                                                 |                        |
| Wear Factor - Washer                           | 63.0             | 10 <sup>-10</sup> in <sup>5</sup> -min/ft-lb-hr | ASTM D3702 Modified    |
| Impact                                         | Nominal Value    | Unit                                            | Test Method            |
| Notched Izod Impact                            |                  |                                                 |                        |
| 23°C                                           | 37               | J/m                                             | ASTM D256              |
| 23°C <sup>2</sup>                              | 4.7              | kJ/m <sup>2</sup>                               | ISO 180/1A             |
| Unnotched Izod Impact                          |                  |                                                 |                        |
| 23°C                                           | 380              | J/m                                             | ASTM D4812             |
| 23°C <sup>3</sup>                              | 29               | kJ/m <sup>2</sup>                               | ISO 180/1U             |
| Instrumented Dart Impact                       |                  |                                                 |                        |
| 23°C, Energy at Peak Load                      | 8.17             | J                                               | ASTM D3763             |
| --                                             | 9.39             | J                                               | ISO 6603-2             |
| Thermal                                        | Nominal Value    | Unit                                            | Test Method            |
| Deflection Temperature Under Load              |                  |                                                 |                        |
| 1.8 MPa, Unannealed, 3.20 mm                   | 164              | °C                                              | ASTM D648              |
| 1.8 MPa, Unannealed, 64.0 mm Span <sup>4</sup> | 193              | °C                                              | ISO 75-2/Af            |
| CLTE                                           |                  |                                                 |                        |
| Flow : -40 to 40°C                             | 1.8E-5           | cm/cm/°C                                        | ASTM E831, ISO 11359-2 |
| Transverse : -40 to 40°C                       | 9.4E-5           | cm/cm/°C                                        | ASTM E831              |
| Transverse : -40 to 40°C                       | 9.5E-5           | cm/cm/°C                                        | ISO 11359-2            |
| Electrical                                     | Nominal Value    | Unit                                            | Test Method            |
| Surface Resistivity                            | 1.0E+3 to 1.0E+5 | ohms                                            | ASTM D257              |
| Volume Resistivity                             | 1.0E+3 to 1.0E+5 | ohms·cm                                         | ASTM D257              |
| Flammability                                   | Nominal Value    | Unit                                            | Test Method            |
| Flame Rating (1.50 mm, Testing by SABIC)       | V-0              |                                                 | UL 94                  |
| Injection                                      | Nominal Value    | Unit                                            |                        |
| Drying Temperature                             | 82.2             | °C                                              |                        |
| Drying Time                                    | 4.0              | hr                                              |                        |
| Suggested Max Moisture                         | 0.12 to 0.20     | %                                               |                        |
| Rear Temperature                               | 249 to 260       | °C                                              |                        |
| Middle Temperature                             | 260 to 271       | °C                                              |                        |
| Front Temperature                              | 271 to 282       | °C                                              |                        |
| Processing (Melt) Temp                         | 271 to 277       | °C                                              |                        |
| Mold Temperature                               | 82.2 to 93.3     | °C                                              |                        |
| Back Pressure                                  | 0.172 to 0.344   | MPa                                             |                        |
| Screw Speed                                    | 30 to 60         | rpm                                             |                        |
| NOTE                                           |                  |                                                 |                        |

|    |            |
|----|------------|
| 1. | 50 mm/min  |
| 2. | 80*10*4    |
| 3. | 80*10*4    |
| 4. | 80*10*4 mm |

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