

MEDIA INFORMATION

Transparent GreenLine Bio-Polyamide for tubes

The Polyamide PA1010 Grilamid 1S is based to nearly 100%, PA610 Grilamid 2S to 62% on renewable resources. Both of them belong to the bio-based polymers of the EMS-GRIVORY GreenLine family. The properties of Grilamid 1S are very close to those of Polyamide 12 (PA12), the properties of Grilamid 2S are positioned between those of PA12 and PA66 or PA6.

PA1010 and PA610 are inherently too rigid and too brittle for tubes used in the pneumatic industry and have to be improved with plasticizer and impact modifier to achieve the right level of flexibility and impact resistance. However, such a modification dramatically reduces the translucency of the product, makes it largely opaque and prevents the use in pneumatic applications requiring a good transparency or see-through clarity.

EMS-GRIVORY has been able to overcome this problem and introduces its new high viscosity bio-based extrusion grades **Grilamid 1S XE 4281** and **Grilamid 2S XE 4282** for flexible, transparent and impact resistant pneumatic tubes. Thanks to a proprietary technology the new products show an unrivaled balance of properties including flexibility, impact strength as well as transparency. In addition to extruding transparent tubes the products can be used for colored tubes too, where the transparency of the base polymer enables intense colors and good gloss finish frequently sought in the pneumatic tube sector.

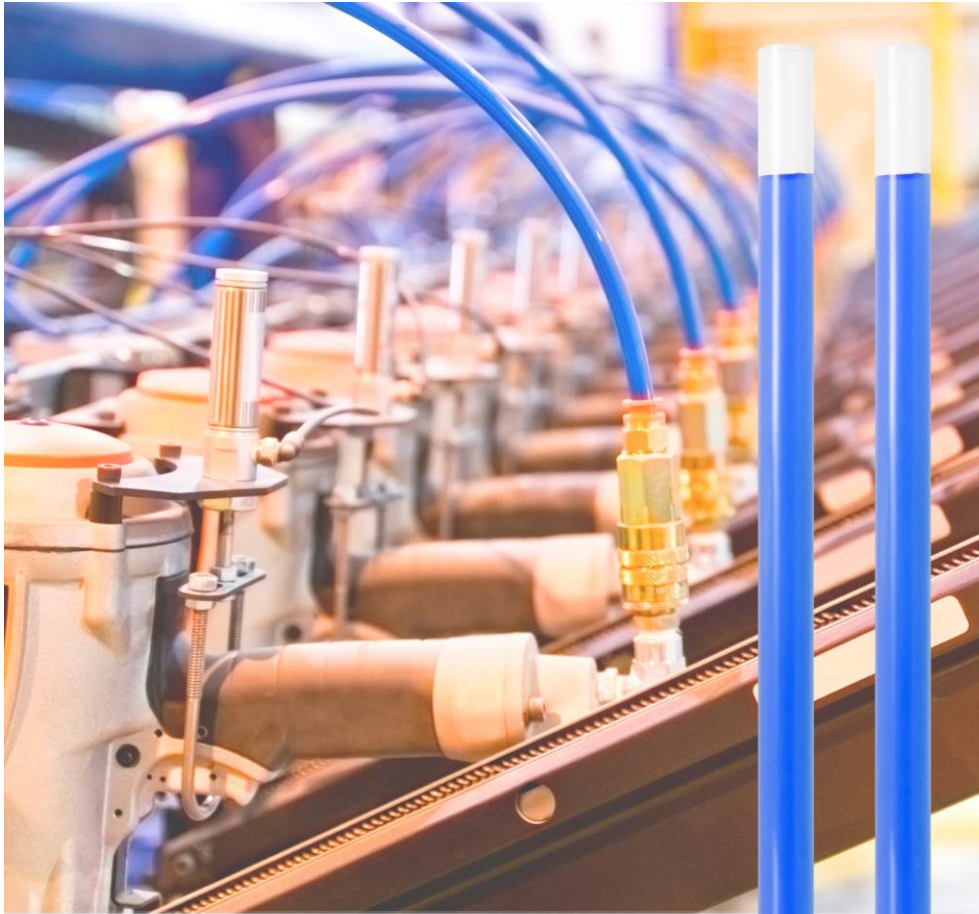
Key characteristics of **Grilamid 1S XE 4281** and **Grilamid 2S XE 4282**:

- Partially bio-based
- High transparency
- High flexibility (tensile-E-modulus: 400 Mpa cond.)
- High impact strength (Charpy notched impact, 23°C: no break)
- High viscosity for high speed tube extrusion
- Low, resp. moderate water absorption
- High strength (55 MPa cond.) and high elongation (> 200% cond.)
- Excellent chemical and heat resistance

As a leading Polyamide specialist EMS-GRIVORY is backward integrated in the polymerization of PA1010 and PA610 base resin. The new transparent products **Grilamid 1S XE 4281** and **Grilamid 2S XE 4282** are available from now on worldwide.

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Tubes made out of the biobased Grilamid 1S XE 4281 and 2S XE 4282.



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