

# FRIANYL® A3 GF35 V0

Polyamide 66

Nilit Plastics

## Message:

FRIANYL® A3 GF35 V0 is a Polyamide 66 (Nylon 66) compound, 35% glass fiber reinforced, flame retardant, halogen and red phosphorous free, UL listed V0.

It is VDE certified. It is also certified according to railways requirements NFF 16-101.

This compound is intended for injection molding.

FRIANYL® A3 GF35 V0 is primarily designed for the Electrical and Electronic industry. It is also suitable for Automotive or Industrial & Consumer applications.

| General Information            |                                    |                   |               |
|--------------------------------|------------------------------------|-------------------|---------------|
| UL YellowCard                  | E172252-100760326                  | E331274-100305894 | E86034-306733 |
|                                | E172252-101977594                  |                   |               |
| Filler / Reinforcement         | Glass Fiber,35% Filler by Weight   |                   |               |
| Additive                       | Flame Retardant                    |                   |               |
| Features                       | Flame Retardant                    |                   |               |
|                                | Halogen Free                       |                   |               |
|                                | Low (to None) Phosphorus Content   |                   |               |
| Uses                           | Automotive Applications            |                   |               |
|                                | Consumer Applications              |                   |               |
|                                | Electrical/Electronic Applications |                   |               |
|                                | Industrial Applications            |                   |               |
| Processing Method              | Injection Molding                  |                   |               |
| Physical                       | Nominal Value                      | Unit              | Test Method   |
| Density (23°C)                 | 1.46                               | g/cm <sup>3</sup> | ISO 1183      |
| Molding Shrinkage              |                                    |                   | ISO 294-4     |
| Across Flow : 23°C             | 1.0                                | %                 |               |
| Flow : 23°C                    | 0.30                               | %                 |               |
| Water Absorption               |                                    |                   | ISO 62        |
| 23°C, 24 hr                    | 1.4                                | %                 |               |
| Saturation, 23°C               | 4.0                                | %                 |               |
| Mechanical                     | Nominal Value                      | Unit              | Test Method   |
| Tensile Modulus (23°C)         | 11500                              | MPa               | ISO 527-2     |
| Tensile Stress (Yield, 23°C)   | 150                                | MPa               | ISO 527-2     |
| Tensile Strain (Break, 23°C)   | 2.5                                | %                 | ISO 527-2     |
| Impact                         | Nominal Value                      | Unit              | Test Method   |
| Charpy Notched Impact Strength |                                    |                   | ISO 179/1eA   |
| -30°C                          | 7.0                                | kJ/m <sup>2</sup> |               |
| 23°C                           | 8.0                                | kJ/m <sup>2</sup> |               |

| Charpy Unnotched Impact Strength                 |               |                   | ISO 179/1eU    |
|--------------------------------------------------|---------------|-------------------|----------------|
| 23°C                                             | 48            | kJ/m <sup>2</sup> |                |
| 30°C                                             | 45            | kJ/m <sup>2</sup> |                |
| Thermal                                          | Nominal Value | Unit              | Test Method    |
| Heat Deflection Temperature                      |               |                   |                |
| 0.45 MPa, Unannealed                             | 220           | °C                | ISO 75-2/B     |
| 1.8 MPa, Unannealed                              | 210           | °C                | ISO 75-2/A     |
| Continuous Use Temperature <sup>1</sup>          | 130           | °C                | IEC 60216      |
| Ball Pressure Test                               |               |                   | IEC 60695-10-2 |
| 125°C                                            | Pass          |                   |                |
| 165°C                                            | Pass          |                   |                |
| Electrical                                       | Nominal Value | Unit              | Test Method    |
| Surface Resistivity <sup>2</sup>                 | 1.0E+13       | ohms              | IEC 60093      |
| Volume Resistivity (23°C)                        | 1.0E+15       | ohms·cm           | IEC 60093      |
| Electric Strength (2.00 mm)                      | 18            | kV/mm             | IEC 60243-1    |
| Comparative Tracking Index (3.20 mm, Solution A) | 600           | V                 | IEC 60112      |
| Needle Flame Test                                |               |                   | IEC 60695-11-5 |
| 1.00 mm                                          | Pass          |                   |                |
| 2.00 mm                                          | Pass          |                   |                |
| Flammability                                     | Nominal Value | Unit              | Test Method    |
| Flame Rating                                     |               |                   | UL 94          |
| 0.400 mm                                         | V-0           |                   |                |
| 0.800 mm                                         | V-0           |                   |                |
| 1.60 mm                                          | V-0           |                   |                |
| 3.20 mm                                          | V-0           |                   |                |
| Glow Wire Flammability Index                     |               |                   | IEC 60695-2-12 |
| 0.800 mm                                         | 960           | °C                |                |
| 3.20 mm                                          | 960           | °C                |                |
| Glow Wire Ignition Temperature                   |               |                   | IEC 60695-2-13 |
| 0.800 mm                                         | 800           | °C                |                |
| 3.20 mm                                          | 850           | °C                |                |
| Oxygen Index                                     | 31            | %                 | ISO 4589-2     |
| Flammability <sup>3</sup>                        | SE            |                   | FMVSS 302      |
| NOTE                                             |               |                   |                |
| 1.                                               | 20000 hr      |                   |                |
| 2.                                               | 23°C          |                   |                |
| 3.                                               | 355x100x1mm   |                   |                |

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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

