

DANTHANE® I 25K-20F-GRANULE

DESCRIPTION

DANTHANE® 125K-20F-Granule is a special compound-granule based on TPU/PTFE. This type is especially suitable for calender and extrusion coating of technical textiles. This compound granule combines the properties of high flexibility of a TPU together with the excellent chemical non-stick properties of Teflon (polytetrafluorethylene PTFE). DANTHANE® 125K-20F-Granule is mainly used for the coating of transport elements and conveyor belts, drive sections (flat drive belts) and for the coating of materials for big-bags, materials for containers and for special hoses. Beside the properties of TPU coatings, the advantage of DANTHANE® 125K-20F-Granule is the high resistance against contamination and the very high slippage of the surface. So laminated materials are self-cleaning because at pure TPU coatings contaminations can set down more easy than at coatings made with DANTHANE® 125K-20F-Granule.

PRODUCT CHARACTERISTIC

Aspect	Values	Method
Aspect	White coloured granule (colour RAL 9011)	
Density	1,20 g/cm ³ at 20 °C	DIN 53.479
Melt Flow Index (MFI)	190 °C/10kg/10 min.: 65 - 95 g	ISO 1133
Shore hardness	86 A	DIN 53.505
Melting range	140 – 145 °C	KOFLER
Softening range	135 – 140 °C	KOFLER
Hydrolysis resistance	Good	
Solubility	Good soluble in DMF and THF. The resistance of the films produced with DANTHANE® 125K-20F-Granule to all organic solvents is good, respectively the films will show a swelling behavior by the influence of these solvents.	

MECHANICAL VALUES

	Values	Method
Tear strength	30 MPa	DIN 53.504
Elongation at break	500 %	DIN 53.504
Modulus 100 % elongation	5,5 MPa	DIN 53.504
Modulus 200 % elongation	6 MPa	DIN 53.504
Modulus 300 % elongation	8,5 MPa	DIN 53.504
Compression set (70 hrs./23 °C)	30 %	DIN 53.517
Compression set (24 hrs./70 °C)	80 %	DIN 53.517
Abrasion loss	20 mm ³	DIN 53.516
Glass transition temperature (Tg) (DSC, 10 °C/min.)	- 27,0 °C	DIN 51.007

CHARACTERISTICS OF THE FILMS PRODUCED WITH DANTHANE® 125K-20F-GRANULE

	Values	Method
Aspects of the films	white, elastic	
Softening range	140 – 145 °C	Kofler
Film processing temperature	120 – 180 °C	
Chemical resistance	Good	
Wash resistance	Good	
Hydrolysis and microbe resistance	Sufficient	

APPLICATION

DANTHANE® 125K-20F-Granule is processed at calender and extrusion coatings of industrial textiles. DANTHANE® 125K-20F-Granule is mainly used for the coating of textile and non-woven supporting materials. It can be applied as medium layer as well as top coat. Due to the good slip and surface properties, DANTHANE® 125K-20F-Granule is mainly used as top coat. As medium layer it could be combined the classical types DANTHANE® 125K-Granule respectively DANTHANE® 126K-Granule. Concerning impregnation and primers of the corresponding textiles and other supporting materials we refer to the primers of the DANCOLL® range.

PROCESSING

Because polyurethane granules are very hygroscopic, we recommend a pre-drying by the processing by hot melt calendaring respectively extrusion. We suggest to dry DANTHANE® 125H 2 hours at a temperature of 80 °C to 100 °C. Suitable dryers are vacuum, circulation and dry air tumble dryers. By cold grinding DANTHANE® 125H can be grinded to powder with different powder grit sizes. For the spread coating powder grit sizes of 50µ to 500µ are usual. For paste and dispersion dots the powder grit size of DANTHANE®125H should be 0µ to 80µ. During processing, DANTHANE® 125H can be colored with pigments or color concentrates. During the processing, the coloring is best made by using TPU color masterbatches. We recommend to use the TPU based color- and additive masterbatches of the DANCOLOR® MB and DANADD® MB range.

COMPATIBILITY

DANTHANE® 125K-20F-Granule can be mixed with other aromatic DANTHANE®-Granule types. DANTHANE® 125K-20F-Granule shows a good compatibility to PVC materials. Due to this reason this special compound can also be used as modification and compound material for PVC granules.

STORAGE

If stored correct, cool and dry in its original packaging, the storage time of the product is at least 6 months. The product has to be protected against humidity.

PRODUCT SAFETY

DANTHANE® 125K-20F-Granule is under normal hygienic processing conditions a harmless material. Please observe that TPU granule may cause electrostatic sparks. If larger quantities are being processed in the melt, vapour extraction must be ensured.

* For further information we refer to our Safety Data Sheet

PHYSIOLOGICAL CHARACTERISTICS

With regard to physiological aspects, the product DANTHANE® 125K-20F-Granule is a harmless material to a large extent. For the release for applications in the food and medical sector it must be fulfilled corresponding requirements. If you intend to use the product in these two sectors, we kindly ask you to contact us. This product meets the positive list acc. to FDA, 21CFR, §177/2600, for applications in the food area.

RECYCLING

Clean and uncontaminated waste of DANTHANE® 125K-20F-Granule, which was separated from the substrate, may be grinded and reused as grinding material or may be added to new TPU-material.


PACKAGING


25 kg moisture proof, special bags, packed on pallets of 500 kg. The pallets are wrapped with PE shrink films. Additionally, PE-lined cardboard bigbags of 700 kg net weight are available.



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