



QUALITY CONTROL REPORT

PORTLAND CEMENT TYPE 1-325

CHEMICAL SPECIFICATION

NO.	Chemical Specification	Value	Factory standard	ISIRI 389
1	SiO ₂	21.2	---	---
2	Al ₂ O ₃	4.39	---	---
3	Fe ₂ O ₃	3.75	---	---
4	CaO	64.25	---	---
5	MgO	1.58	Max:2.5	Max:5
6	SO ₃ C ₃ A<=8 C ₃ A>8	2.29	Max:2.9 Max:3.2	Max:3.0 Max:3.5
7	K ₂ O	0.60	---	---
8	Na ₂ O	0.36	---	---
9	LOI	2.19	Max:2.9	Max:3
10	IR	0.43	Max:0.70	Max:0.75
11	F.CaO	0.95	---	---
12	LSF	93.8	---	---
13	SIM	2.60	---	---
14	ALM	1.17	---	---
15	C ₃ S	54.4	---	---
16	C ₂ S	20.6	---	---
17	C ₃ A	5.3	---	---
18	C ₄ AF	11.5	---	---



QUALITY CONTROL REPORT

PORTLAND CEMENT TYPE 1-325

PHYSICAL SPECIFICATION

NO.	Physical Specification	Value	Factory standard	ISIRI 389
1	Fineness by Blain (cm ² /gr)	2929	Min:2900	Min:2800
2	Autoclave expansion	0.037	Max:0.6	Max:0.8
3	Setting time	---	---	---
1-3	Initial Time (min)	145	Min:70	Min:45
2-3	Final time (hr)	03:15	Max:5	Max:6
4	Compressive Strength (kg/cm ²)	---	---	---
1-4	1 Day	---	---	---
2-4	3 Days	228	Min:150	Min:120
3-4	7 Days	296	Min:220	Min:200
4-4	28 Days	410	Min:350 Max:510	Min:325 Max:525
5	Heat of hydration (cal/gr)	---	---	---
1-5	3 Days	---	---	---
2-5	28 Days	---	---	---





QUALITY CONTROL REPORT PORTLAND CEMENT TYPE 1-425

CHEMICAL SPECIFICATION

NO.	Chemical Specification	Value	Factory standard	ISIRI 389
1	SiO ₂	20.90	---	---
2	Al ₂ O ₃	3.81	---	---
3	Fe ₂ O ₃	3.70	---	---
4	CaO	62.45	---	---
5	MgO	1.54	Max:2.5	Max:5
6	SO ₃ C ₃ A≤8 C ₃ A>8	2.28	Max:2.9 Max:3.2	Max:3.0 Max:3.5
7	K ₂ O	0.55	---	---
8	Na ₂ O	0.26	---	---
9	LOI	2.44	Max:2.9	Max:3
10	IR	0.36	Max:0.70	Max:0.75
11	F.CaO	1.46	---	---
12	LSF	93.2	---	---
13	SIM	2.78	---	---
14	ALM	1.03	---	---
15	C ₃ S	55.0	---	---
16	C ₂ S	20.4	---	---
17	C ₃ A	3.90	---	---
18	C ₄ AF	11.6	---	---





QUALITY CONTROL REPORT

PORTLAND CEMENT TYPE 1-425

PHYSICAL SPECIFICATION

NO.	Physical Specification	Value	Factory standard	ISIRI 389
1	Fineness by Blain (cm ² /gr)	3493	Min:2900	Min:2800
2	Autoclave expansion	0.039	Max:0.6	Max:0.8
3	Setting time	---	---	---
1-3	Initial Time (min)	155	Min:70	Min:45
2-3	Final time (hr)	03:45	Max:5	Max:6
4	Compressive Strength (kg/cm ²)	---	---	---
1-4	2 Day	169	Min:120	Min:100
2-4	3 Days	---	---	---
3-4	7 Days	---	---	---
4-4	28 Days	480	Min:425 Max:625	Min:425 Max:625
5	Heat of hydration (cal/gr)	---	---	---
1-5	3 Days	---	---	---
2-5	28 Days	---	---	---





