

Injection Molding General Processing Ranges



Resin	Drying Temperature (°F)	Drying Time (Hours)	Maximum Moisture Content (%)	Mold Temperature (°F)	Melt Temperature (°F)	Mold Shrinkage (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	<0.10	175 - 210	425 - 500	0.008
Nylon 610	160 - 175	4 - 12	<0.10	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	<0.10	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

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PC/ABS	250	3	<0.02	150 - 190	460 - 500	.003 - .007
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	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	2 - 3	<0.08	50 - 120	390 - 430	.012 - 0.32
SMMA	175	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

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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 to 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.

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