GENERAL POLYMER PROCESSING GUIDE

Resin	Specific Gravity	Drying Parameters Temperature (F)/Time	Mold Temperature (F)	Melt Temperature (F)	Mold Shrinkage (in./in.)
ABS	1.07	180 / 3 hrs	120 - 140	440 - 465	.003 - .007
ABS Flame Retardant	1.18	180 / 3 hrs	105 - 160	345 - 365	.003 - .007
ABS/TPU	1.1	170 / 4 hrs	80 - 100	390 - 415	.005 - .007
ASA	1.07	175 / 2-4 hrs	105 - 175	465 - 535	.004 - .007
EVA	.920 - .970	None Required	60 - 105	300 - 425	.001 - .016
GPPS	1.04	170 / 2 hrs	60 - 160	390 - 475	.003 - .007
HIPS	1.05	170 / 2 hrs	60 - 160	390 - 475	.003 - .007
LCP Reinforced	1.50 - 1.90	250 - 300 / 4 hrs	175 - 250	555 - 650	.000 - .004
PA 6 (Nylon 6)	1.13	165 / 2-4 hrs	160 - 200	460 - 520	.010 - .015
PA 6 Reinforced	1.18 - 1.49	165 / 2-4 hrs	160 - 220	515 - 565	.0015 - .003
PA 6/6 (Nylon 6/6)	1.14	165 / 2-4 hrs	175 - 200	520 - 530	.012 - .020
PA 6/6 Reinforced	1.22 - 1.49	165 / 2-4 hrs	175 - 220	540 - 570	.003 - .005
PBT	1.31	250 / 3-4 hrs	100 - 200	460 - 500	.017 - .023
PBT Reinforced	1.52	250 / 3-4 hrs	140 - 220	480 - 525	.003 - .006
PC	1.2	250 / 4 hrs	160 -200	550 - 600	.005 - .007
PC Reinforced	1.25 - 1.52	250 / 6 hrs	190 - 250	600 - 650	.001 - .005
PC/ABS	1.08 - 1.22	250 / 3 hrs	150 - 190	460 - 500	.005 - .007
PE	.905 - .968	None Required	85 - 105	320 - 450	.015 - .035
PET Reinforced	1.58 - 1.73	250 / 3 hrs	180 - 250	540 - 580	.002 - .006
PMMA (Acrylic)	1.19	170 / 3 hrs	85 - 160	350 - 450	.004 - .006
POM (Acetal)	1.41	180 / 1 hr	170 - 200	370 - 390	.015 - .022
PP	0.9	None Required	80 - 150	375 - 500	.010 - .025
PPO	1.04 - 1.28	220 - 250 / 6 hrs	160 - 220	550 - 620	.004 - .007
PPS Reinforced	1.4 - 2.0	265 - 285 / 3-4 hrs	285 - 320	560 - 650	.002 - .007
SAN	1.06	175 / 3 hrs	105 - 175	390 - 480	.003 - .007
TPU	1.01 - 1.23	160 - 220 / 3 hrs	50 - 110	365 - 435	.005 - .01

Polymer families tend to have a wide range of processing conditions so supplier specific information and grade specific information should be used whenever possible when designing molds or setting up processing conditions.

The drying conditions, melt and mold temperature ranges provided should only be used as a general guide. Because the specific processing conditions can vary with different grades of a specific material as well as from supplier-to-supplier it is strongly suggested to refer to the suppliers data sheet for information specific to a given grade of material.

The mold shrinkage values provided are general ranges and are only intended to be used to allow comparisons to other materials and should only be used as a general guide. The mold shrinkage values provided are the “flow-direction” shrinkage and are based on 1/8” thick injection molded test specimens tested per ASTM D955. Actual material shrinkage is based on a number of factors including part design, wall thickness, tool configuration, mold cooling layout and processing parameters. Entec’s recommendation would be to use shrinkage values observed in other molds currently running the material that produce parts with a similar geometry and wall thickness, and proceed to machine the mold cores and cavities in a “steel safe” manner.

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