

901-M-069 PORTLAND CEMENTS AND BLENDED CEMENTS

(Revised 08-21-25)

The Standard Specifications are revised as follows:

SECTION 901, BEGIN LINE 18, DELETE AND INSERT AS FOLLOWS:

(b) Portland Cements and Blended Cements

Portland cements and blended cements shall conform to the requirements of the following specifications except as noted be furnished from a source listed on the QPL of Cement Sources. Cement sources will be considered for inclusion on the QPL by completing the requirements in ITM 806, Procedure X.

1. Requirements

Portland cements and blended cements shall be in accordance with the following specifications and exceptions.

Cement	Specifications
Air-Entraining Portland Blast-Furnace Slag Cement	AASHTO M 240, Type IS-A
Air-Entraining Portland Cement	AASHTO M 85, Type IA or IIIA
Air-Entraining Portland-Pozzolan Cement	AASHTO M 240, Type IP-A
Portland Blast-Furnace Slag Cement	AASHTO M 240, Type IS
Portland Cement	AASHTO M 85, Type I, II, or III
Portland-Limestone Cement	AASHTO M 240, Type IL(t^*)
Portland-Pozzolan Cement	AASHTO M 240, Type IP

** The cement manufacturer may select their target percentage by mass, t , of limestone in the finished blended IL cement, however the amount of limestone in the finished blended cement shall not exceed 10% by mass of the blended cement. Every variation and tolerance in all production variables shall be accounted for such that the amount of limestone in the finished blended IL cement does not exceed 10% by mass of the blended cement.*

The exceptions to AASHTO M 240 are as follows:

- a. Section 7.1.3 shall read as follows, *Portland-Pozzolan Cement – Portland pozzolan cement shall be a hydraulic cement in which the pozzolan constituent is up to 20% by mass of the blended cement.*
- b. Section 7.1.5 shall read as follows, *Portland-Limestone Cement – Portland-limestone cement shall be a hydraulic cement in which the limestone content is more than 5% but less than or equal to 10% by mass of the blended cement.*
- ac. The amount of pozzolan shall be limited to 20% $\pm 5\%$ by weight of the portland-pozzolan cement for types IP and IP-A.
- bd. The pozzolan in the portland-pozzolan cements, types IP and IP-A, shall be in accordance with ASTM C618, Class C or

Class F with the loss on ignition of the pozzolan limited to a maximum of 3%.

- ee. The pozzolan in the portland-pozzolan cements, types IP and IP-A, shall be interground with the portland cement clinker.

2. Acceptance Criteria Blank

~~Portland cements and blended cements will be accepted based upon the manufacturer's or distributor's documented ability to consistently furnish these materials in accordance with the applicable AASHTO requirements.~~

a. General Requirements

~~Cements shall comply with the applicable requirements of 901 and will be accepted by certification from qualified manufacturers or distributors. The manufacturer is defined as the plant producing the cement. A manufacturer or distributor shall become qualified by establishing a history of satisfactory quality control of cement produced as evidenced by results of tests performed by a testing laboratory which is regularly inspected by the Cement and Concrete Reference Laboratory of the NIST and Technology. Proof of such inspection shall be furnished upon request. All certifications shall be prepared by the manufacturer or distributor in accordance with the applicable requirements of 916.~~

~~If a manufacturer or distributor elects to supply portland cement with a higher sulfur trioxide content in accordance with footnote B from Table 1 in AASHTO M 85, they shall supply all the required supporting data to the Department's Division of Materials and Tests prior to supplying such cement. A QPL of Cement Sources will be maintained by the Department.~~

~~The manufacturer or distributor shall conduct sufficient tests to confirm that adequate quality control is maintained and that cement furnished is in accordance with the specification requirements. Documentation pertaining to cement shipped on certification shall be maintained for a period of at least three years and shall be provided when requested.~~

~~Random samples of cement will be obtained at the concrete plant. If the sample is not in accordance with the specification requirements, an investigation will be conducted. A copy of the findings and conclusions resulting from the investigation will be furnished to the Contractor. Unless the investigation finds the Department is responsible for the failure to comply, the cost of the investigation plus any required corrective action will be assessed to the Contractor.~~

b. Requirements for Domestic Source Qualification

~~Cement manufacturers requesting to be qualified to supply cement shall provide the following:~~

- ~~(1) For the initial qualification, the manufacturer shall provide to the Department's Division of Materials and Tests a QCP in accordance with the applicable requirements of ITM 806. The QCP shall also include the~~

~~location and type of samples taken, and a monthly summary of mill test data for the previous year's production. A current SDS shall be submitted as an integral part of the initial qualification package.~~

(2) ~~To maintain qualification, a monthly average of mill test data shall be submitted to the Department's Division of Materials and Tests. If a specific type of cement is not manufactured in a given month, the monthly submittal shall state "No type _____ cement was manufactured during the month of _____, 20____".~~

c. Requirements for Foreign Source Qualification

~~Foreign cement manufacturers or their domestic distributors requesting to be qualified to supply cement shall provide the following:~~

(1) ~~For the initial qualifications, the manufacturer and distributor shall provide to the Department's Division of Materials and Tests a QCP in accordance with the applicable requirements of ITM 806. The QCP shall also include the location and type of samples taken and a summary of complete test results from the proposed cement source. A current SDS shall be submitted as an integral part of the initial qualification package. The QCP shall explain the linkage between the cement being furnished and the manufacturer's or distributor's quality control data, relative to ship loads, barge loads, railroad car loads, and other applicable loads.~~

(2) ~~Once the initial qualifications have been met, the manufacturer or distributor shall be required to furnish the cement test results for each shipment prior to Department cement usage for the first five cement shipments intended for Department use. The test results for all five of these cement shipments shall fully comply with the required material specifications. If not, this requirement will be continued for subsequent cement shipments until five consecutive cement shipment test results fully comply with the required material specifications, or Department source approval is withdrawn due to the inability to consistently supply satisfactory cement.~~

(3) ~~To maintain qualification after compliance with the previous requirements, a monthly submission of all cement shipment test results for cement intended for Department usage shall be submitted to the Department's Division of Materials and Tests. If no cement shipments~~

~~are received during a given month, the monthly submittal shall state "No cement was received during the month of _____, 20____".~~

d. Certification

~~Only manufacturers and distributors included on the QPL of Cement Sources may furnish cement on certification. A sample certification form addressing all required information is included in ITM 804. Alternate procedures and forms will be considered when requested and will be approved if there is a positive link between the cement furnished and the manufacturer's quality control data.~~

SECTION 901, BEGIN LINE 147 DELETE AND INSERT AS FOLLOWS:

(d) Rapid Hardening Hydraulic Cement

Rapid hardening hydraulic cement shall be calcium sulfoaluminate, CSA, cement furnished from a manufacturer or manufacturer/distributor on the QPL of Cement Sources. A source will be considered for inclusion on the QPL by completing the requirements of 901.01(b)2b or 901.01(b)2e ITM 806 Procedure X.
