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NORMALIZING SCHEDULE FOR ACRYLIC CASTINGS

Table 15.1 Typical heating times for normalizing of acrylic castings prior to machining operations

Thickness inch (mm)	Maximum oven heating rate °F/hr	A Time to heat 285°F (hrs)	B Hold time at 285°F (140°C) (hrs)	Approx. oven cool rate °F/hr	C Hours to Cool oven to 230°F	D Hold time at 230°F (110°C) hrs	Maximum oven cool rate °F/hr	E Time to cool to 80°F (hrs)	F Total hrs to ambient temp.
2.00 (51)	68	3	14	8	7	7	10	15	46
2.50 (63)	51	4	18	6	9	9	8	19	59
3.00 (76)	51	4	21	5	11	11	7	21	68
3.50 (89)	41	5	25	4	13	13	6	25	81
4.00 (101)	34	6	28	4	14	14	5	30	92
4.50 (114)	34	6	32	3.5	16	16	4.5	33	103
5.00 (127)	29	7	36	3	18	18	4.5	33	112
5.50 (140)	26	8	39	3	20	20	4	37	124
6.00 (152)	26	8	43	2.5	22	22	4	38	133
6.50 (165)	20	9	46	2.4	23	23	3.5	43	144
7.00 (178)	20	10	50	2.2	25	25	3.5	43	153
7.50 (190)	20	10	53	2	27	27	3	50	167
8.00 (203)	19	11	57	1.9	29	29	3	50	176
8.50 (216)	17	12	60	1.8	30	30	2.5	60	192
9.00 (229)	17	12	64	1.7	32	32	2.5	60	200
9.50 (241)	16	13	68	1.6	34	34	2.0	75	224
10.00 (254)	15	14	71	1.5	36	36	2.0	75	232
10.50 (267)	15	14	75	1.4	38	38	1.5	100	265
11.00 (279)	14	15	78	1.4	39	39	1.5	100	271
11.50 (292)	13	16	82	1.3	41	41	1.0	150	330
12.00 (305)	13	16	85	1.3	43	43	1.0	150	337
12.50 (318)	12	17	89	1.2	45	45	0.5	300	496
13.00 (330)	11	18	92	1.2	46	46	0.5	300	502
13.50 (343)	11	19	96	1.1	48	48	0.5	300	511
14.00 (357)	11	19	100	1.1	50	50	0.5	300	519
14.50 (368)	10	20	103	1.0	52	52	0.5	300	527
15.00 (381)	10	21	107	1.0	53	53	0.5	300	534
15.50 (394)	10	21	110	1.0	55	55	0.5	300	541
16.00 (406)	9	22	114	0.96	57	57	0.5	300	550
16.50 (419)	9	23	117	0.93	59	59	0.5	300	558
17.00 (432)	9	23	121	0.9	60	60	0.5	300	564
17.50 (445)	8	24	124	0.89	62	62	0.5	300	572
18.00 (457)	8	25	128	0.86	64	64	0.5	300	581
18.50 (470)	8	25	132	0.83	66	66	0.5	300	589
19.00 (483)	8	26	135	0.8	68	68	0.5	300	597
19.50 (495)	8	27	139	0.8	69	69	0.5	300	604
20.00 (508)	8	27	142	0.77	71	71	0.5	300	611
20.50 (521)	7	28	146	0.75	73	73	0.5	300	620
21.00 (533)	7	29	149	0.73	75	75	0.5	300	628
21.50 (546)	7	29	153	0.72	76	76	0.5	300	634
22.00 (559)	7	30	156	0.7	78	78	0.5	300	642
22.50 (572)	7	31	160	0.68	80	80	0.5	300	651
23.00 (584)	7	31	164	0.67	82	82	0.5	300	659
23.50 (597)	6	32	167	0.65	84	84	0.5	300	667
24.00 (610)	6	33	171	0.64	85	85	0.5	300	674
24.50 (622)	6	33	174	0.63	87	87	0.5	300	681
25.00 (639)	6	34	178	0.6	89	89	0.5	300	690

Notes:
1. Assumes room temperature 80°F (27°C) baseline is room temperature
2. The temperature of material removed from oven after completion of normalizing cycle cannot exceed the ambient room temperature by 15°F (8°C) 4 21°C
3. If the ambient temperature exceeds 80°F the time to cool down (category E) may be reduced by multiplying the temperature difference by the approximate cool down rate for the casting thickness and subtracting these hours from category E.