

## AP- Nylon Materials

### Application sheet 16

## Nyrim<sup>®</sup> Railway protection cover

**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<sup>®</sup> C**) leads to standard cast Nylon 6.

**Nyrim<sup>®</sup>** is elastomer toughened, recyclable, thermoplastic Nylon 6 for industrial Reaction Injection Molding (RIM), Injection Molding and Rotomolding applications. Nyrim<sup>®</sup> 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<sup>®</sup> 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.

#### Contact us:

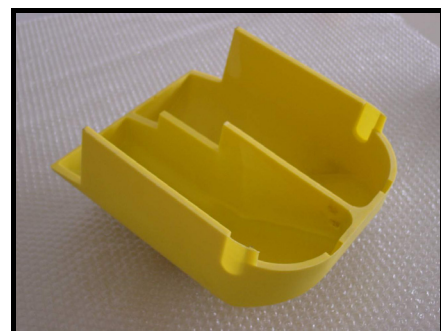
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Electronic equipment is used to safeguard railway switches. Counters are used to guarantee that a similar number of train wheels have passed the beginning and end of a railway track before a next train is allowed on that part of the track.

The sensors need to be protected by a tough cover. At temperatures ranging from -40C to +80C the cover has to withstand high impact forces caused by stones launched by passing trains.

Nyrim has excellent low temperature impact properties and its ease of processing allows optimizing wall thickness in function of required part strength thus minimizing part weight.



#### Important features for this application

Physical properties features	RIM design features
<ul style="list-style-type: none"> <li>• High impact strength at ambient temperatures and at -40C</li> <li>• UV stable</li> <li>• High toughness</li> </ul>	<ul style="list-style-type: none"> <li>• Design flexibility allows for changes in wall thickness</li> <li>• Economic molding of medium series products</li> </ul>