

Arnitel® XG01IM

Print Date: 2024-05-03

This quick start instruction gives an indication of the key settings for processing Arnitel® XG01IM 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://plasticsfinder.com>. Our online guidelines are recommendations to help with material processing and/or to evaluate and resolve potential processing issues.

MATERIAL HANDLING

Drying

Arnitel® grades like Arnitel® XG01IM 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 N_2 purge can also be used. Hot air ovens or hopper driers are not suitable for pre-drying Arnitel® grades; the use of such driers may result in non-optimum performance.

Moisture content	Time	Temperature	
[%]	[h]	$^{\circ}\text{C}$	$^{\circ}\text{F}$
<0.1 and as delivered	3–4	60 – 70	140 – 158
>0.1	4–6	60 – 70	140 – 158

TEMPERATURE SETTINGS

Barrel temperature

The given temperature settings are general for Arnitel®. Optimal settings are governed by barrel size and residence time.

Additionally, a higher hardness and higher melting point of the Arnitel®, requires a barrel temperature at the higher side.

Mold/Tool	Measured melt	Nozzle	Front	Center	Rear	
20 – 50°C 68 – 122°F	190–240°C 374–464°F	190–230°C 374–446°F	190–215°C 374–419°F	180–200°C 356–392°F	150–180°C 302–356°F	

MELT RESIDENCE TIME

The optimal Melt Residence Time (MRT) for Arnitel® XG01IM is ≤ 5 minutes with preferably at least 50% of the maximal shot volume used. The MRT should not exceed 6 minutes.

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

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