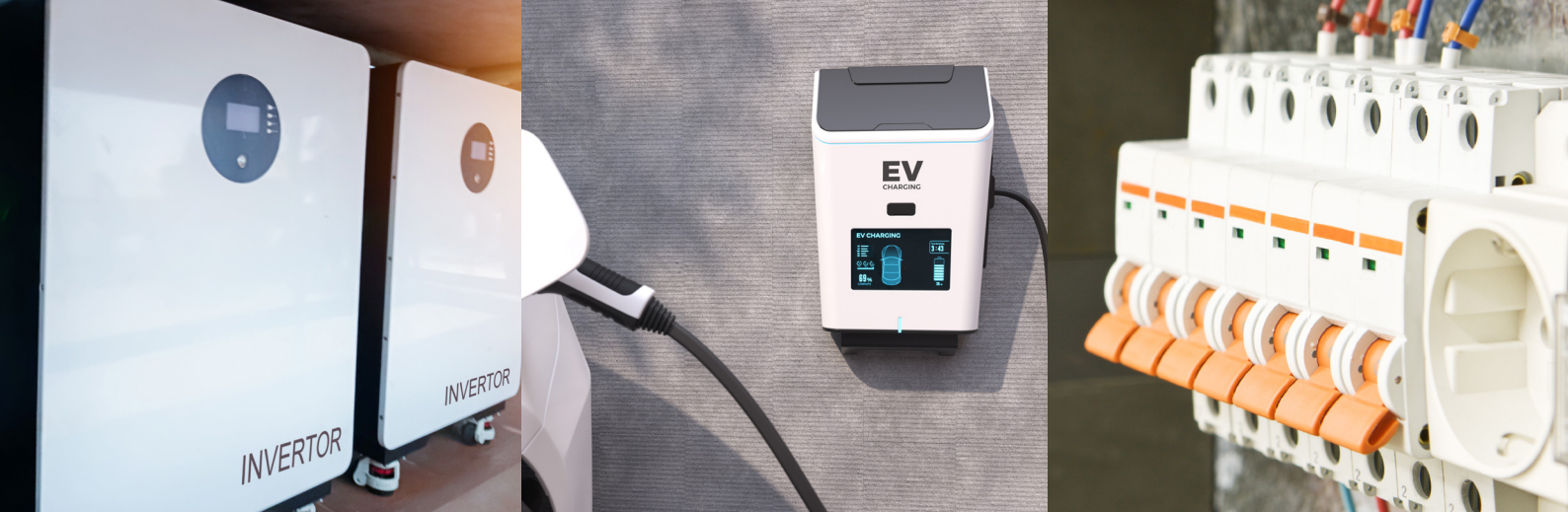




## » PRODUCT BULLETIN

# Nymax™ FR REC Flame Retardant, Recycled Polyamide Formulations

Nymax™ FR REC flame-retardant recycled polyamide grades deliver non-halogenated fire safety performance for electrical and electronics (E&E) applications while incorporating 42% to 77% post-industrial recycled content. These grades preserve the qualified envelope for E&E applications while using post-industrial recycled polyamide feedstock to lower environmental footprint versus prime flame-retardant polyamide. The portfolio spans PA6 and PA66 resins with 15% to 40% glass fiber loading plus unfilled options. Nymax FR REC formulations can be tailored to meet specific application needs and can be reinforced with glass fiber to satisfy required mechanical and thermal performance characteristics.

## KEY CHARACTERISTICS

- UL 94 V-0 rating at 0.8 mm—the foundation for fire safety compliance in E&E applications
- Glow-wire flammability index (GWFI) of 960°C supports compliance with global electrical safety standards
- Comparative tracking index (CTI) values up to 600 V measures electrical insulation reliability under moisture and contamination
- NHFR chemistry aligns with restricted-substance lists; non-PFAS formulations anticipate emerging regulatory bans targeting per- or polyfluoroalkyl substances (PFAS)
- Up to 77% post-industrial recycled (PIR) content lowers product carbon footprint versus prime FR polyamide

- Broad formulation range: 15% to 40% glass fiber loading plus unfilled
- Preserves the qualified envelope for E&E applications to help avoid costly part redesign or re-qualification

## MARKETS AND APPLICATIONS

Nymax FR REC grades serve OEMs, component manufacturers, and material specifiers facing tightening fire safety regulations and growing circularity targets, especially in residential and institutional building sectors. Applications include:

