



## DATA SHEET NO. 8043-050

### V-3<sup>®</sup> 10K Grout

#### DESCRIPTION

V-3 10K grout is composed of graded sieve sizes of pure silica sand, high early strength cement, plus natural inorganic and synthetic materials, blended under strict quality control standards for consistent, uniform, high quality. Finished appearance is similar to concrete and is volumetrically expansive.

#### USES

V-3 10k is used in the following grouting applications:

Anchor bolts, sole plates, bridge bearings, conduit, dowels, sleeves, hangers, pipes, lighting standards and communication towers, signs and highway posts, tanks, guard rails, etc.

Lathes, cranes, rolling mills, ball mills, pulp and paper mills, rubber, and chemical processing equipment, where high early strength and reduced down time is important;

Equipment subject to wide temperature variations or subject to stray electrical currents.

Structural steel columns, bridge beams and seats, transmission towers, and shims.

Post-tensioned concrete and in the manufacture of pre-stressed concrete structurals, underpinning, jointing of precast walls and concrete pipes.

#### FEATURES/BENEFITS

- Truly non-metallic (not just non-ferrous).
- May be dry packed for applications where forming is not desired.
- Contains no cast iron borings or aluminum particles and therefore can be used in areas where products containing these elements cannot be employed.
- High early strength/high mechanical properties.
- High flow.
- Variable flow consistencies.
- Successfully withstands fluctuations of moisture, dryness, heat and cold.
- May be used inside or out without unsightly rusting or the necessity of parging.
- Does not contain chlorides, sulphides, or similarly harmful chemicals which produce corrosive action and which are present in many other grouting compounds.
- Free from carbon, coke, fly ash, or argillaceous materials.

- Rapid strength development; at recommended fluidity, V-3 10K attains compressive strength of over 38 MPa (5500 psi) in 24 hours.
- Ease of installation/No special equipment or personnel are required. Handle as a "performance" concrete.

#### PACKAGING

22.7 kg (50 Lb.) Bag

#### TECHNICAL DATA

Consistency (per ASTM C 827-10)	Plastic	Flowable
Mix Ratio* per 22.7 kg (50 lb.)	2.84 L (6.0 pts)	3.08 L (6.5 pts)
Percentage Flow (per ASTM C 230-08)		
5 Drops in 3 sec	120%	140%
Set Time (per ASTM C 191-08)		
Initial Set	30-45 min.	30-45 min.
Final Set	3-4 hrs	7-8 hrs
Compressive Strength (per ASTM C 109-11A)	MPa (psi)	MPa (psi)
@ 1 day	43 (6,250)	40 (5,750)
@ 3 days	56 (8,067)	46 (6,700)
@ 7 days	61 (8,842)	60 (8,733)
@ 28 days	76 (11,088)	74 (10,675)

\*V-3 10K may be mixed to a dry pack consistency. Use 2.1 L (4.5 pints) of water per bag.

All technical data is typical information, but will vary due to testing methods, conditions, procedures, batching variations, and raw materials variances.

#### Chemical Analysis

No metallic elements. No evidence of corrosives.

#### COVERAGE

22.7 kg (50 lb.) bag yields 12,176 cm<sup>3</sup> (0.43 ft.<sup>3</sup>) of in-place grout, when using the median water ratio level.

#### SHELF LIFE

One year from date of manufacture when stored indoors on pallets in a dry, cool area. Do not store product outside.

#### SPECIFICATIONS

- Agriculture and Agri-Food Canada accepted.

Continued over ...

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## APPLICATION

**Surface Preparation ...** Clean grout contact surfaces of oil, grease, scale, dirt, and other foreign matter. Treat stubborn oil and grease deposits with a caustic solution, then flush all surfaces with clean water. Abrade and roughen existing concrete, ensuring removal of unsound concrete. The surface should be roughened and level. Prior to placing grout, saturate all surfaces by flooding with water for a period of 3 - 12 hours.

**Forming ...** Provide for rapid, continuous, and complete grout placement. Use forms of sufficient strength, closely fitted with joints sealed to prevent leakage. Coat forms with DUOGARD® from W. R. MEADOWS. Do not form tight to equipment - air may be entrapped. Slant forms on the pouring side to avoid trapping air. Allow 76 mm (3") clearance for grout entry and up to 152 mm (6") "head." On the opposite side of the entry, allow minimum 12.7 mm (1/2") clearance between form and equipment and provide initial 25.4 mm (1") of grout "head" above the bottom of the equipment base plate. Reduce all grout "heads" to 3 mm (1/8") after initial set. Provide minimum 19 mm (3/4") grout thickness between foundation and base plate.

**Temperature ...** V-3 10K sets faster at high temperatures; slower at lower temperatures. Follow normal winter or summer concreting procedures as appropriate.

**Mixing ...** Use minimum water necessary to produce mix consistency desired. Mix grout in conventional mortar mixing equipment. First add 2/3 of the amount of water required, mix for a short period (until lump free), and then add the balance of the water. Mix for a further two or three minutes. Smaller quantities may be mixed using a blending propeller on a slow-speed drill.

For deep grouting, V-3 10K may be extended by adding up to 50% by weight washed pea gravel (sizes up to 9.5 mm - 3/8"). (See information on bag.)

Mix only enough grout for immediate use.

**Placement ...** Place by damp-packing, pumping, pouring, rodding, strapping, chaining, or vibrating. To prevent voids, place grout from side or corner only, or, alternatively, place excess grout which will be displaced by the weight of the object to be grouted (e.g. leveling plate) to effect full bearing. Larger objects (e.g. large tanks) may require use of shims.

**Curing ...** Follow normal concrete curing procedures. Do not remove forms until grout is sufficiently hard to avoid sagging. Cover exposed material with wet burlap during the first 48 hours. Alternatively use 1100-CLEAR, CS-309™ (VOC), or VOCOMP®-20 from W. R. MEADOWS as a membrane cure.

## PRECAUTIONS

V-3 10K is not normally recommended where the space under a base plate or around an anchor bolt is less than 12.7 mm (1/2"). However, where only dead loads and little stress are involved, 12.7 mm (1/2") may be sufficient. Do not employ extending aggregate for 12.7 mm (1/2") thickness or less. The basic rule is that aggregate size should be no greater than 20% of grout depth. Do not use sand as an extender under any circumstances. Use crushed stone as an extender only in damp pack mixes or other placements where flowability is not a consideration, since the angular shape of this aggregate is not conducive to flowability. Consult W. R. MEADOWS for information on extending aggregates for specific installations.

Where grout may be exposed to sulphuric, nitric, hydrochloric, or other acids corrosive to concrete, protect with an applicable chemical-resistant coating.

## MASTERFORMAT NUMBER AND TITLE

03 62 13 – Non-Metallic Non-Shrink Grouting

## LEED INFORMATION

May help contribute to LEED credits:

- IEQ Credit 4.1: Low-Emitting Materials: Adhesives and Sealants
- MR Credit 2: Construction Waste Management
- MR Credit 5: Regional Material

For most recent data sheet, further LEED information, and MSDS, visit [www.wrmeadows.com](http://www.wrmeadows.com).

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