

# NYCOA Polyamide GR30 V0 Black

Polyamide 6

Nycoa (Nylon Corporation of America)

Message:

NYCOA GR30 V0 is a 30% glass fiber reinforced, flame retardant Nylon 6 resin used for injection molding. This resin complies with ROHS requirements, as it contains a non-halogenated flame retardant package.  
NYCOA GR30 V0 is listed by Underwriters Laboratories as UL 94 V0 at 1.4mm thickness.  
Typical applications include speaker baskets, relay housings, bobbins, and electrical connectors.

| General Information                     |   |                   |             |
|---|---|-------------------|-------------|
| UL YellowCard                           | E86478-513024   |                   |             |
| Filler / Reinforcement                  | Glass fiber reinforced material, 30% filler by weight |                   |             |
| Features                                | Halogen-free  |                   |             |
|   | Flame retardancy                                      |                   |             |
| Uses                                    | Electrical/Electronic Applications                    |                   |             |
|   | Electrical components                                 |                   |             |
|   | Connector   |                   |             |
|   | Shell   |                   |             |
| RoHS Compliance                         | RoHS compliance                                       |                   |             |
| Appearance                              | Black   |                   |             |
| Forms                                   | Particle  |                   |             |
| Processing Method                       | Injection molding                                     |                   |             |
| Physical                                | Nominal Value   | Unit              | Test Method |
| Specific Gravity                        | 1.42  | g/cm <sup>3</sup> | ASTM D792   |
| Molding Shrinkage                       |   |                   | ASTM D955   |
| Flow                                    | 0.30  | %                 | ASTM D955   |
| Transverse flow                         | 0.50  | %                 | ASTM D955   |
| Water Absorption (24 hr)                | 0.95  | %                 | ASTM D570   |
| Hardness                                | Nominal Value   | Unit              | Test Method |
| Rockwell Hardness (R-Scale)             | 120   |                   | ASTM D785   |
| Mechanical                              | Nominal Value   | Unit              | Test Method |
| Tensile Strength <sup>1</sup>           | 146   | MPa               | ASTM D638   |
| Tensile Elongation <sup>2</sup> (Break) | 3.0   | %                 | ASTM D638   |
| Flexural Modulus <sup>3</sup>           | 9150  | MPa               | ASTM D790   |
| Flexural Strength <sup>4</sup>          | 206   | MPa               | ASTM D790   |
| Impact                                  | Nominal Value   | Unit              | Test Method |
| Notched Izod Impact (6.35 mm)           | 110   | J/m               | ASTM D256   |
| Unnotched Izod Impact (6.35 mm)         | 910   | J/m               | ASTM D256   |
| Thermal                                 | Nominal Value   | Unit              | Test Method |

|                                   |               |    |             |
|-----------------------------------|---------------|----|-------------|
| Deflection Temperature Under Load |               |    | ASTM D648   |
| 0.45 MPa, not annealed            | 220           | °C | ASTM D648   |
| 1.8 MPa, not annealed             | 205           | °C | ASTM D648   |
| Melting Temperature               | 221           | °C | DSC         |
| Flammability                      | Nominal Value |    | Test Method |
| Flame Rating (1.40 mm)            | V-0           |    | UL 94       |

#### Additional Information

The value listed as Melting Point DSC, was tested in accordance with ASTM D789.

| Injection               | Nominal Value | Unit |
|-------------------------|---------------|------|
| Drying Temperature      | 71.1 - 82.2   | °C   |
| Drying Time             | 4.0 - 6.0     | hr   |
| Rear Temperature        | 232 - 271     | °C   |
| Middle Temperature      | 243 - 282     | °C   |
| Front Temperature       | 254 - 291     | °C   |
| Nozzle Temperature      | 252 - 291     | °C   |
| Processing (Melt) Temp  | 254 - 291     | °C   |
| Mold Temperature        | 76.7 - 87.8   | °C   |
| Injection Rate          | Fast          |      |
| Back Pressure           | 0.138 - 0.517 | MPa  |
| Cushion                 | 1.59 - 6.35   | mm   |
| Screw L/D Ratio         | 16.0:1.0      |      |
| Screw Compression Ratio | 3.0:1.0       |      |

#### NOTE

1. 50 mm/min
2. 50 mm/min
3. 50 mm/min
4. 50 mm/min

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#### Recommended distributors for this material

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