# ElectriPlast® EP-CF/66

### Polyamide 66

Integral Technologies, Inc.

#### Message:

ElectriPlast®EP-CF/66 is a polyamide 66 (nylon 66) product containing nickel-plated carbon fiber. It can be processed by injection molding and is available in North America. The main characteristics are: flame retardant/rated flame.

| General Information                  |                            |                            |                 |  |
|--------------------------------------|----------------------------|----------------------------|-----------------|--|
| Filler / Reinforcement               | Nickel plated carbon fiber | Nickel plated carbon fiber |                 |  |
| Features                             | Self-extinguishing         |                            |                 |  |
| Processing Method                    | Injection molding          |                            |                 |  |
| Physical                             | Nominal Value              | Unit                       | Test Method     |  |
| Specific Gravity                     | 1.25                       | g/cm³                      | ASTM D792       |  |
| Mechanical                           | Nominal Value              | Unit                       | Test Method     |  |
| Tensile Modulus                      | 11900                      | MPa                        | ASTM D638       |  |
| Tensile Strength (Break)             | 111                        | MPa                        | ASTM D638       |  |
| Tensile Elongation (Break)           | 1.4                        | %                          | ASTM D638       |  |
| Flexural Modulus                     | 7830                       | МРа                        | ASTM D790       |  |
| Flexural Strength                    | 199                        | МРа                        | ASTM D790       |  |
| Impact                               | Nominal Value              | Unit                       | Test Method     |  |
| Notched Izod Impact (23°C)           | 64                         | J/m                        | ASTM D256       |  |
| Unnotched Izod Impact (23°C)         | 290                        | J/m                        | ASTM D256       |  |
| Thermal                              | Nominal Value              | Unit                       | Test Method     |  |
| Deflection Temperature Under Load (1 |                            |                            |                 |  |
| MPa, Unannealed)                     | > 250                      | °C                         | ASTM D648       |  |
| CLTE - Flow                          | 1.9E-5                     | cm/cm/°C                   | ASTM D696       |  |
| Thermal Conductivity                 | 0.37                       | W/m/K                      | ASTM D5470      |  |
| Electrical                           | Nominal Value              | Unit                       | Test Method     |  |
| Surface Resistivity                  | 3.8E+2                     | ohms                       | ESD STM11.11    |  |
| Volume Resistivity                   | 82                         | ohms·cm                    | ASTM D257       |  |
| Static Decay                         | 10                         | msec                       | Internal method |  |
| Surface Resistance                   | 38                         | ohms                       | ESD STM11.11    |  |
| Flammability                         | Nominal Value              | Unit                       | Test Method     |  |
| Flame Rating (No Burn)               | НВ                         |                            | UL 94           |  |
| Injection                            | Nominal Value              | Unit                       |                 |  |
| Drying Temperature                   | 82.2                       | °C                         |                 |  |
| Drying Time                          | 4.0                        | hr                         |                 |  |
| Rear Temperature                     | 282                        | °C                         |                 |  |
| Middle Temperature                   | 288                        | °C                         |                 |  |
| Front Temperature                    | 288                        | °C                         |                 |  |
| Nozzle Temperature                   | 282                        | °C                         |                 |  |

| Mold Temperature       | 82.2 | °C  |  |
|------------------------|------|-----|--|
| Back Pressure          | 3.03 | МРа |  |
| Screw Speed            | 170  | rpm |  |
| Injection instructions |      |     |  |

Injection Speed: 2 in/sec1st Stage (injection): 2000 psi2nd Stage (molding): 450 psiDecomposition: 0.5 inch

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