Special Information on Coinjection Moulding: Shrinkage

Shrinkage

Due to the anisotropic behaviour of THERMOLAST K compounds, shrinkage normally differs in relation to the flow direction in moulding. Our engineering staff can assist you in design of your moulds and will provide shrinkage data for injection-moulded plaques fabricated under various conditions.

Please note that shrinkage values from laboratory samples will not correlate on a 1:1 basis with values obtained in practice as shrinkage can be influenced by a large number of factors:

- processing parameters
- runner system (hot runner / cold runner)
- mould temperature
- mould design
- part geometry
- melt temperature
- flow direction
- material processed

Effects on shrinkage when injection moulding conditions are changed:

	Changes in injection moulding conditions	Effect on shrinkage
∆ T melt - mould	▲	▲
cooling time in mould	▲	▼
mould temperature	▲	▲
injection rate	▲	▼
hold pressure	▲	▼

In the case of hard/soft parts, shrinkage is generally impeded due to adhesion to the pre-injected part, with the result that the shrinkage values of the hard material generally play a determining role. In each case, however, it must be ensured that the stability of the hard pre-injected part is sufficient to avoid warping caused by shrinkage of the soft TPE. Integrating reinforcements into the hard part may be necessary, especially in the case of very thin-walled parts and/or extensive coverage with TPE.