Processing Guidelines
Injection Moulding

ROMIRA
TECHNISCHE KUNSTSTOFFE

Luranyl® PPE/HIPS Blends

General

Luranyl PPE/HIPS can be processed using all techniques convenient for thermoplastic resins. In particular it can be moulded without difficulty on usual injection moulding machines. A broad processing range, good thermal stability, low moulding shrinkage and low tendency to warp allow trouble free injection moulding.

Storage

Luranyl PPE/HIPS should be stored dry in closed rooms. ABS/PC have to be protect against direct sun shine. If the material is stored outside the packs can be easy damaged and the granulate becomes faster yellow. Thus the mechanical and optical properties can be affected.

Drying

Luranyl PPE/HIPS leaves the plant with moisture content < 0.1 % (Karl-Fischer-Titration).
Luranyl PPE/HIPS can absorb moisture if stored in inconvenient places. We therefore recommend to dry the material in a dry air dryer at 80 – 100 °C for about 2 –4 hours (circulation air drying oven, vacuum dryer, fixed hopper). If the material will not be dried properly, streaks on the surface can occur.

Furthermore, we recommend to dry the material up to moisture content < 0.05 %. The pellet hopper used should be heatable.

The drying time should be limited to less than 2h if the material is coloured in light colour.

Processing

Depending on the size of the injection moulding machine and the finished part, the processing conditions should be controlled regular and very careful. Following conditions are recommended for processing:

Luranyl® PPE/HIPS	**unreinforced**	**reinforced**
Drying temperature	**80 - 100 °C**	**80 - 100 °C**
Drying time	**2- 4 h**	**2 - 4 h**
Melt temperature **(for flame retardant grades)**	**260 - 300 °C** **260 - 290 °C**	**270 - 310 °C** **260 - 300 °C**
Mould temperature	**60 - 100 °C**	**60 - 100 °C**
Maximum residence time	**4-10 min**	**4-10 min**
Injection speed	**moderate**	**moderate**
Peripheral screw speed	**0,2 m/s** **max. 0,3 m/s**	**0,2 m/s** **max. 0,3 m/s**
Injection preassure	**moderate to high**	**moderate to high**

Recycling

Defective parts and sprues from Luranyl PPE/HIPS without any contaminations can be reprocessed as a regrind. The amount of the regrind used should be chosen in dependence on the colour and degree of reinforcing. We recommend to start with 5% regrind and to control changes of the mechanical and optical properties. However, if there are specific properties requested, only prime material should be used.

The use of regrind from flame retardant materials has to be limited. Trials are necessary to evaluate the maximum possible amount.

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