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Novamid® 1010GN8–30 NAT

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This quick start instruction gives an indication of the key settings for processing Novamid® 1010GN8–30 NAT 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

Novamid® 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–drying Novamid® 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*

Drier types that are not de–humidified can be operated until 100°C but care has to be taken with natural/light colors for which a color change might be observed upon drying depending on time/temperature exposure.

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	
50 – 80°C *122 – 176°F*	245–265°C *473–509°F*	235–255°C *455–491°F*	235–250°C *455–482°F*	230–240°C *446–464°F*	225–235°C *437–455°F*	

MELT RESIDENCE TIME

The optimal Melt Residence Time (MRT) for Novamid® 1010GN8–30 NAT is ≤ 4 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.