

## TYPICAL CEMENT CERTIFICATE

Binary blended hydraulic cement type

**GUb-8SF**

Physical tests

Time of Set Vicat (minutes)  
*Initial*..... 130  
*Final*..... 290

Fineness  
Specific surface  
*Blaine (m<sup>2</sup>/kg)*..... 617  
*Retained on 45 µm sieve (%)*..... 4

Autoclave expansion (%) ..... 0.04

Compressive strength (MPa)  
*3 days*..... 25.8  
*7 days*..... 33.5  
*28 days*..... 47.5

Expansion of mortars bars at 14 days (%) ..... 0.009

Chemical Analysis (%)

*SiO<sub>2</sub>* ..... 24.4  
*Al<sub>2</sub>O<sub>3</sub>* ..... 4.3  
*Fe<sub>2</sub>O<sub>3</sub>* ..... 3.1  
*CaO* ..... 54.1  
*Free Lime*..... 1.2  
*MgO* ..... 2.3  
*SO<sub>3</sub>* ..... 3.8  
*Loss on ignition* ..... 2.8  
*Total alkali (Na<sub>2</sub>O equivalent)* ..... 0.88

Silica Fume addition (% by mass) ..... 8.3

We hereby certify that the cement delivered complies with the CSA Standard A3000-13 requirements section A3001-13, Type GUb-8SF.

For any information regarding this certificate, please contact our technical service at (418) 329-2100, ext. 3276.

Michel Chabot, Eng.  
 Chemist Engineer