

Heating from glassy state – heating step

q^+	T_g	T_{cl}^{ons}	T_{cl}	ΔH_{c1}	T_{c2}	ΔH_{c2}	T_m^{ons}	T_m	ΔH_m
$^{\circ}\text{C}\cdot\text{min}^{-1}$	$^{\circ}\text{C}$	$^{\circ}\text{C}$	$^{\circ}\text{C}$	$\text{J}\cdot\text{g}^{-1}$	$^{\circ}\text{C}$	$\text{J}\cdot\text{g}^{-1}$	$^{\circ}\text{C}$	$^{\circ}\text{C}$	$\text{J}\cdot\text{g}^{-1}$
0.1	-16.88	6.25	8.56	31.94	73.44	0.53	104.92	111.39	72.4
0.2	-17.2	8.76	11.84	33.72	73.59	3.917	104.16	110.49	76.32
0.5	-16.92	12.45	16.2	35.58	74.18	6.234	102.02	108.98	69.29
1	-16.55	15.5	19.74	36.75	75.31	6.679	100.26	107.86	67.57
2	-16.03	18.96	23.64	38.64	76.66	6.045	98.67	106.84	63.6
3	-15.77	21.2	26.08	39.25	77.52	5.76	97.77	106.27	63.53
5	-15.45	24.45	29.63	39.95	78.59	4.752	96.85	105.64	63.39
7	-15.05	26.74	32.26	40.36	79.49	4.719	96.12	105.36	62.23
10	-14.49	29.39	35.39	41.79	80.53	4.536	95.21	105.16	61.05
15	-13.43	32.56	39.4	43.24	82.06	3.774	94.16	105.12	59.54
20	-12.39	34.91	42.65	43.51	83.89	3.556	93.81	105.17	56.75
30	-10.7	38.39	48.01	44.85	85.95	1.732	94.12	105.89	56.13
50	-7.25	43.43	56.65	43.95			96.42	107.89	48.26

Cooling from molten state – cooling step

\dot{q} °C·min ⁻¹	$T_{\text{cool}}^{\text{ons}}$ °C	T_{cool} °C	ΔH_{cool} J·g ⁻¹
0.1	89.56	83.2	70.25
0.2	86.25	77.97	65.42
0.5	80.31	70.31	62.4
1	74.41	63.65	59.16
2	67.69	55.93	56.17
3	63.78	51.51	54.4
5	59.31	44.92	52.65
7	56.75	40.49	47.36
10	54.87	36.54	30.83
15	52.7	33.38	11.56
20	50.36	31.31	3.574
30	47.31	31.21	1.374
50	43.47	30.57	1.325

Cooling from molten state – heating step

\dot{q}	Δc_p	T_{cl}^{ons}	T_{cl}	ΔH_{c1}	T_{c2}	ΔH_{c2}	T_m^{ons}	T_m	ΔH_m
$^{\circ}\text{C}\cdot\text{min}^{-1}$	$\text{J}\cdot\text{g}^{-1}\cdot\text{C}^{-1}$	$^{\circ}\text{C}$	$^{\circ}\text{C}$	$\text{J}\cdot\text{g}^{-1}$	$^{\circ}\text{C}$	$\text{J}\cdot\text{g}^{-1}$	$^{\circ}\text{C}$	$^{\circ}\text{C}$	$\text{J}\cdot\text{g}^{-1}$
0.1	0.3721						95.15	104.87	74.47
0.2	0.3254						93.13	106.12	68.8
0.5	0.3793						98.5	106.39	64.66
1	0.3178						98.36	106.17	62.13
2	0.2931				92.02	0.1939	97.35	105.93	59.77
3	0.3368				89.94	1.095	96.8	105.83	58.21
5	0.3592				87.31	2.141	95.8	105.65	57.75
7	0.3571	29.2	39.74	1.551	85.28	2.222	95.22	105.51	57.02
10	0.442	31.78	42.12	15.25	83.86	2.347	94.75	105.46	58.1
15	0.612	35	43.91	32.86	84.3	2.562	94.65	105.56	58.14
20	0.6481	36.09	44.49	38.59	84.83	2.655	94.63	105.74	57.72
30	0.6866	36.32	44.56	41.85	85.17	2.788	94.63	105.93	57.49
50	0.6697	35.36	43.94	39.95	84.62	2.382	94.45	106.19	57.96

Isotherm reached from glassy state – heating step

T_a	Δc_p	T_{c2}	ΔH_{c2}	T_m^{ons}	T_m	ΔH_m
°C	J·g ⁻¹ ·C ⁻¹	°C	J·g ⁻¹	°C	°C	J·g ⁻¹
0	0.3113	66.28	2.793	95.11	105	69
5	0.3439	68.42	3.881	95.19	105.07	66.91
10	0.3398	70.48	3.913	94.77	104.71	66.06
15	0.3234	72.93	3.761	94.78	104.64	65.59
20	0.2556	75.49	3.398	94.1	104.6	61.43
25	0.3265	77.2	4.492	94.6	104.59	61.56
30	0.3459	78.79	5.162	95.06	104.72	62.42
35	0.3025	80.56	5.77	95.33	104.87	62.33
40	0.3143	82.23	5.929	95.37	105.01	62.59
45	0.2795	83.8	5.834	95.35	105.11	62.65
50	0.2986	85.08	6.245	95.45	105.22	61.91

