COLD WEATHER CONCRETE MIX

DIVISION 03 31 00 - STRUCTURAL CONCRETE





KNOW YOUR MIX

Cold Weather Concrete Mix is a highly engineered blend of aggregates, cement and proprietary admixtures designed to quickly develop high strength. Ideal for applications in cold temperatures as low as 0°F and featuring exceptional freeze-thaw resistance for any project over 2" (51mm) in depth.









APPLICATIONS
2"+

STRENGTH

TECHNICAL DATA

| PACKAGE SIZE | YIELD | WATER REQUIRED | SLUMP RANGE |
|--------------|----------------------|----------------|-------------|
| 50 lb | 0.35 ft ³ | 2 qts | 2 – 3 in |
| 22.7 kg | .008 m ³ | 1.9 L | 50–75 mm |

| PSI - 3 HOUR | PSI - 1 DAY | PSI - 7 DAY | PSI - 28 DAY | ASTM CERTIFICATIONS |
|--------------|-------------|-------------|--------------|---------------------|
| 4,000 psi | 6,000 psi | 8,000 psi | >8,000 psi | ASTM C928-R3 at 0°F |
| 27.5 MPa | 41 MPa | 55 MPa | >55 MPa | |

| INITIAL SET TIME | FINAL SET TIME | |
|-----------------------------------------|-----------------------------------------|--|
| 10 – 30 minutes (temperature dependent) | 30 – 60 minutes (temperature dependent) | |

Data at 0°F and at a 3" slump

LEED ELIGIBILITY

- Regional Materials (MR-c5)
- Recycled Material (MR-c4)

PRECAUTIONS

Temperatures should be between $0^{\circ}F$ (-18°C) and $90^{\circ}F$ (32°C). For applications outside of this range of conditions, contact the Technical Support Team.

- Do not apply when frost is present on any surface.
- · Colder temperatures or higher humidity conditions will extend set times.
- Use only clean mixing containers and tools.
- Do not over trowel.
- Do not overwater.
- Do not add anything other than clean potable water.

NOTE: Proper application and installation of all products are the responsibility of the end user.

PREPARATION/APPLICATION

For best results, all materials should be stored between 40°F (4°C) and 90°F (32°C) 24 hours prior to installation.

REFER TO

- ACI 302.1 Guide for Concrete Flooring and Slab Construction
- ACI 304.1 Guide for Measuring, Mixing, Transportation and Placing Concrete
- ACI 305R Guide for Hot Weather Concreting
- ACI 305R Guide for Cold Weathering Concreting



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MIXING

- 1. For best results, use a mechanical mixer with rotating blades or use a heavy-duty corded drill and mixing paddle in a 5-gallon bucket. Pre-wet mixer/bucket and empty excess water.
- 2. Place the appropriate amount of clean, potable water in the mixer, then add dry material. Mix on low RPM for a total of 2 3 minutes until a homogeneous mixture is achieved. Mix only enough material that can be placed within working time.
- 3. Do not add excess water as bleeding and segregation may occur. Do not use any other admixtures or additives.

APPLICATION: REPAIRS

- 1. Surfaces to be repaired must be sound, dimensionally stable, and clean.
- 2. Slick or sealed surfaces must be roughened to an ICRI CSP of 3 to 5.
- 3. Saw cut perimeter of area.
- 4. Clean all reinforcing steel to bare metal and coat with a rust preventative if not covering within 8 hours.
- 5. Clean and remove all loose materials and debris.
- 6. All surfaces that will come in contact with the concrete mix should be brought to a SSD (Surface Saturated Dry) condition.
- 7. Completely fill the repair area and use a concrete float to ensure proper consolidation.
- 8. Use a float to remove any surface imperfections and to achieve the desired finish.

APPLICATION: FLAT WORK (SLABS)

- 1. Stake out the area where the concrete will be placed and remove all soil, grass, debris, etc.
- 2. For improved drainage, place several inches of gravel into the excavated area. Remember to allow enough depth for both the gravel and a minimum of 4" (102 mm) of concrete.
- 3. Pre-treat forms with a release agent to prevent water absorption and for the ease of removal.
- 4. Place forms in the desired area, ensuring that they are level, square, and that all corners are sealed.
- 5. Place the mixed concrete into the forms to full depth.
- 6. Fully fill the form, working the mix into corners and compacting to minimize voids.
- 7. Using a straight edge, strike the surface level with the top of the forms using a sawing motion.
- 8. Use a float to smooth the surface and remove any imperfections. Use an edging tool to smooth the edges along the forms.
- 9. Using a concrete grooving tool, cut joints into the concrete every 3 4 ft. (.9 1.2 m). Expansion joints should be placed every 8 ft. x 12 ft. in each direction and must extend through the entire depth of the slab.
- 10. Once concrete has stiffened slightly, a broom finish can be applied. Forms can also be removed once the material has set (after approx. 30 60 min).

SAFETY







DANGER HAZARD STATEMENT

Causes skin irritation. Causes serious eye damage. May cause an allergic skin reaction. May cause cancer. Causes damage to organs (lungs) through prolonged or repeated exposure.

PRECAUTIONARY STATEMENTS

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe dust/fume/gas/mist/vapors/spray. Wash hands, forearms and face thoroughly after handling. Do not eat, drink or smoke when using this product. Contaminated work clothing must not be allowed out of the workplace. Wear protective gloves/protective clothing/eye protection/face protection. If exposed or concerned: Get medical advice/attention. If on skin: Wash with plenty of water. Take off contaminated clothing and wash it before reuse. If skin irritation or rash occurs: Get medical advice/attention. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center or doctor. Store locked up. Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation. KEEP OUT OF REACH OF CHILDREN.

CONTAINS: Portland cement.

WARNING: This product can expose you to Crystalline Silica, which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

KEEP OUT OF THE REACH OF CHILDREN AND ANIMALS.

For additional information, call the manufacturer at 866-725-7383 or Chemtrec at 800-424-9300 or 703-527-3887 outside of USA. Refer to Safety Data Sheet (SDS) for further information.

LIMITED PRODUCT WARRANTY

COLD WEATHER CONCRETE MIX





The manufacturer warrants that this product is free from defects in material and workmanship and will perform per the manufacturer product literature in effect at the time of purchase. This warranty is for one (1) year from the date of purchase. Any implied warranty of merchantability or fitness for a particular purpose is limited to the duration of this express warranty. This warranty applied only if the product is used, in strict accord with manufacturer published instructions. The sole and exclusive remedy under this warranty is replacement of the defective product or refund of the purchase price, at manufacturer's option. CONSEQUENTIAL, SPECIAL, AND INCIDENTAL DAMAGES ARE NOT RECOVERABLE UNDER THIS WARRANTY. All claims under this warranty must be submitted to manufacturer by calling 866-725-7383. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

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