

**Product  
Information  
Feb 2021**
**Nypel® RC6030F BK  
Polyamide 6**

**Product Description**

Nypel RC6030F BK is a 30% glass fiber reinforced, injection molding compound produced with 25% post-consumer recycled polymer content. This product is a regional grade available in North America only.

**Applications**

Nypel RC6030F BK is generally recommended for applications such as bolts, racks, automotive underhood components, pressure regulator housings and caps.

| PHYSICAL                                              | ISO Test Method | Property Value |             |
|-------------------------------------------------------|-----------------|----------------|-------------|
| Density, g/cm <sup>3</sup>                            | 1183            | 1.35           |             |
| Moisture, %                                           | 62              |                |             |
| (24 Hour)                                             |                 | 1.1            |             |
| (50% RH)                                              |                 | 1.9            |             |
| (Saturation)                                          |                 | 6.7            |             |
| MECHANICAL                                            | ISO Test Method | Dry            | Conditioned |
| Tensile Modulus, MPa                                  | 527             |                |             |
| 23°C                                                  |                 | 9,660          | -           |
| Tensile stress at break, MPa                          | 527             |                |             |
| 23°C                                                  |                 | 154            | -           |
| Tensile strain at break, %                            | 527             |                |             |
| 23°C                                                  |                 | 2.5            | -           |
| Flexural Strength, MPa                                | 178             |                |             |
| 23°C                                                  |                 | 230            | -           |
| Flexural Modulus, MPa                                 | 178             |                |             |
| 23°C                                                  |                 | 8,380          | -           |
| IMPACT                                                | ISO Test Method | Dry            | Conditioned |
| Charpy Notched, kJ/m <sup>2</sup>                     | 179             |                |             |
| -30°C                                                 |                 | 8              | -           |
| 23°C                                                  |                 | 8.5            | -           |
| Charpy Unnotched, kJ/m <sup>2</sup>                   | 179             |                |             |
| 23°C                                                  |                 | 56             | -           |
| THERMAL                                               | ISO Test Method | Dry            | Conditioned |
| Melting Point, °C                                     | 3146            | 218            | -           |
| HDT A, °C                                             | 75              | 203            | -           |
| HDT B, °C                                             | 75              | 218            | -           |
| Coef. of Linear Thermal Expansion, Parallel, mm/mm °C |                 | 0.25 X10-4     | -           |
| Coef. of Linear Thermal Expansion, Normal, mm/mm °C   |                 | 0.67 X10-4     | -           |
| ELECTRICAL                                            | ISO Test Method | Dry            | Conditioned |
| Volume Resistivity (Ohm-m)                            | IEC 60093       | >1E13          | -           |

**Processing Guidelines**
**Material Handling**

Max. Water content: 0.15%

Material is supplied in sealed containers and drying prior to molding in a dehumidifying or desiccant dryer is recommended. Drying parameters are dependent upon the actual percentage of moisture in the pellets and typical pre-drying conditions are 2-4 hours at 180F (83C). Recommended moisture levels for achieving optimum surface qualities and mechanical properties is 0.05% - 0.12%. Further information concerning safe handling procedures can be obtained from the Safety Data Sheet (MSDS), or by contacting your BASF representative.

**Typical Profile**

Melt Temperature 270-295°C (518-563°F)

Mold Temperature 80-95°C (176-203°F)

Injection and Packing Pressure 35-125 bar (500-1500 psi)

**Mold Temperatures**

This product can be processed over a wide range of mold temperatures; however, for applications where aesthetics are critical, a mold surface temperature of 80-95°C (176-203°F) is recommended.

**Pressures**

Injection pressure controls the filling of the part and should be applied for 90% of ram travel. Packing pressure affects the final part and can be used effectively in controlling sink marks and shrinkage. It should be applied and maintained until the gate area is completely frozen off.

Back pressure can be utilized to provide uniform melt consistency and reduce trapped air and gas. Minimal back pressure should be utilized to prevent glass breakage.

**Fill Rate**

Fast fill rates are recommended to ensure uniform melt delivery to the cavity and prevent premature freezing. Surface

appearance is directly affected by injection rate.

**Note**

Although all statements and information in this publication are believed to be accurate and reliable, they are presented gratis and for guidance only, and risks and liability for results obtained by use of the products or application of the suggestions described are assumed by the user. NO WARRANTIES OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, ARE MADE REGARDING PRODUCTS DESCRIBED OR DESIGNS, DATA OR INFORMATION SET FORTH. Statements or suggestions concerning possible use of the products are made without representation or warranty that any such use is free of patent infringement and are not recommendations to infringe any patent. The user should not assume that toxicity data and safety measures are indicated or that other measures may not be required.

BASF Corporation  
Engineering Plastics  
1609 Biddle Avenue  
Wyandotte, MI 48192

General Information: 800-BC-RESIN  
Technical Assistance: 800-527-TECH (734-324-5150)  
Web address: <http://www.plasticsportal.com/usa>

