



DANPOL[®] PES-800

DESCRIPTION

DANPOL[®] PES-800 is a high molecular, amorphous polyester for the lamination of different products. DANPOL[®] PES-800 is supplied as a solid and will be dissolved in organic solvents for the corresponding laminating adhesives. Due to the chemical structure, the adhesives produced with this polyester have a very good adhesion to polyester films. Also for the bonding of steel, aluminum, brass, copper, wood, cardboard, textiles, polyethylene, polypropylene and PVC films, the adhesives based on DANPOL[®] PES-800 are very suitable. This adhesive has a chemical structure very similar to polyester film and therefore it has a particular strong adhesion to this substrate. This adhesive is also recommended for bonding to steel, aluminium, brass, copper, vinyl, wood, board, textile, polyethylene and polypropylene. DANPOL[®] PES-800 shows very high adhesion properties on different materials. Further advantages are:

- High chemical resistance
- High heat resistance
- Good hardness and flexibility
- Good dielectric properties for PETP films
- Excellent transparency
- Excellent freeze/thaw resistance

PRODUCT CHARACTERISTIC

	Values	Method
Type	Amorphous, high molecular polyester	
Polyester base	1047H	
Appearance	Solid packed in small blocks	
Colour /Gardner 1953)	4 max (30 % AE)	
Odour	None	
Softening range	140 °C	
Melting range	150 °C	Kofler
Solids	100 %	
Melting viscosity	~ 9 Pa.s	BROOKFIELD Thermosel at 232 °C
Solvent viscosity (at 23°C solved 30% in ethylacetat)	> 400 mPa.s	
Density at 20°C	1,22	
Hydroxyl number	4 – 6mg KOH/g	
Acid number	< 3mg KOH/g	
Flash point	200 °C	
Tensile strength	25 – 30 N/mm ²	
Elongation at 25°C	> 2000 %	



SOLUBILITY

	Values	Method
Ethyl Acetate	S	
Acetone	S	
Butyl Alcohol	I	
Ethyl Alcohol	M	
Benzol	SH	
Cyclohexanone	S	
Chloroform	S	
Aliphatic Hydrocarbons	I	
Carbon Tetrachloride	M	
MEK	S	
Toluene	S	
Trichloroethane	S	
Trichloroethylene	S	

S = soluble; I = insoluble; M = melting; SH = soluble with heating only

APPLICATION

The lamination process involves two steps:

- application of the adhesive
- combining the two surfaces of the substrates with heat and pressure

These two functions have been combined in a conventional laminating machine into an unwind station, a coating head, combing roller, and a rewind station. When laminating impermeable substrates, such as PETP/aluminium, the adhesive coating must be dried in order to eliminate the carrying solvent. Solvent retained between the laminated films will reduce the bonding of the adhesive. The drying time and the temperature of the oven depend upon factors such as coating weight of the adhesive, type of the used solvent and the percentage dilution. For most end-use applications a dry coating weight of the adhesive of between 5,0 – 7,5 μ is necessary to obtain good bonding strength. This quantity of adhesive is recommended as a starting point, from which it can be judged the effectiveness of the adhesive. Maximum nip temperatures in combination with a high line-pressure of the calendar improve the bonding strength and optimize the properties.

PROCESSING

DANPOL® PES-800 can be processed by direct lamination or by pre-coating of the substrates. DANPOL® PES-800 polyester adhesives can be modified with catalyst in nearly all applications. The efficiency of the catalyst with regards to the bonding strength varies depending on the type of used substrate. The best proportion of catalyst for each end-use application must be determined.

COMPATIBILITY

DANPOL® PES-800 can be applied in the melt as well as solved in organic solvents with the other products of the DANPOL® product range. At the production of hot melt adhesives and hot melt coatings DANPOL® PES-800 can be good modified with natural and synthetic resins. In appropriate hot melt adhesives, thixotropic agents and fillers can be incorporated.



STORAGE

If correctly stored in a dry place at room temperature (below 30 °C) and in its original packing, this product can be stored 12 months at least.

PRODUCT SAFETY

Under normal hygienic working conditions, DANPOL® PES-800 is a largely non-dangerous material.

* For further data, please refer to our Safety Data Sheet.

WASTE CLASSIFICATION

Under the D.P.R. 915/82 regulation, DANPOL® PES-800 packed in the original container, up until destruction, is classified as special waste. Diluting with urethane grade ethyl acetate does not change this classification.

PHYSIOLOGICAL CHARACTERISTICS

According to recommendations of the BGA (Bundesgesundheitsamt) and FDA (FOOD and DRUG ADMINISTRATION) DANPOL® PES-800 may be used for the bonding of food packaging when protected by a functional barrier film. It is important to observe the conditions mentioned in the recommendations.

PACKAGING


Delivered in small blocks of about 3 kg.




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STAND 02/2024