Isotherm reached from molten state – heating step

T_a	Δc_p	T_{c2}	ΔH_{c2}	T_m^{ons}	T_m	ΔH_m
°C	J·g ⁻¹ ·C ⁻¹	°C	J·g ⁻¹	°C	°C	J·g ⁻¹
0	0.3	66.41	3.157	95.16	105.02	68.81
5	0.2899	68.36	3.889	95.19	105.03	67.31
10	0.3267	70.5	3.966	94.85	104.69	66.12
15	0.2941	72.63	4.165	94.86	104.69	65.53
20	0.2775	75.52	4.466	94.13	104.6	61.02
25	0.2971	77.16	4.468	94.67	104.58	61.84
30	0.2694	78.8	5.281	95.13	104.69	62.01
35	0.2892	80.43	5.513	95.35	104.86	63.04
40	0.2783	82.23	5.908	95.37	105.01	62.47
45	0.2668	84.04	6.054	95.38	105.14	62.89
50	0.2705	85.93	6.087	95.29	105.26	62.21

Kinetic parameters obtained for the MCHL model applied to the crystallization during cooling

q^-	ΔH	$\ln(A/s^{-1})$	K_g	M	N
$^{\circ}C \cdot min^{-1}$	$J \cdot g^{-1}$	-	K^2	-	-
0.1	70.61271	6.15942	80835.67	0.362415	0.847045
0.2	62.94952	6.978329	94273.07	0.318896	0.739643
0.5	57.77252	8.753702	119322.2	0.353478	0.655646
1	55.36083	11.73192	165334.2	0.290917	0.626794
2	52.12018	14.53423	212482.4	0.325925	0.614499
3	50.68727	18.92132	292001.3	0.210543	0.692609
5	48.30595	21.24767	341574.9	0.219109	0.788651
7	40.98308	28.33355	492202	-0.11241	0.985016
10	23.27183	40.55991	759329.1	-0.74987	1.154166
15	7.631553	52.59001	1023759	-1.29617	1.261412

Kinetic parameters obtained for the Arrhenian rate constant coupled with the Šesták-Berggren model applied to the crystallization during heating

q^+	ΔH	$\ln(A/s^{-1})$	E	M	N
$^{\circ}C \cdot min^{-1}$	$J \cdot g^{-1}$	-	$J \cdot mol^{-1}$	-	-
0.1	31.57034	60.96667	157190.7	0.829065	0.834149
0.2	31.96905	56.46819	147377.4	0.778211	0.77727
0.5	34.73236	51.03397	134748.7	0.7595	0.776562
1	35.4088	46.94847	124900	0.763744	0.78407
2	36.79552	42.51292	114212.3	0.762552	0.768455
3	37.89298	39.88807	107836.6	0.761419	0.764584
5	38.72326	36.02735	98353.72	0.770064	0.770202
7	39.66987	33.24521	91440.02	0.778527	0.797598
10	40.85991	30.12258	83557.1	0.792435	0.876974
15	41.89643	26.19201	73646.4	0.804941	0.962869
20	42.0214	23.14854	65985.04	0.80635	1.017884
30	44.5026	18.17713	53244.29	0.820627	1.178937
50	41.415	10.75011	33855.91	0.850345	1.209235

Kinetic parameters obtained for the MCHL model applied to the isothermal crystallization from molten state

T_a	ΔH	$\ln(A/s^{-1})$	K_g	M	N
$^{\circ}C$	$J \cdot g^{-1}$	-	K^2	-	-
0	23.51679	23.471	360138	0.763421	0.658475
5	28.98943	22.21201	360138	0.68688	0.56589
10	33.83893	22.08022	360138	0.667268	0.619362
15	36.90531	22.1168	360138	0.648238	0.633214
20	36.43774	22.15053	360138	0.640893	0.653751
25	39.54854	22.39821	360138	0.666207	0.657761
30	41.86816	22.60731	360138	0.717951	0.68037
35	43.72326	22.55351	360138	0.698523	0.662705
40	46.70935	22.44495	360138	0.647701	0.644151
45	48.96995	22.64072	360138	0.621752	0.649831
50	48.30888	22.91337	360138	0.587191	0.622573

Kinetic parameters obtained for the MCHL model applied to the isothermal crystallization from glassy state

T_a	ΔH	$\ln(A/s^{-1})$	K_g	M	N
$^{\circ}C$	$J \cdot g^{-1}$	-	K^2	-	-
0	39.18407	14.23278	130518	0.768008	0.587621
5	27.69961	13.13146	130518	0.668668	0.555407
10	32.10217	12.90667	130518	0.67042	0.631253
15	35.09722	12.81947	130518	0.708962	0.66484
20	37.69692	12.56183	130518	0.588287	0.747497
25	39.11972	12.81345	130518	0.649399	0.704919
30	41.1491	12.98987	130518	0.669156	0.736662
35	43.21399	13.13483	130518	0.685009	0.835991
40	45.39039	13.22281	130518	0.703352	0.969679
45	47.33806	13.15485	130518	0.646056	1.032483
50	48.14388	13.07055	130518	0.564256	1.05498