

CALIFORNIA DEPARTMENT OF TRANSPORTATION

AUTHORIZATION PROCEDURES AND CRITERIA FOR MATERIALS FOR CEMENTITIOUS PIPELINERS AND CONCRETE INVERT PAVING

The procedure for inclusion on the list of authorized materials for cementitious pipeliners and concrete invert paving is:

I. Manufacturer submits a submittal package and Authorized Material List Submittal Form, TL-9502 to New.Products@dot.ca.gov. Form TL-9502 is available at: www.dot.ca.gov/aml/

The submittal package must include:

- A. Company's name, address, contact information
- B. Name of the product
- C. Material Safety Data Sheet
- D. Test results from an independent, authorized laboratory. The product must provide a corrosion barrier, seal voids and leaks, and resist abrasion. The product must meet or exceed the requirements for minor concrete under section 90-2 of Caltrans Standard Specifications.

The product must comply with the requirements shown in the following table:

Quality characteristic	Test method	Requirement
Compressive strength at 28 days (min, psi)	ASTM C109	6,000
Abrasion resistance	ASTM C1138	<6% loss

Calcium aluminate cement based products must meet one of the following:

1. The water-to-cement ratio in the field must not exceed 0.35
2. Long term compressive strength must be at least 6000 psi when tested under the following procedure. Six 6 x 12 inch cylinders must be cured adiabatically in a curing box with continuous temperature monitoring for 48 hours. The mixed material must be designed to reach a 140 degrees Fahrenheit during the curing process. Test compressive strength of 3 cylinders at 24 hours and 3 cylinders at 48 hours. Determine the average compressive strength at each age. The long term compressive strength is the lower of the values.

II. Caltrans will:

- A. Review the submittal for completeness and compliance with the requirements
- B. Notify the manufacturer of missing documents or unsatisfactory test results
- C. Update the authorized materials list as necessary

Authorization is valid for 5 years. To renew, provide a submittal package with current information approximately 6 months before expiration.

Products that do not perform adequately in the field may be removed from the authorized material list at any time.