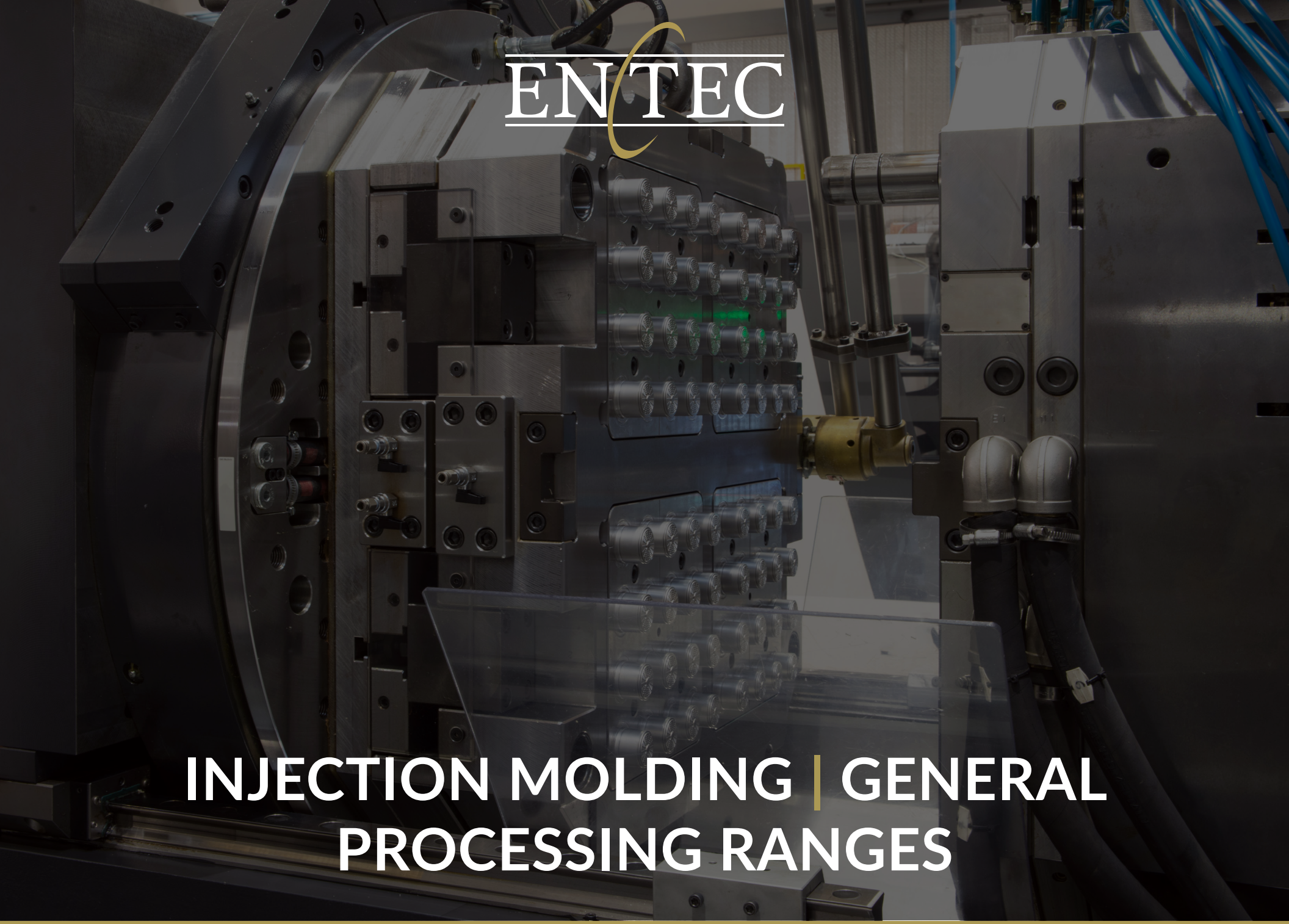

INJECTION MOLDING | GENERAL PROCESSING RANGES

ENTEC

INJECTION MOLDING | GENERAL PROCESSING RANGES

Resin	Drying Temperature (°F)	Drying Time (Hours)	Maximum Moisture Content for Processing (%)	Mold Temperature (F))	Melt Temperature (F)	Mold Shrinkage Flow Direction (in./in.)
ABS	180	3	<0.10	120 - 140	440 - 465	.003 - .007
ABS Flame Retardant	180	3	<0.10	105 - 160	375 - 430	.003 - .007
ABS/Nylon	175 - 195	4 - 8	<0.10	140 - 175	465 - 520	0.007
ABS/Nylon - Reinforced	175 - 195	4 - 8	<0.10	140 - 175	465 - 520	0.003
ABS/TPU	220	2 - 4	<0.02	80 - 150	410 - 490	.005 - .007
ASA	175	2 - 4	<0.10	105 - 175	465 - 535	.004 - .007
COC	Not Required	---	<0.10	105 - 300	425 - 590	.002 - .008
COPE	190 - 250	3 - 4	<0.10	70 - 160	350 - 480	.005 - .016
EVA	Not Required	---	<0.06	60 - 105	300 - 425	.001 - .016
GPPS	Not Required	---	<0.06	60 - 160	390 - 475	.003 - .007
HIPS	Not Required	---	<0.06	60 - 160	390 - 475	.003 - .007
LCP - Reinforced	250 - 300	4	<0.01	175 - 250	555 - 650	.000 - .004
Nylon 6	165	2 - 4	<0.20	160 - 200	460 - 520	.010 - .015
Nylon 6 - Reinforced	165	2 - 4	<0.20	160 - 220	515 - 565	.003 - .007
Nylon 66	165	2 - 4	<0.20	175 - 200	520 - 530	.012 - .020
Nylon 66 - Reinforced	165	2 - 4	<0.20	175 - 220	540 - 570	.003 - .005
Nylon 12	170	4 - 12	<0.1	175 - 210	425 - 500	0.008
Nylon 610	160 - 175	4 - 12	<0.1	160 - 195	500 - 535	.011 - .015
Nylon 612	175	4 - 6	<0.15	120 - 210	445 - 555	0.02
Nylon -High Temperature - Reinforced	175	4 - 12	<0.1	210 - 320	605 - 645	.001 - .004
Nylon - Transparent	175	4 - 12	<0.08	140 - 250	500 - 590	.004 - .008
PBT	250	3 - 4	<0.02	100 - 200	460 - 500	.017 - .023
PBT - Reinforced	250	3 - 4	<0.02	140 - 220	480 - 525	.003 - .006
PC	250	4	<0.02	160 -200	550 - 600	.003 - .007
PC - Reinforced	250	6	<0.02	190 - 250	600 - 650	.001 - .005
PC/ABS	250	3	<0.02	150 - 190	460 - 500	.003 - .007

Resin	Drying Temperature (°F)	Drying Time (Hours)	Maximum Moisture Content for Processing (%)	Mold Temperature (F))	Melt Temperature (F)	Mold Shrinkage Flow Direction (in./in.)
PC/PBT	230	4 - 6	<0.02	150 - 195	490 - 525	.008 - .011
PCT - Reinforced	160 - 200	4 - 6	<0.02	175 - 250	560 - 590	.002 - .004
PE	Not Required	---	---	85 - 105	320 - 450	.015 - .035
PET - Reinforced	250	3	<0.01	180 - 250	540 - 580	.002 - .006
