

AP- Nylon Materials

Application sheet 10

Nyrim® Street gutter grates

Brüggemann Chemical provides raw materials for three distinct families of **AP-Nylon**

(polyamides produced by **Anionic Polymerization**) used in a wide range of applications.

Mechanical properties of these AP-Nylons extend from thermoplastic polyamides into rubber-like elastomeric materials.

AP Caprolactam along with different catalyst systems (**Bruggolen® C**) leads to standard cast Nylon 6.

Nyrim® is elastomer toughened, recyclable, thermoplastic Nylon 6 for industrial Reaction Injection Molding (RIM), Injection Molding and Rotomolding applications. Nyrim® usually contains 10-40% built-in elastomer, depending on the specific performance needs.

The stiffness / toughness combination of Nylon-6 and elastomer gives excellent impact resistance, wear resistance and repetitive load (fatigue) endurance.

Nyrim® can be selectively reinforced with glass fiber or glass mats and can also be filled with mineral fillers.

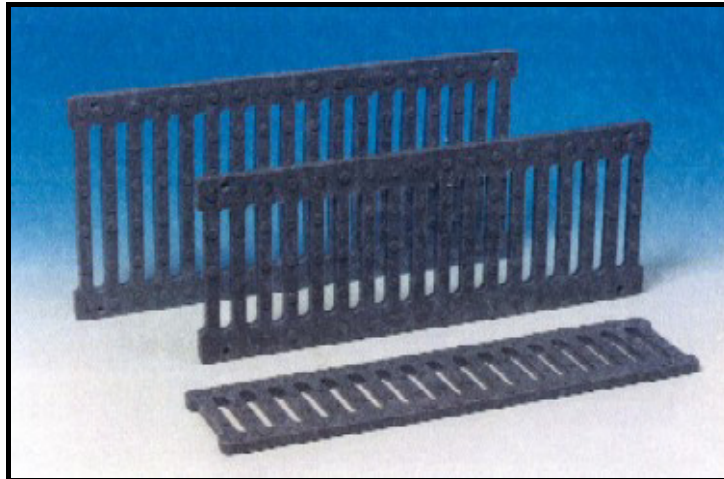
Star-Rim is a toughened Nylon suitable for RIM processing. It can also be reinforced with glass or filled with mineral fillers.

RIM processing is the preferred method to manufacture large, complex or thick parts. RIM processing allows for large design flexibility.

Pressures are lower than injection molding pressures, resulting in lower mold and manufacturing costs.

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Nyrim performance durability in outdoor exposure conditions coupled with the capability to mould thick sections at low pressures provides an excellent material choice for replacement of cast iron road grates for street sewage water.

Depending on load design requirements for a specific application, the RIM process enables the encapsulation of metal reinforcing members.

The steel-Nyrim composite construction provides a corrosion resistance part with a weight reduction (versus cast iron) that facilitates shipping and handling.



Important features for this application

Physical properties features

- Excellent toughness
- Excellent abrasion resistance
- Good chemical resistance- road salts, oils etc.
- UV stable
- High load carry capability when reinforced
- Maintenance of mechanical properties over a wide range of temperatures

RIM design features

- Thick section molding
- Cost effective, low pressure multi-cavity tooling
- Ability to encapsulate reinforcing bars