



Mold Shrinkage of Millathane® 76 and Millathane E34 Compounds

Table with 6 columns (D, A, E, B, H) and 2 columns (E, C) showing mold shrinkage percentages for Millathane® 76, Millathane E-34, NUCAP 100G, N990, and TP-95.

Other ingredients: MBTS-4, MBT-2, Thanecure®ZM-1, Sulfur-1.5, Struktol WB222-1, zinc stearate-0.5

MOLD SHRINKAGE - 150°C Cures

Doughnut/washer-shaped (ID/OD) Mold*

Dimensional Change (shrinkage), %

Table showing dimensional change for OD, ID, and Depth at 150°C for Doughnut/washer-shaped mold.

no test is bad sample

Bar Mold**

Dimensional Change (shrinkage), %

Table showing dimensional change for Length and Width at 150°C for Bar Mold.

MOLD SHRINKAGE - 160°C Cures

Doughnut/washer-shaped (ID/OD) Mold*

Dimensional Change (shrinkage), %

Table showing dimensional change for OD, ID, and Depth at 160°C for Doughnut/washer-shaped mold.

Bar Mold**

Dimensional Change (shrinkage), %

Table showing dimensional change for Length and Width at 160°C for Bar Mold.

MOLD SHRINKAGE - 175°C Cures

Doughnut/washer-shaped (ID/OD) Mold*

Dimensional Change (shrinkage), %

Table showing dimensional change for OD, ID, and Depth at 175°C for Doughnut/washer-shaped mold.

Bar Mold**

Dimensional Change (shrinkage), %

Table showing dimensional change for Length and Width at 175°C for Bar Mold.

*Outside Diameter = 2.998", Inside Diameter = 2.000", Depth = 0.503"

**Length = 4.000", Width = 0.752", Depth = 0.502"

Observations

- 1. The mold shrinkage of sulfur-cured Millathane® 76 compounds decreased as the filler loading increased.
2. Mold shrinkage is not significantly affected by molding temperature.
3. Millathane E34 gave similar mold shrinkage to Millathane 76 in the same formula.
4. There was no significant difference in mold shrinkage between N990 black and Nucap 100G.

Conclusions

Mold shrinkage for Millathane® compounds is approximately 2.5%.