The Lafarge Difference

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Lafarge Canada Inc. is part of the Lafarge Group, a world leader in building materials.

Do-It-Yourself Product Reference Guide

LAFARGE
bringing materials to *life*

General Use Hydraulic Cement (GU) Formerly T–10 Normal Portland Cement

Lafarge GU Cement is a basic ingredient for general purpose concrete. This cement is specified for use in concrete where the special properties of other hydraulic cements is not required. The amount of cement to be used in any given mix is a function of the desired properties of the concrete to be manufactured.

- Available in 40 kg bags and New "Backsaver" 20 kg bags.
- This product is manufactured to meet all requirements of CSA A3001 (Type GU).

High–Early Strength Hydraulic Cement (HE) Formerly T–30 High Early Strength Portland Cement

Lafarge High–Early Strength Hydraulic Cement produces concrete with accelerated strength gain. It is recommended where early form removal is desired, or where concrete will be cast in cold weather conditions.

- Available in 40 kg bags.
- This product is manufactured to meet all requirements of CSA A3001 (Type HE).

High Sulphate Resistant Hydraulic Cement (HS) Formerly T–50 Sulphate High Resistant Portland Cement

Developed by Lafarge, and sold under the trade name Kalicrete, this product is used where concrete will be exposed to severe sulphate attack. This cement hydrates and gains strength at slower rates, compared to GU cement.

- Available in 40 kg bags.
- This product is manufactured to meet all requirements of CSA A3001 (Type HS).

Type MCS Mortar Cement

Lafarge Mortar S cement was developed after years of research and offers a solution to obtaining the pre–blended benefits of strength and lower air content of Portland and cement/lime mixtures. For specific guidelines on mixing and using Lafarge MCS Mortar Cement, please refer to the instructions on the back of the bag.

- Available in 34 kg bags.
- This product is manufactured to meet all code requirements, as well as ASTM C270 and CSA A3002.

Stucco Cement

Lafarge Stucco Cement is manufactured with one bag convenience in mind. Lafarge Stucco Cement is used to make an "M", "CM", or "FM" mortar as defined in ASTM C926 "Application of Portland Cement Based Plaster". For specific guidelines on mixing and using Lafarge Stucco Cement, please refer to the instructions on the back of the bag.

- Available in 34 kg bags.
- This product is manufactured to meet all code requirements, as well as ASTM C270 and CSA A3002.

GUIDE FOR MAKING CONCRETE:

Concrete is made with four main ingredients:
- Appropriate type of Lafarge cement
- Concrete sand (conforming to the limits set out in CSA–A23.1)
- Crushed stone (conforming to the limits set out in CSA–A23.1)
- Clean water

By varying the proportions of the ingredients, different concrete compressive strengths can be produced depending on the applications.

Type of application	Type of concrete (28–day compressive strength)
• Foundation • Column footing • Fill	20 MPa *
• Interior floor • Interior work • Bearing piles	25 MPa *
• Structural concrete	30 MPa *
• Exterior concrete subjected to frost action such as: - sidewalks, curbs - patio steps, porches - driveways	32 MPa * with air entrainment maximum water ratio: 0.45 (air entrainment is produced by adding an air–entraining admixture during mixing of concrete)

* MPa = megapascal

Mix proportions:

Concrete strength	Cement	Water (1)	Concrete sand (2) damp	Crushed stone (3)	Volume of concrete produced
20 MPa	1 bag / 40 kg	24 L	3.5 bags / 125 kg	3 bags / 125 kg	0.14 m³ (5 cu. ft)
25 MPa	1 bag / 40 kg	24 L	3 bags / 115 kg	2.5 bags / 110 kg	0.13 m³ (4.5 cu. ft)
30 MPa	1 bag / 40 kg	20 L	2.5 bags / 105 kg	2.5 bags / 110 kg	0.12 m³ (4.2 cu. ft)
32 MPa with air entrainment**	1 bag / 40 kg	18 L	2.25 bags / 95 kg	2.25 bags / 100 kg	0.11 m³ (3.8 cu. ft)

** Based on recommendations from air–entraining admixture manufacturers.
(1) Use potable water
(2) Use clean, hard, properly graded sand. (conforming to CSA–A23.1)
(3) Use clean, hard, properly graded crushed stone, having a maximum size of 20 mm (3/4 in.) or smaller. (conforming to CSA–A23.1)

A mix that is too wet reduces the quality of the concrete.

RECOMMENDED PREPARATION FOR STUCCO:

A good stucco mortar is made with the following ingredients:
- Lafarge Stucco Cement made according to ASTM C–91.
- Aggregate Sand, free of salt, alkaline, organic or harmful substances (ASTM C–897).
- Potable water.

Lafarge Stucco Cement, when mixed with the recommended volume of sand (ASTM C–897) produces a stucco mix that complies with the proportion requirements for the "Application of Portland Cement–Based Plaster (ASTM C–926).

Plaster Coat	Lafarge Stucco Cement	Sand Volume Parts	Shovels*
Scratch Coat	1 Bag	3.5 – 4.25	25 – 30
Brown Coat	1 Bag	3 – 3.5	21 – 25
Finish Coat	1 Bag	2.25 – 3	16 – 21

* Seven #2 shovels equal 1 cubic foot.

MIXING LAFARGE STUCCO CEMENT

First, follow the mixing charts printed in this brochure and on the bag itself. If you are machine mixing, pour 2/3 of the water in first, followed by the Lafarge Stucco Cement. Add the sand and the remaining water until the mix reaches the desired consistency.

It is important for quality and cost savings to have the mixing operation continue for 5 to 10 minutes after all ingredients are placed in the mixer. This mixing time permits all necessary chemical and physical reactions to occur–improving strength, workability and the general quality of the stucco. At the same time, adequate mixing makes it possible to add more sand, which increases the volume or yield of the mix at very little cost.

COVERAGE

The following table outlines the area covered by one (1) bag of Lafarge Stucco Cement in various mixes, applied in various thickness. This table may vary due to different trade practices.

Mixture Parts by Volume		Thickness of Stucco Coat			
		1/4	3/8	1/2	3/4
Stucco Cement	Sand	Square Feet			
1	2.5	120	90	60	45
1	3	144	108	72	54
1	3.5	168	126	84	63
1	4	192	144	96	72

Lafarge manufactures / distributes a number of speciality cement products including White Portland Cement, as well as a wide range of Calcium Aluminate Cements. For more information on these products, please contact your local Lafarge dealer.

You must check with your local building authorities as to cement type and strength requirements for each concrete application.