



AP- Nylon Materials

Application sheet 17

Nyrim® Casing for metal spring

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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This housing for metal springs for ski lifts requires vibration resistance and high toughness at subzero temperatures.

Nyrim fulfills the mechanical requirements and the RIM processing allows for thickness gradients and easy molding-in of metal inserts.



Important features for this application

Physical properties features

- High impact strength at ambient temperatures and at -40C
- UV stable
- High toughness
- Very resistant to fatigue

RIM design features

- Design flexibility allows for changes in wall thickness
- Easy molding-in of metal inserts