

MILL TEST REPORT

Cement Type: **Specialty Cement**

Plant: **Delta, BC**

Certificate #: **D4-66**

Production Period:	Aug 26 2010 Sep 02 2010		Test Result	CSA A3002 Specification	ASTM C91 Specification
SO3 (%)		ASTM C114	1.96	-	-
Loss on Ignition (%)		ASTM C114	16.31	-	-
Free Calcium Oxide (%)		ASTM C114	0.21	-	-
Blaine (m2/kg)	ASTM C204	ASTM C204	665	-	-
+325 mesh (%)		ASTM C430	0.6	-	max. 24
Gilmore Setting Time					
Initial (min)	CSA A3004-B3	ASTM C266	174	min. 90	min. 90
Final (min)	CSA A3004-B3	ASTM C266	264	max. 1440	max. 1000
Air Content of Mortar (%)	CSA A3004-C4	ASTM C185	17	min. 8 max. 20	min. 8 max. 19
Autoclave Expansion (%)	CSA A3004-B5	ASTM C151	-0.01	max. 1.0	max. 1.0
Water Retention (%)	CSA A3004-C3	ASTM C91	84.4	min. 70	min. 70
Compressive Strength			MPa / psi		
7 Days	CSA A3004-C2	ASTM C109/109M	18.2 / 2639	min. 9.0	min. 9.0
28 Days	CSA A3004-C2	ASTM C109/109M	19.1 / 2770	min. 14.5 max. 25.0	min. 14.5

This will certify that the above described cement meets the standard chemical and physical requirements of CSA Specification A3002 for Type S Masonry Cement, and ASTM Specification C91 for Masonry Cement Type S.

Eileen M. Jang
 Quality Control Manager / Mill Engineer



October 12, 2010