

MILL TEST CERTIFICATE FOR CSA PORTLAND CEMENT TYPE HS

Production for Week Ending 2007:	7-Oct	14-Oct	21-Oct	28-Oct	4-Nov	11-Nov	18-Nov	25-Nov	9-Dec	16-Dec	23-Dec	30-Dec
CHEMICAL ANALYSIS												
SiO ₂	21.3	20.8	20.9	21.0	20.6	20.6	20.9	20.9	20.8	19.7	19.6	20.7
Al ₂ O ₃	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.1	4.0	4.0	3.9	4.0
Fe ₂ O ₃	4.4	4.5	4.5	4.5	4.7	4.6	4.6	4.5	4.5	4.7	4.6	4.5
CaO	62.1	62.3	62.1	62.3	62.1	62.2	61.6	62.0	61.4	62.3	61.7	62.0
MgO	3.08	3.22	3.22	3.33	3.52	3.79	3.69	3.68	3.58	3.90	4.05	2.95
SO ₃	2.02	2.01	2.09	1.95	2.01	2.06	2.09	2.06	2.05	2.10	1.93	2.05
Loss on Ignition	0.88	0.92	1.12	1.02	0.68	0.75	0.72	0.90	0.98	1.50	1.43	0.93
Na ₂ O	0.25	0.24	0.27	0.24	0.23	0.27	0.31	0.25	0.24	0.25	0.27	0.28
K ₂ O	0.43	0.45	0.46	0.46	0.45	0.45	0.47	0.46	0.48	0.43	0.44	0.46
Insoluble Residue	0.22	0.25	0.19	0.27	0.25	0.22	0.28	0.30	0.29	0.25	0.30	0.25
T. Alk.	0.54	0.53	0.57	0.55	0.53	0.57	0.62	0.55	0.56	0.53	0.56	0.58
C ₃ S	52	56	54	55	57	57	52	54	53	65	63	56
C ₂ S	22	17	19	19	16	16	21	19	20	8	8	17
C ₃ A	3.1	2.9	3.0	2.9	2.7	2.9	3.0	3.2	3.0	2.6	2.5	3.1
C ₄ AF	13.4	13.8	13.7	13.7	14.2	13.9	13.9	13.6	13.5	14.3	14.1	13.5
PHYSICAL PROPERTIES												
Blaine	387	400	398	392	404	393	391	391	397	397	398	392
Retained on 45µ sieve	3.62	3.65	4.33	4.61	3.15	4.04	3.97	6.72	5.30	5.27	5.05	5.56
Autoclave Expansion	0.075	0.102	0.072	0.065	0.072	0.082	0.085	0.085	0.084	0.082	0.064	0.058
Sulphate Expansion	0.038	0.038	0.038	0.038	0.038	0.028	0.028	0.031	0.031	0.031	0.031	0.031
Vicat Initial Set	74	71	79	98	88	90	93	93	93	85	102	108
False Set	88	98	87	87	79	79	90	92	90	91	86	84
Air Content	7.14	6.72	7.24	7.00	6.52	6.48	6.43	6.80	7.20	7.53	7.53	7.50
3 Day	19.9	19.7	21.8	20.2	20.8	20.6	19.4	19.3	19.8	24.5	22.7	20.4
7 Day	29.0	28.9	30.9	28.6	29.7	31.2	29.5	28.9	30.7	30.5	29.9	28.2
28 Day	44.5	41.8	44.7	40.6	42.2	43.6	44.9	43.5	38.6	37.9	39.6	42.3

Manufactured cement conforms to CSA Standard A3001-03.

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