

# Arnitel<sup>®</sup> CM622

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This quick start instruction gives an indication of the key settings for processing Arnitel<sup>®</sup> CM622 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

Arnitel<sup>®</sup> 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<sub>2</sub> purge can also be used. Hot air ovens or hopper driers are not suitable for pre-drying Arnitel<sup>®</sup> grades; the use of such driers may result in non-optimum performance.

| Moisture content       | Time | Temperature |      |
|------------------------|------|-------------|------|
|                        |      | [°C]        | [°F] |
| [%]                    | [h]  |             |      |
| <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<sup>®</sup>. Optimal settings are governed by barrel size and residence time.

Additionally, a higher hardness and higher melting point of the Arnitel<sup>®</sup>, requires a barrel temperature at the higher side.

| Mold/Tool               | Measured melt          | Nozzle                 | Front                  | Center                 | Rear                   |
|-------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|
| 20 - 50°C<br>68 - 122°F | 230-250°C<br>446-482°F | 230-250°C<br>446-482°F | 220-240°C<br>428-464°F | 210-230°C<br>410-446°F | 200-220°C<br>392-428°F |

## MELT RESIDENCE TIME

The optimal Melt Residence Time (MRT) for Arnitel<sup>®</sup> CM622 is ≤ 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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