

UNIQUE[®] HIGHWAY DOT

FAST SETTING
CONCRETE MIX

DATA SHEET

UNIQUE[®] Highway DOT Fast Setting Concrete Mix

Product Description

UNIQUE[®] Highway DOT Fast Setting Concrete Mix is a blend of hydraulic cement, sand, 3/8" stone (ASTM C-33), and performance enhancing additives.

Recommended Uses

Use for deep patches on roadways, industrial floors, loading docks, parking garages, bridge decks, footings and sidewalks.

Benefits / Features

- High early strength
- Freeze-thaw resistant
- Excellent adhesion to concrete surfaces
- For repairs from 2" to 12" deep
- Sulfate resistant
- Open to foot traffic in 1 hour
- Open to vehicle traffic in 3 hours
- Exceeds 300 freeze/thaw cycles
- Applicable to virtually every horizontal concrete application 2" to 12"

Limitations

Not intended for applications on unsound concrete or like surfaces. Not intended for applications under 2" deep. For shallower applications use UNIQUE[®] High Performance Fast Set Mortar. For overlay applications at least one section should be prepared to evaluate the suitability of the materials and procedures.

Surface Determination

Why has the concrete failed? Is there presence of salt, freezing damage, drainage water, deteriorated control or expansion joints? The surface area to be repaired should be in solid condition.

Surface Preparation

The area to be repaired should be checked with a chipping hammer to ensure the exposed concrete is not scaling. If a section of concrete is deemed to be questionable, complete removal and replacement should be considered. Patching over control or expansion joints is not recommended. The quality and durability of your repair depends on the surface to be patched. Remove loose concrete, mineral salts, grease and paint that will limit bonding performance.

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Mineral salt should be treated with an acid wash to ensure its removal. Exposed rebar should be free of rust or scaling then protected with a zinc oxide coating to reduce the probability of future rust development. Wet the repair area with water leaving it Saturated Surface Dry (SSD) during the repair. Any standing water should be removed.

For Best Results

For best results the water temperature should be between 55°F and 75°F.

- Warmer water will accelerate the set of the material
- Cooler water will slow the set of the material

Mixing

Organize work so that all personnel and equipment are in place before mixing. Roll or shake the sealed pail of UNIQUE Highway DOT concrete mix to ensure the product is thoroughly mixed prior to use. Use clean, potable water. The use of a mortar mixer or variable speed drill is recommended. UNIQUE Highway DOT concrete mix may be mixed using the percentages of water as shown in the table below:

Water	UNIQUE [®] Highway DOT Fast Set Concrete Mix
20 - 22 oz.	10#
40 - 44 oz.	20#
3.3 - 3.4 qt.	50#

Use less water to achieve higher strengths. Do not exceed the recommended water percentages.

Place the desired quantity of water into the mixing container. While the mixer is running add UNIQUE Highway DOT concrete mix. Mix for the minimum amount of time required to achieve a lump-free, uniform consistency (usually 1 to 3 minutes). Do not re-temper. Do not mix more material than can be placed in a 10 minute period.

If mixing smaller amounts of UNIQUE Highway DOT concrete mix, thoroughly mix the entire pail of dry ingredients prior to adding the product to the water. Use the chart below for water ratios:



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Placement

Make sure surface is SSD and any standing water has been removed. Place, consolidate, screed and apply finish as soon as possible (DO NOT WAIT FOR BLEED WATER). Trowel mixed material into the voids of the existing concrete. Place product in full depth sections. Product may be trowel floated or texture finished. DO NOT layer material. DO NOT apply on frozen surfaces.

Coverage

10 pounds of **UNIQUE** Highway DOT concrete mix yields approximately 0.18 cubic foot of finished product when mixed with 22 ounces of potable water.

Cleanup

Water soluble prior to drying. Clean container and tools prior to material drying.

Curing

Damp cure all **UNIQUE** Highway DOT concrete mix installations. Begin curing as soon as the surface has lost its moist sheen. Keep exposed surfaces wet for a minimum of 1 hour. When experiencing extended setting times, due to cold temperature or the use of retarder, longer cure times

may be required. The objective of damp curing shall be to maintain the continuously wet surface until the product has achieved sufficient strength.

Temperature

Warm environmental and materials temperatures will reduce the working time of **UNIQUE** Highway DOT concrete mix to compensate for warm temperatures, keep material cool and use chilled water. Temperatures below 60°F will decrease the rate of strength gain. **UNIQUE** Highway DOT concrete mix should not be applied if surface temperature is below 45°F or above 90°F.

Shelf Life

One year if stored in an unopened bag or two years if stored in an unopened pail according to ACI Guidelines.

Freight

Class 55

Packaging

Item #	Description	
52-00035	UNIQUE® Highway DOT Fast Set Concrete Mix Pail 1-gal (10#)	120 - 10# pails per stretch wrapped pallet 3360 - 10# pails per truckload
52-00032	UNIQUE® Highway DOT Fast Set Concrete Mix Pail 2-gal (20#)	60 - 20# pails per stretch wrapped pallet 1680 - 20# pails per truckload
52-00025	UNIQUE® Highway DOT Fast Set Concrete Mix Pail 5-gal (50#)	36 - 50# pails per stretch wrapped pallet 828 - 50# pails per truckload
Special	UNIQUE® Highway DOT Fast Set Concrete Mix Poly Lined Bag (50#)	60 - 50# bags per stretch wrapped pallet 840 - 50# bags per truckload Minimum order 2,000 bags

Truckload quantities are typical but may vary depending on destination, truck tare weight and/or trailer type (box van, flat bed, rail shipments or ocean freight container).

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Caution:

This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive problems. THIS PRODUCT CONTAINS FREE SILICA. Any inhalation of dust may be harmful to your health. Excessive inhalation causes the risk of serious respiratory disease (SILICOSIS) and susceptibility to other possibly fatal disease. Some medical studies suggest a possible association between crystalline silica and incidence of cancer in humans. Take appropriate protective measure to avoid breathing dust. Use a NIOSH approved respirator for silica dust. For further information, please refer to the Safety Data Sheet. Injurious to eyes and causes skin irritation. Contains Portland Cement and Lime. Avoid eye contact or prolonged contact with skin. Wash thoroughly after handling. In case of eye contact, flush with plenty of water for at least 15 minutes. Consult a physician immediately if irritation persists. Keep out of reach of children. Do not take internally.

Limited Warranty:

UNIQUE Paving Materials Corporation (UNIQUE) warrants that at the time and place we make shipment our materials will be of good quality and will conform with our published specifications in force on the date of acceptance of the order. THE FOREGOING WARRANTY SHALL BE EXCLUSIVE AND IN LIEU OF ANY OTHER WARRANTY, EXPRESSED OR IMPLIED. WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE AND ALL OTHER WARRANTIES OTHERWISE ARISING BY OPERATION OF LAW, COURSE OF DEALING, CUSTOM OR TRADE OR OTHERWISE ARE SPECIFICALLY DISCLAIMED. As the exclusive remedy for breach of this warranty, we will replace defective materials, provided, however, that the buyer examines the material when received and promptly notifies us in writing of any defect before the materials are used or incorporated into structure. Three (3) months after UNIQUE has shipped the materials, all our warranty and other duties with respect to the quality of the materials delivered shall conclusively be presumed to have been satisfied, all liability therefor terminates, and no action for breach of any duties may thereafter be commenced. UNIQUE shall in no event be liable for consequential damages. No warranty is made with respect to materials not manufactured by UNIQUE.

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