Arnite® TV4 240 S

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This quick start instruction gives an indication of the key settings for processing Arnite® TV4 240 S 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

Preferred driers are de–humidified driers with dew points maintained between –20 and –30°C / –4 and –22°F. Vacuum driers with N_2 purge can also be used.

Moisture content	Time	Temperature	
[%]	[h]	[°C]	*[°F]*
as delivered	3–6	100–120	*212–248*
open bag	3–12	100–120	*212–248*

Warm, dried granules should be prevented from cooling down and coming into contact with ambient air before entering the cylinder. Pellets should be fed with hot dried air straight from the hopper drier into the cylinder or via a closed loop system using hot dried air, from the stand–alone drier into the cylinder.

TEMPERATURE SETTINGS

Barrel temperature

Optimal settings are governed by barrel size and residence time. Furthermore, the level of glass and/or mineral reinforcement and the presence or absence of flame retardant have to be taken into account.

Mold/Tool	Measured melt	Nozzle	Front	Center	Rear	
80 – 100°C *176 – 212°F*	240–260°C *464–500°F*	240–260°C *464–500°F*	240–255°C *464–491°F*	235–250°C *455–482°F*	230–240°C *446–464°F*	

MELT RESIDENCE TIME

The optimal Melt Residence Time (MRT) for Arnite® TV4 240 S is ≤ 6 minutes with preferably at least 50% of the maximal shot volume used. The MRT should not exceed 10 minutes.
A full self–service MRT calculation can be done using the following link.