Recommendations for injection molding



EcoPaXX® Q–HG10

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This quick start instruction gives an indication of the key settings for processing EcoPaXX® Q-HG10 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

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 | |
|---------------------------|-------------------------------|------------------------|------------------------|------------------------|------------------------|--|
| 80 – 140°C 176 – 284°F | 275–310°C <i>527–590°F</i> | 270–300°C 518–572°F | 270–290°C 518–554°F | 260–280°C 500–536°F | 250–270°C 482–518°F | |

MELT RESIDENCE TIME

The optimal Melt Residence Time (MRT) for EcoPaXX $^{\circ}$ Q-HG10 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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