Recommendations for injection molding



Arnitel® FM8226

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This quick start instruction gives an indication of the key settings for processing Arnitel® FM8226 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

Arnitel® 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-druing Arnitel® grades; the use of such driers may result in non-optimum performance.

Moisture content	Time	Temperature	
[%]	[h]	[°C]	[°F]
<0.05 and as delivered	3–4	100	212
>0.05-0.2	4–6	100	212

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	190–210°C <i>374–410°F</i>	190–210°C <i>374–410°F</i>	180–200°C <i>356–392°F</i>	170–190°C <i>338–374°F</i>	160–180°C <i>320–356°F</i>	

MELT RESIDENCE TIME

The optimal Melt Residence Time (MRT) for Arnitel $^{\circ}$ FM8226 is \leq 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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