- **Connectors** – terminal blocks, power/sensor connectors, charging interfaces
- **Switchgear** – breakers, contactors, phase barriers, coil bodies, and housings
- **Appliances** – terminal carriers, control housings, motor interfaces
- **Data centers** – power distribution units (PDUs), remote power panels (RPPs), busways, connector components
- **Battery energy storage systems (BESS)** – Battery modules, inverters, power conversion interfaces
- **EV/Charging** – power distribution, couplers, protection components

## PA6 GRADES

| Grade                              | GF  | MI  | Recycled % | UL 94 @ | GWFI  | GWIT  | CTI  |
|------------------------------------|-----|-----|------------|---------|-------|-------|------|
|                                    |     |     |            | 0.8mm   |       |       |      |
| Nymax REC-I ND6000-5046 NHFR HS    | –   | –   | 77.70%     | V-2     | 960°C | 875°C | 600V |
| Nymax REC-I ND6000-5038 RS NHFR HS | 15% | –   | 64.20%     | V-0     | 960°C | 775°C | 500V |
| Nymax REC-I ND6000-50              | 20% | –   | 59.85%     | V-0     | 960°C | 800°C | 600V |
| Nymax REC-I ND6000-5039 RS NHFR HS | 25% | –   | 64.20%     | V-0     | 960°C | 800°C | 550V |
| Nymax REC-I ND6000-5040 RS NHFR HS | 30% | –   | 52.40%     | V-0     | 960°C | 800°C | 600V |
| Nymax REC-I ND6000-5041 RS NHFR HS | 35% | –   | 47.40%     | V-0     | 960°C | 800°C | 600V |
| Nymax REC-I ND6000-5042 RS NHFR HS | 40% | –   | 43.00%     | V-0     | 960°C | 825°C | 600V |
| Nymax REC-I ND6000-5045 RS NHFR HS | –   | 25% | 59.40%     | V-2     | 850°C | 875°C | 600V |
| Nymax REC-I ND6000-5047 RS NHFR HS | 10% | 10% | 59.00%     | V-0     | 960°C | 825°C | 600V |

## PA66 GRADES

| Grade                              | GF  | Recycled % | UL 94 @ | GWFI  | GWIT  | CTI  |
|------------------------------------|-----|------------|---------|-------|-------|------|
|                                    |     |            | 0.8mm   |       |       |      |
| Nymax REC-I ND6600-5044 NHFR HS    | –   | 69.70%     | V-2     | 960°C | 775°C | 600V |
| Nymax REC-I ND6600-5039 RS NHFR HS | 15% | 65.40%     | V-0     | 960°C | 800°C | 500V |
| Nymax REC-I ND6600-5040 RS NHFR HS | 25% | 55.45%     | V-0     | 960°C | 775°C | 600V |
| Nymax REC-I ND6600-5041 RS NHFR HS | 30% | 53.40%     | V-0     | 960°C | 800°C | 600V |
| Nymax REC-I ND6600-5042 RS NHFR HS | 35% | 48.90%     | V-0     | 960°C | 800°C | 600V |
| Nymax REC-I ND6600-5043 RS NHFR HS | 40% | 42.40%     | V-0     | 960°C | 825°C | 600V |

Contact your sales representative for the full grade portfolio and color options.

**1.844.4AVIENT**  
**www.avient.com**



Copyright © 2026, Avient Corporation. Avient makes no representations, guarantees, or warranties of any kind with respect to the information contained in this document about its accuracy, suitability for particular applications, or the results obtained or obtainable using the information. Some of the information arises from laboratory work with small-scale equipment which may not provide a reliable indication of performance or properties obtained or obtainable on larger-scale equipment. Values reported as "typical" or stated without a range do not state minimum or maximum properties; consult your sales representative for property ranges and min/max specifications. Processing conditions can cause material properties to shift from the values stated in the information. Avient makes no warranties or guarantees respecting suitability of either Avient's products or the information for your process or end-use application. You have the responsibility to conduct full-scale end-product performance testing to determine suitability in your application, and you assume all risk and liability arising from your use of the information and/or use or handling of any product. AVIENT MAKES NO WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, either with respect to the information or products reflected by the information. This literature shall NOT operate as permission, recommendation, or inducement to practice any patented invention without permission of the patent owner.