

TPO Thermoforming Guide

SEQUEL® and DEXFLEX® thermoplastic polyolefins (TPOs) are elastomer-modified materials developed specifically for thermoformable sheet extrusion.

SEQUEL and DEXFLEX TPOs can be formed using most oven designs, but, for maximum control and performance, those having ceramic elements with multiple control zones are recommended.

The forming of SEQUEL and DEXFLEX TPOs on fully-automatic, multi-station machines may require

longer heating times in order to compensate for longer cooling cycles typical of TPO. If cycle time is a concern, the use of cooling fixtures may allow for faster cycles.

SEQUEL and DEXFLEX extrusion-grade TPOs are hygroscopic and should be tightly wrapped and sealed in plastic film until forming. Sheet not used after 8-10 weeks may require drying in order to obtain optimum surface quality.

General Thermoforming Start-up Conditions for TPO

Sheet Temperature, °F	320-360
Tool Temperature, °F	170-190
Part Removal Temperature, °F	140-170
Minimum Vacuum, Inches of Hg	25
Drying Temperature, °F (1-4 hrs)	120-180*

**Normally drying is not necessary. However, drying at the above conditions may lead to a better surface finish and optimal sheet performance.*

Thermoforming Best Practices for TPO

Tool Mounting	Top Platen
Plug Assist Material	Syntactic Foam
Oven Elements	Ceramic / Multi-Zoned
Vacuum Actuation	Bleed In As Tool Hits Sheet
Tool Finish	Vapor Honed / Sand Blast
Vacuum Hole Size	#60 – Drill Bit
Environmental Conditions	Controlled – No Drafts
Cycle Time & Warpage Reduction	Cooling Fixtures