

ForTii[®] MX15HR

Print Date: 2024-05-14

This quick start instruction gives an indication of the key settings for processing ForTii[®] MX15HR to ensure best crystallization and prevent material degradation as a result of hydrolysis or thermal load. It is a summary of the Injection Molding Recommendations which can be found in our Plastics Finder at <https://envalior.plasticsfinder.com>. Our online guidelines are recommendations to help with material processing and/or to evaluate and resolve potential processing issues.

MATERIAL HANDLING

Drying

ForTii[®] grades are hygroscopic and absorb moisture from the air relatively quickly. Moisture absorption is fully reversible under the following drying conditions without compromising material quality. Preferred driers are de-humidified driers with dew points maintained between -30 and -40°C / -22 and -40°F. Vacuum driers with N₂ purge can also be used. Hot air ovens or hopper driers are not suitable for pre-drying ForTii[®] grades; the use of such driers may result in non-optimum performance.

Moisture content	Time	Temperature	
		[°C]	[°F]
0.1 – 0.2 and as delivered	2 – 4	100 – 130	212 – 266

TEMPERATURE SETTINGS

Barrel temperature

Due to the high melting point of ForTii[®] this temperature should be set high enough to provide a homogeneous melt without getting too near to the degradation temperature of 360°C / 680°F. A flat or rising temperature profile is recommended. Optimal settings are governed by barrel size and residence time.

Mold/Tool	Measured melt	Nozzle	Front	Center	Rear
120 – 200°C 248 – 392°F	340–360°C 644–680°F	330–360°C 626–680°F	330–350°C 626–662°F	330–350°C 626–662°F	320–340°C 608–644°F

MELT RESIDENCE TIME

The optimal Melt Residence Time (MRT) for ForTii[®] MX15HR is ≤ 2 minutes with preferably at least 50% of the maximal shot volume used. The MRT should not exceed 4 minutes.

A full self-service MRT calculation can be done using the following [link](#).

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