QUALITY CONTROL REPORT

PORTLAND CEMENT TYPE 1-525

CHEMICAL SPECIFICATION

NO.	Chemical Specification	Value	Factory standard	ISIRI 389
1	SiO ₂	21.12	---	---
2	Al ₂ O ₃	4.26	---	---
3	Fe ₂ O ₃	3.72	---	---
4	CaO	63.68	---	---
5	MgO	1.46	Max:2.5	Max:5
6	SO ₃ C ₃ A≤8 C ₃ A>8	2.63	Max:2.9 Max:3.2	Max:3.0 Max:3.5
7	K ₂ O	0.52	---	---
8	Na ₂ O	0.34	---	---
9	LOI	2.30	Max:2.9	Max:3
10	IR	0.62	Max:0.70	Max:0.75
11	F.CaO	1.04	---	---
12	LSF	93.1	---	---
13	SIM	2.65	---	---
14	ALM	1.15	---	---
15	C ₃ S	52.3	---	---
16	C ₂ S	22.8	---	---
17	C ₃ A	5.1	---	---
18	C ₄ AF	11.5	---	---





QUALITY CONTROL REPORT

PORTLAND CEMENT TYPE 1-525

PHYSICAL SPECIFICATION

NO.	Physical Specification	Value	Factory standard	ISIRI 389
1	Fineness by Blain (cm ² /gr)	3652	Min:2900	Min:2800
2	Autoclave expansion	0.025	Max:0.6	Max:0.8
3	Setting time	---	---	---
1-3	Initial Time (min)	180	Min:70	Min:45
2-3	Final time (hr)	03:40	Max:5	Max:6
4	Compressive Strength (kg/cm ²)	---	---	---
1-4	2 Days	240	Min:200	Min:200
2-4	3 Days	---	---	---
3-4	7 Days	---	---	---
4-4	28 Days	567	Min:525	Min:525
5	Heat of hydration (cal/gr)	---	---	---
1-5	3 Days	---	---	---
2-5	28 Days	---	---	---





QUALITY CONTROL REPORT PORTLAND CEMENT TYPE 2

CHEMICAL SPECIFICATION

NO.	Chemical Specification	Value	Factory standard	ISIRI 389
1	SiO ₂	20.62	Min:20.5	Min:20
2	Al ₂ O ₃	4.37	Max:5	Max:6
3	Fe ₂ O ₃	3.95	Max:5	Max:6
4	CaO	63.56	---	---
5	MgO	1.46	Max:2.5	Max:5
6	SO ₃	2.46	Max:2.9	Max:3
7	K ₂ O	0.68	---	---
8	Na ₂ O	0.26	---	---
9	LOI	2.57	Max:2.9	Max:3
10	IR	0.48	Max:0.70	Max:0.75
11	F.CaO	0.95	---	---
12	LSF	94.7	---	---
13	SIM	2.48	---	---
14	ALM	1.11	---	---
15	C ₃ S	56.1	---	---
16	C ₂ S	17.5	---	---
17	C ₃ A	4.9	Max:6.5	Max:8
18	C ₄ AF	12.1	---	---



QUALITY CONTROL REPORT PORTLAND CEMENT TYPE 2

PHYSICAL SPECIFICATION

NO.	Physical Specification	Value	Factory standard	ISIRI 389
1	Fineness by Blain (cm ² /gr)	3083	Min:2900	Min:2800
2	Autoclave expansion	0.018	Max:0.6	Max:0.8
3	Setting time	---	---	---
1-3	Initial Time (min)	170	Min:70	Min:45
2-3	Final time (hr)	03:55	Max:5	Max:6
4	Compressive Strength (kg/cm ²)	---	---	---
1-4	1 Day	---	---	---
2-4	3 Days	224	Min:170	Min:100
3-4	7 Days	303	Min:250	Min:175
4-4	28 Days	430	Min:350	Min:315
5	Heat of hydration (cal/gr)	---	---	---
1-5	3 Days	---	---	---
2-5	28 Days	---	---	---





