

# Stanyl® Diablo OCD2300 BK27021

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This quick start instruction gives an indication of the key settings for processing Stanyl® Diablo OCD2300 BK27021 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

Stanyl® 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  $-40^{\circ}\text{C}$  /  $-22$  and  $-40^{\circ}\text{F}$ . Vacuum driers with  $\text{N}_2$  purge can also be used. Hot air ovens or hopper driers are not suitable for pre-drying Stanyl® 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 – 0.2 and as delivered	2	80	176
0.2 – 0.5	4 – 8	80	176
>0.5	<100 or 24	80 105	176 221

## TEMPERATURE SETTINGS

### Barrel temperature

Optimal settings are governed by barrel size and residence time. Due to the high melting point of Stanyl® this temperature should be set high enough to provide a homogeneous melt without getting too near to the degradation temperature of  $315^{\circ}\text{C}$  /  $599^{\circ}\text{F}$ . A flat or rising temperature profile is recommended.

Mold/Tool	Measured melt	Nozzle	Front	Center	Rear	
80 – $120^{\circ}\text{C}$ 176 – $248^{\circ}\text{F}$	295– $305^{\circ}\text{C}$ 563– $581^{\circ}\text{F}$	280– $300^{\circ}\text{C}$ 536– $572^{\circ}\text{F}$	295– $305^{\circ}\text{C}$ 563– $581^{\circ}\text{F}$	280– $300^{\circ}\text{C}$ 536– $572^{\circ}\text{F}$	270– $290^{\circ}\text{C}$ 518– $554^{\circ}\text{F}$	

## MELT RESIDENCE TIME

The optimal Melt Residence Time (MRT) for Stanyl® Diablo OCD2300 BK27021 is  $\leq 2$  minutes with preferably at least 50% of the maximal shot volume used. The MRT should not exceed 4 minutes. A full self-service MRT calculation can be done using the following [link](#).

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