

MILL TEST REPORT

Cement Type: **CSA Type GU**
Low Alkali Portland Cement

Plant: **Delta, BC**

Certificate #:	D1-374
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Production Period:	Jun 01 2009 Jun 30 2009	Test Result	CSA A3001 Specification
SiO2 (%)	CSA A3003	20.0	-
Al2O3 (%)	CSA A3003	5.03	-
Fe2O3 (%)	CSA A3003	3.69	-
CaO (%)	CSA A3003	65.0	-
MgO (%)	CSA A3003	0.83	max. 5.0
SO3 (%)	CSA A3003	2.80	max. 3.0
Na2O (%)	CSA A3003	0.30	-
K2O (%)	CSA A3003	0.36	-
TiO2 (%)	CSA A3003	0.25	-
C3S (%)	ASTM C150	66	-
C2S (%)	ASTM C150	8	-
C3A (%)	CSA A3003	7.1	-
C4AF (%)	ASTM C150	11.2	-
Equivalent Alkalies (%)	ASTM C150	0.54	-
Loss on Ignition (%)	CSA A3003	2.5	max. 3.0
Insoluble Residue (%)	CSA A3003	0.30	max. 1.5
Free Calcium Oxide (%)	CSA A3003	0.41	-
Vicat Setting Time			
Initial (minutes)	CSA A3004-B2	108	min. 45 max. 360
Final (minutes)	CSA A3004-B2	214	-
Blaine Fineness (m2/kg)	ASTM C204	387	-
+325 mesh	CSA A3004-A3	1.5	max. 28
Air Content (%)	CSA A3004-C4	6.60	-
Autoclave Expansion (%)	CSA A3004-B5	0.00	max. 1.0
Compressive Strength		MPa / psi	
3 Day	CSA A3004-C2	28.3 / 4098	min. 14.5
7 Day	CSA A3004-C2	35.3 / 5115	min. 20.0
28 Day (previous month)	CSA A3004-C2	42.4 / 6148	min. 26.5

This will certify that the above described cement meets the standard chemical and physical requirements of CSA Specification A3001-08 for Type GU Portland Cement.