

AP- Nylon Materials

Application sheet 18

Nyrim® Industrial motor 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® 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.

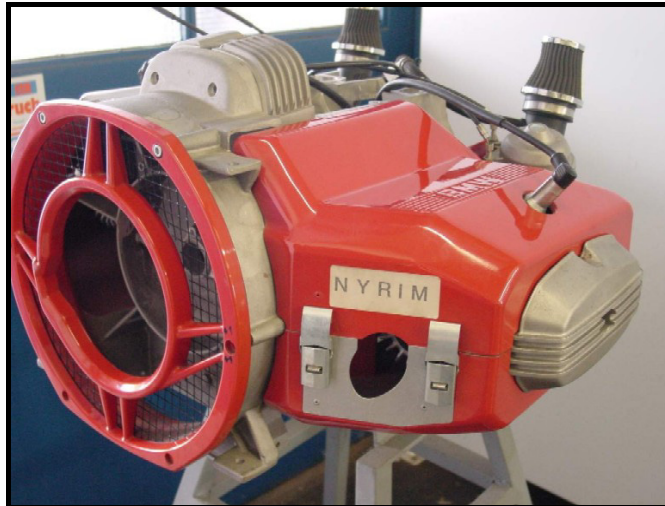
Star-Rim is a toughened Nylon suitable for RIM processing. It can also be reinforced with glass or filled with mineral fillers.

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 industrial boxer motor operates in extreme conditions. Its main use is as stand alone unit with fire brigades, requiring 100% availability.

The cover guides cooling air along the motor. It used to be hand laminated. This did not give the required inner surface quality, disturbing the airflow pattern.

The covers are mounted very close to the motor, resulting in high temperature differences across the surfaces. Short glass fiber reinforced Nyrim is the optimal solution. It performs to the requirements and efficiently guides the cooling air along the motor.



Important features for this application

Physical properties features

- High toughness and impact resistance
- Resistance against high temperatures of motor
- Resistance to thermal constraints

RIM design features

- Economic solution because of low pressure process
- Nyrim can be painted
- Both inner and outer surface are of high quality, "out of the mold"