

## General Information:

Silica fume is a pozzolanic material used to produce high performance concrete or mortar possessing increased strength, impermeability and durability. Silica fume reacts with the hydration products of Portland cement, forming calcium silicate hydrate gel, which enhances strength and durability by consuming the weaker calcium hydroxide.

XL-Fume™ silica fume meets all CSA A3001-13 specifications for a Type SF silica fume supplementary cementing material. XL-Fume™ meets all ASTM C1240-14 specifications for silica fume supplementary cementing material. XL-Fume™ silica fume has been specially developed to provide enhanced bulk material flow and handling characteristics, providing efficient bulk transportation and pneumatic unloading.

## Physical Analysis: (typical)\*

| Component                                | Units         | Test method     | Typical Result    |
|--|---------------|-----------------|-------------------|
| Appearance                               |               |                 | Light Grey Powder |
| Specific Gravity                         |               | CSA A3004-13-A4 | 2.2               |
| Bulk Density                             | kg/m3         |                 | 600 - 650         |
| Fineness, 45 µm retained                 | wt % retained | CSA A3004-13-A3 | 1 - 3             |
| Soundness (autoclave)                    | % expansion   | CSA A3004-13-B5 | 0.01 - 0.05       |
| Tendency to entrap air                   | Yes/No        | CSA A3004-13-A5 | No                |
| 7 day Pozzolanic Strength Activity Index | % of control  | ASTM C1240-14   | 118 - 125         |

## Chemical Analysis: (typical)\*

| Component  | Units | Test method  | Typical Result |
|--|-------|--------------|----------------|
| Silicon Dioxide (SiO <sub>2</sub> )              | wt %  | CSA A3003-13 | 86 - 89        |
| Aluminum Oxide (Al <sub>2</sub> O <sub>3</sub> ) | wt %  | CSA A3003-13 | 1.1 - 2.2      |
| Calcium Oxide (CaO)                              | wt %  | CSA A3003-13 | 0.9 - 1.5      |
| Iron Oxide (Fe <sub>2</sub> O <sub>3</sub> )     | wt %  | CSA A3003-13 | 2.0 - 3.0      |
| Magnesium Oxide (MgO)                            | wt %  | CSA A3003-13 | 1.1 - 1.5      |
| Total Alkali (as Na <sub>2</sub> O eq.)          | wt %  | CSA A3003-13 | 0.5 - 0.9      |
| Sulphur Trioxide (SO <sub>3</sub> )              | wt %  | CSA A3003-13 | 0.1 - 0.3      |
| Loss On Ignition (LOI)                           | wt %  | CSA A3003-13 | 4.0 - 6.0      |
| Moisture Content                                 | wt %  | CSA A3003-13 | 0.1 - 0.5      |

## Mixing and Handling:

Caution must be used in exposed silica fume applications as the concrete or mortar containing silica fume is darker than standard concrete.

Silica fume is very fine and dust may cause eye and respiratory irritation. Use good industrial hygiene practices (i.e. wear goggles and approved usage dust mask). For further handling and safety instructions, please consult the Safety Data Sheet (SDS).

## Supply:

Please contact Cementec Industries for FOB pricing to your location. XL-Fume is available in 20 kg bags, 1,000 kg bulk bags, or pneumatic bulk trailer shipments. Custom packaging is also available by request.

*\* testing performed by independent, third party testing, laboratories.*

Product performance is affected by many factors including storage, method and conditions of application and use. User testing is ESSENTIAL to determine suitability of product for intended method of application and use. Seller's SOLE WARRANTY is that the product has been manufactured to specifications. No oral or written information or advice shall increase this warranty or create new warranties. Seller's SOLE LIABILITY is to replace product proved defective. In no event shall Seller be liable for any consequential, indirect or other damages whether arising from negligence or otherwise.

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