



## Dimensional Report

The wax under test was injected using an 8" step wedge tool using the MI lab's 25 ton paste press.

The following injection & measurement conditions were used;

	A	B
Wax temperature (°F):	140	135
Injection pressure (psi):	400	600
Injection time (s):	60	60
Platten temperature (°F):	75	75

Linear contraction measured using Mitutoyo 12" digital caliper  
Sinkage measured using Mitutoyo height gauge

To calculate linear contraction, the cavity of the tool was taken to be 8.090 inches (as indicated on the manufacturer's tool sketch)

Patterns rested for 24 hours in chiller cabinet @ 72°F before measurements made.

A	Length (inch)	Lin con (%)	Lin con (in/in)	Step 2 sink (inch)	Step 3 sink (inch)	Part weight (g)	B	Length (inch)	Lin con (%)	Lin con (in/in)	Step 2 sink (inch)	Step 3 sink (inch)	Part weight (g)
1	8.0225	0.834	0.0083	0.0225	0.0230	260.8	1	8.0240	0.816	0.0082	0.0240	0.0280	261.5
2	8.0205	0.859	0.0086	0.0230	0.0260	260.9	2	8.0275	0.773	0.0077	0.0210	0.0195	261.3
3	8.0210	0.853	0.0085	0.0230	0.0270	260.8	3	8.0230	0.828	0.0083	0.0185	0.0215	261.5
4	8.0215	0.847	0.0085	0.0225	0.0275	260.9	4	8.0240	0.816	0.0082	0.0230	0.0270	261.7
5	8.0205	0.859	0.0086	0.0215	0.0285	260.8	5	8.0250	0.803	0.0080	0.0215	0.0225	261.6
6	8.0225	0.834	0.0083	0.0250	0.0280	260.9	6	8.0220	0.841	0.0084	0.0205	0.0215	261.5
7	8.0220	0.841	0.0084	0.0220	0.0235	260.8	7	8.0230	0.828	0.0083	0.0195	0.0250	261.6
8	8.0215	0.847	0.0085	0.0230	0.0250	260.7	8	8.0225	0.834	0.0083	0.0200	0.0205	261.3
9	8.0205	0.859	0.0086	0.0240	0.0270	260.7	9	8.0260	0.791	0.0079	0.0230	0.0230	261.6
10	8.0220	0.841	0.0084	0.0230	0.0265	260.7	10	8.0220	0.841	0.0084	0.0210	0.0270	261.4
average =	<b>8.0215</b>	<b>0.847</b>	<b>0.0085</b>	<b>0.0230</b>	<b>0.0262</b>	<b>260.80</b>	average =	<b>8.0239</b>	<b>0.817</b>	<b>0.0082</b>	<b>0.0212</b>	<b>0.0236</b>	<b>261.50</b>
std dev =	<b>0.0008</b>	<b>0.0099</b>	<b>0.0001</b>	<b>0.0010</b>	<b>0.0018</b>	<b>0.08</b>	std dev =	<b>0.0018</b>	<b>0.0216</b>	<b>0.0002</b>	<b>0.0017</b>	<b>0.0030</b>	<b>0.13</b>

Dimensional performance is probably a pattern wax's most important characteristic.

Argüeso's MI lab is equipped with a modern 25 ton press fitted with dual reservoirs, allowing both paste & liquid injections to be conducted. The lab has access to a wide variety of tooling so we can simulate many of the situations that customers face in their day to day activities.

Customers are welcome to bring, or send, in tooling for development work.

This report shows the effect of wax temperature & injection pressure on the dimensional response of a filled, reclaim based commercial pattern wax..

