

Technical Data Sheet

Masterbatch for hydrolysis resistance NBH-241B.

Masterbatch NBH-241B is a product in granule, the carrier is TPU. The product is formulated with protective agent of hydrolysis and Monomeric Carbodimide.

Characteristics

Physical appearance of material is soft slightly yellow granules.

The Masterbatch protector of hydrolysis extends the life cycle of TPU pieces and allows the use of these pieces even in critical conditions. The attack of water or moisture, particularly at elevated temperatures, is a general problem of the materials obtained by polycondensation or contain polycondensation products. The degradation or breakdown of the polymers due to water or acids is known as hydrolysis. Hydrolysis of the ester molecule polymer is split by the action of water (moisture) to produced a carboxylic acid and an alcohol. This process self-sustaining accelerates autonomy for the breakdown. The purpose of the Masterbatch NBH-241B is therefore to delay in time as much as possible this phenomenon.

This particular Masterbatch gives the TPU important system specifications, such as to affect a variety of markets and applications.

Processing recommendations

The optimal use percentage has to be determined by preliminary tests but is typically between 3% and 7% on the total.

Recommended to use with thermoplastic polyurethane with hardness from 40 ShA up to 50 ShD.

For optimal processing and receiving of high-quality thermoplastic polyurethane it is recommended to dry material preliminary at 100-110C within 2 hours at desiccant dryer.

Packaging and storage

TPU NBH is supplied pre-dried in 20 kg moisture guarded sacks (40 per pallet, covered with plastic film).

Shelf life of products under recommended conditions in sealed containers: 24 months from date of manufacture.

Health and safety

Before processing or any other actions with material, all personnel should be well aware about safe handling with thermoplastic polyurethane. Production facilities where thermoplastic polyurethane is processed should be equipped with continuously operating forced ventilation.

Thermoplastic polyurethane is not explosive, not flammable spontaneously. Extinguishing: Powder-type fire extinguishers, foam fire extinguisher, do not use water jet. Products of processed thermoplastic polyurethane have no adverse effect on human health.

The manufacturer carry no responsibility for the consequences of non following to recommendations, including those related to the fact that consumers do not read the technical documentation and instructions of material usage. The information in this technical data sheet corresponds to the time of its publication. The manufacturer reserves the right to change the technical parameters of materials without the deterioration of quality in the course of technological progress, and for reasons related to the development of production. The company cannot list all possible applications of materials, so the consumer is responsible for determining the suitability of the product for a specific application. Recommended applications listed in the Technical Data Sheet require experimental verification at consumer, as beyond the control of the manufacturer are after sales conditions of storage, transportation and usage of products, especially when materials from different manufacturers are used together.

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