Recommendations for injection molding



EcoPaXX[®] Q-DWX10

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This quick start instruction gives an indication of the key settings for processing EcoPaXX® Q-DWX10 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 quidelines are recommendations to help with material processing and/or to evaluate and resolve potential processing issues.

MATERIAL HANDLING

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

Moisture content	Time	Temperature	
[%]	[h]	[°C]	[°F]
0.1–0.2 and as delivered	2–4	80	176
0.2-0.5	4–8	80	176

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	
100 – 140°C 212 – 284°F	275–310°C <i>527–5</i> 90°F	270–300°C <i>518–572°F</i>	270–290°C <i>518–554°F</i>	260–280°C 500–536°F	250–270°C <i>482–518°F</i>	

MELT RESIDENCE TIME

The optimal Melt Residence Time (MRT) for EcoPaXX $^{\circ}$ Q-DWX10 is \leq 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.

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