PMMA	170	3	<0.02	130 - 175	390 - 520	.003 - .007
POM	180	2 - 4	<0.15	170 - 200	370 - 390	.015 - .022
PP	Not Required	---	---	80 - 150	375 - 500	.010 - .025
PP - Reinforced	160 (if needed)	2 - 3	<0.01	50 - 140	400 - 500	.003 - .015
PP - Recycled	Not Required	---	---	80 - 120	390 - 460	.013 - .022
PPE	190 - 210	2 - 4	<0.02	120 - 210	430 - 570	.004 - .007
PPS - Reinforced	265 - 285	3 - 4	<0.02	285 - 320	560 - 650	.002 - .007
PES	265 - 300	4	<0.02	285 - 375	645 - 735	.006 - .0085
PES - Reinforced	265 - 300	4	<0.02	300 - 375	660 - 735	.0025 - .0035
PPSU	265 - 300	4	<0.02	285 - 355	660 - 735	.008 - .009
PSU	265 - 300	4	<0.02	285 - 355	645 - 735	.006 - .008
PSU - Reinforced	265 - 300	4	<0.02	300 - 375	660 - 735	.0025 - .0035
SAN	Not Required	---	<0.1	105 - 175	390 - 480	.003 - .007
SBC	Not Required	---	---	70 - 120	355 - 465	.003 - .010
SEBS	150 (if needed)	2 - 3	<0.08	50 - 120	390 - 430	.012 - 0.32
SMMA	175 (if needed)	2	<0.1	85 - 120	390 - 465	.003 - .007
TPO	160 - 195	2 - 3	<0.1	50 - 120	410 -445	.005 - .016
TPU	160 - 220	3	<0.01	50 - 110	365 - 435	.005 - .010
TPV	180	2 - 4	<0.08	50 - 120	390 - 450	.015 - .035

- The various polymer families have many different grades that can have different molding conditions, so supplier-specific and grade-specific information should be used whenever possible when designing molds or setting up molding parameters.

- The drying conditions and melt and mold temperature ranges provided should only be used as a general guide. Because the specific molding 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 / processing sheets for information specific on a given grade of material.

- The mold shrinkage ranges 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 ranges provided are for the “flow-direction” and are based on 1/8” thick injection molded test specimens per ASTM D955 or 4 mm thick test specimens per ISO 294. Actual mold shrinkage is influenced by a number of factors including part design, wall thickness, tool configuration, mold cooling layout, gate type, location and size, and processing parameters. Entec Polymer’s recommendation would be to perform a mold filling analysis to better predict the part shrinkage or to produce a prototype mold to measure the actual part shrinkage.