

## Technical data sheet (TPU - Pellets)

### Thermoplastic Polyurethane Elastomer

#### Description

Thermoplastic elastomer polymer (TPU) is a highly malleable elastomer that prints with high toughness while retaining great flexibility. TPU is more rigid, somewhat more durable, it has a greater resistance to abrasion and the ability to maintain its elasticity at low temperatures.

It is suitable to produce food packaging in accordance with the criteria of Regulation (EU) No. 10/2011 and compatible with EN 1343 models.

#### Material Properties

|               |                                     |
|---------------|-------------------------------------|
| Density       | 1.21 g/cm <sup>3</sup> ISO 1183-1/A |
| Chemical Name | Thermoplastic Polyurethane          |

#### Mechanical Properties

|                    |                     |          |
|--------------------|---------------------|----------|
| Tensile strength   | 40 MPa              | ISO 37   |
| Hardness           | 93A (Shore A scale) | ISO 868  |
| Tear strength      | 150 N/m             | ISO 34-1 |
| Elongation @ break | 500%                | ISO 37   |

#### Thermal Properties

|       |       |
|-------|-------|
| HDT B | 40°C  |
| Vicat | 164°C |

## Drying

The materials aren't pre-dry.

Drying conditions:

|                            |                                   |
|----------------------------|-----------------------------------|
| Temperature                | 80°C – 90°C                       |
| Time                       | Min. 2 hours – Max. 6 hours       |
| Air Flow                   | >1.5 m <sup>3</sup> /min per kg/h |
| Dew point                  | < -40°C                           |
| Residual Moisture Contents | < 0.02% (200ppm)                  |

## Storage & Handling

During storage, the product may acquire humidity if exposed to fresh air. The humidity it absorbs depends on the temperature, humidity, and time of exposure. Therefore, it should be stored in its packaging in a cool place and kept at temperatures below 50°C. No special restrictions on storage with other products.

## Security

This product is not classified as dangerous according to the CE Regulation No 1272/2008, and therefore is not subject to special transport regulations. This product does not melt at room temperature.

|                           |                  |
|---------------------------|------------------|
| Suitable for food contact | Yes (EU) 10/2011 |
| Suitable for Toys         | Yes              |
| Suitable for packaging    | Yes              |

**\*\*Disclaimer:** The product and technical information provided in this datasheet is correct to the best of our knowledge. The information given is provided as a guidance for good use, handling and processing and is not to be considered as a quality specification. The information only relates to the specific product and the material properties.