QUALITY CONTROL REPORT PORTLAND CEMENT TYPE 3

CHEMICAL SPECIFICATION

NO.	Chemical Specification	Value	Factory standard	ISIRI 389
1	SiO ₂	20.87	---	---
2	Al ₂ O ₃	3.90	---	---
3	Fe ₂ O ₃	3.73	---	---
4	CaO	62.89	---	---
5	MgO	1.54	Max:2.5	Max:5
6	SO ₃ C ₃ A<=8 C ₃ A>8	2.58	Max:3.2 Max:4.2	Max:3.5 Max:4.5
7	K ₂ O	0.56	---	---
8	Na ₂ O	0.24	---	---
9	LOI	2.40	Max:2.9	Max:3
10	IR	0.38	Max:0.70	Max:0.75
11	F.CaO	1.57	---	---
12	LSF	93.5	---	---
13	SIM	2.74	---	---
14	ALM	1.05	---	---
15	C ₃ S	56.1	---	---
16	C ₂ S	19.0	---	---
17	C ₃ A	4.1	Max:8	Max:15
18	C ₄ AF	11.6	---	---



QUALITY CONTROL REPORT

PORTLAND CEMENT TYPE 3

PHYSICAL SPECIFICATION

NO.	Physical Specification	Value	Factory standard	ISIRI 389
1	Fineness by Blain (cm ² /gr)	3496	Min:2900	Min:2800
2	Autoclave expansion	0.046	Max:0.6	Max:0.8
3	Setting time	---	---	---
1-3	Initial Time (min)	150	Min:70	Min:45
2-3	Final time (hr)	03:50	Max:5	Max:6
4	Compressive Strength (kg/cm ²)	---	---	---
1-4	1 Day	140	Min:130	Min:125
2-4	3 Days	308	Min:250	Min:240
3-4	7 Days	---	---	---
4-4	28 Days	---	---	---
5	Heat of hydration (cal/gr)	---	---	---
1-5	3 Days	---	---	---
2-5	28 Days	---	---	---





QUALITY CONTROL REPORT PORTLAND CEMENT TYPE 5

CHEMICAL SPECIFICATION

NO.	Chemical Specification	Value	Factory standard	ISIRI 389
1	SiO ₂	20.88	---	---
2	Al ₂ O ₃	4.02	---	---
3	Fe ₂ O ₃	3.94	---	---
4	CaO	63.3	---	---
5	MgO	1.51	Max:2.5	Max:5
6	SO ₃	1.85	Max:2.2	Max:2.3
7	K ₂ O	0.64	---	---
8	Na ₂ O	0.38	---	---
9	LOI	2.50	Max:2.9	Max:3
10	IR	0.49	Max:0.70	Max:0.75
11	F.CaO	1.12	---	---
12	LSF	94.5	---	---
13	SIM	2.62	---	---
14	ALM	1.02	---	---
15	C ₃ S	57.4	---	---
16	C ₂ S	17.3	---	---
17	C ₃ A	4.0	Max:4.5	Max:5
18	C ₄ AF	12.1	---	---





QUALITY CONTROL REPORT PORTLAND CEMENT TYPE 5

PHYSICAL SPECIFICATION

NO.	Physical Specification	Value	Factory standard	ISIRI 389
1	Fineness by Blain (cm ² /gr)	3159	Min:2900	Min:2800
2	Autoclave expansion	0.023	Max:0.6	Max:0.8
3	Setting time	---	---	---
1-3	Initial Time (min)	155	Min:70	Min:45
2-3	Final time (hr)	03:25	Max:5	Max:6
4	Compressive Strength (kg/cm ²)	---	---	---
1-4	1 Day	---	---	---
2-4	3 Days	203	Min:150	Min:85
3-4	7 Days	293	Min:200	Min:150
4-4	28 Days	400	Min:300	Min:270
5	Heat of hydration (cal/gr)	---	---	---
1-5	3 Days	---	---	---
2-5	28 Days	---	---	---

