



**AUTHORIZED REQUIREMENTS AND ACCEPTANCE CRITERIA FOR
CRUMB RUBBER MODIFIER**

The following procedures are required to authorize crumb rubber modifier (CRM) suppliers for inclusion in the Authorized Material List for Crumb Rubber Modifier.

Only crumb rubber manufactured in the United States that is derived from waste tires taken from vehicles owned and operated in the United States may be used.
– California Public Resources Code Section (PRC §) 42703

CRM specification requirements are listed in Section 37, Section 39, and Section 92 of the 2018 Standard Specifications.

1. Manufacturer/Supplier must:

- a. Provide a Submittal Package which includes but is not limited to:
 - i) CRM Manufacturer's name, plant address, and contact information.
 - ii) Identify CRM produced at the plant.
 - iii) Description of the manufacturing plant's CRM product labeling system (i.e. lot numbers, batch numbers, manufacturing date, bill of lading, etc.) when it is supplied to a contractor. Attach a sample of CRM product label.
 - (1) The CRM product labeling system must be unique and allow for tracking of all manifests/documents associated with all waste tires used in this uniquely labeled CRM product.
 - (2) The product labeling system must certify that all CRM is derived from whole waste tires taken from vehicles owned and operated in the United States.
 - (3) If the Manufacturer/Supplier, including any subsidiaries, division and /or affiliates use raw materials, whether whole tires, shreds, granulite or crumb rubber, that do not conform with California PRC § 42703, it must further certify that there is no co-mingling at any time with raw materials used to produce CRM in Caltrans projects.
 - (4) Example:

I, _____ (Name), am authorized to contractually bind the Company and certify as to the following: I certify under penalty of perjury that 100 percent of the crumb rubber supplied under Lot _____/Batch _____ was manufactured in the United States of America, was derived from whole waste tires taken from

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vehicles owned and operated in the United States of America in compliance with California PRC § 42703.

Name: _____ Title: _____
Signature: _____
Company Name: _____ Executed on (date): _____

- iv) Description of the CRM manufacturer's documentation of the waste tire chain of custody system from generators to hauler to collector to CRM manufacturing plant and sold and delivered to a hot plant job site, asphalt or binder manufacturer located in the State of California. Attach sample manifest/document of this chain of custody system.
- (1) CRM manufacturers participating in the California Tire Management Program, administered under California's Department of Resources Recycling and Recovery (CalRecycle) satisfy Caltrans requirement for manifest/document of the waste tire chain of custody system. Provide a current copy of the CalRecycle Permit and Tire Program ID Number (TPID).
 - (2) The chain of custody for all other CRM manufacturers must comply with the following:
 - (a) Each leg of the chain of custody system must employ a unique manifest/document system.
 - (b) For the first leg of the chain of custody system (hauler), the waste tire generator must be traceable to a location in the United States. Waste tires taken from vehicles at tire generator located in the United States are assumed to be vehicles owned and operated in the United States.
 - (c) For each leg of the chain of custody system, the document/manifest must identify the initial and final destination, and the amount of waste tire hauled.
 - (d) The CRM manufacturer must keep a copy of the manifest/document for all legs of the chain of custody system.
 - (e) If the Manufacturer/Supplier, including any subsidiaries, division and /or affiliates, accept materials, whether whole tires, shreds, granulate or crumb rubber, from out-of-state companies, it must further certify that it has obtained the chain-of-custody documents to prove that the materials are in conformance with California PRC § 42703
- b. Provide two bags of samples (2 lbs of scrap tire crumb rubber and 2 lbs of high natural scrap tire crumb rubber). CRM must be properly labeled (i.e. Scrap tire CRM or High Natural CRM). Certificate of Compliance for a

sample tested no more than two (2) months prior to Caltrans receipt of the Submittal Package. At a minimum, the material data sheet must contain test results for the applicable Caltrans specification requirements.

Send the required documents and samples to:
Caltrans Transportation Laboratory
Attention: Sanchita Dey, Crumb Rubber Modifier
5900 Folsom Boulevard
Sacramento, CA 95819

Caltrans will evaluate the submittal and when complete will notify the manufacturer/supplier of a facility audit.

2. Facility Audit

Audits are conducted to verify that the manufacturer/supplier is meeting the requirements as identified in the submittal.

a. Initiating the Audit

The Department will notify the manufacture/supplier of the audit at a minimum of two weeks prior to the actual audit date.

- i) Site audits typically take one day.
- ii) The manufacturer/supplier must provide sufficient access and cooperation. Quality control personnel are required to be present during the audit.

b. Conducting the Audit

- i) The auditors will evaluate manufacturer/supplier practices and procedures against the submitted package and the following requirements:
 - (1) CRM must be ground or granulated at ambient temperature.
 - (2) If steel and fiber are cryogenically separated, separation must occur before grinding or granulating. All cryogenically produced CRM particles must be ground or granulated.
 - (3) CRM must be dry, free-flowing particles that do not stick together.
 - (4) Scrap tire crumb rubber and high natural scrap tire crumb rubber must be delivered to the asphalt rubber binder production site in separate bags.
 - (5) Manufacturing processes must demonstrate mechanisms for ensuring that CRM meets the applicable gradation requirements in specifications.

(6) Confirm mechanisms in place to prevent raw material not meeting California PRC § 42703 from co-mingling with CRM supplied to Caltrans.

c. Audit Results

- i) Upon successful completion of the audit, Caltrans will place the manufacturer on the Authorized Material List for Crumb Rubber Modifier.
- ii) Successful completion of the audit does not relieve the manufacturer/supplier of the responsibility of meeting other requirements outlined within this procedure or any other such requirements stipulated by the Department.
- iii) Procedures for a Failed Audit
 - (1) The manufacturer/supplier will be notified of deficiencies discovered in the audit.
 - (2) When the deficiencies are corrected to the satisfaction of the Department a follow up audit may be warranted.
 - (3) Upon successful correction of the deficiencies, Caltrans will place the manufacturer on the Authorized Material List for Crumb Rubber Modifier.

3. Authorized Material List for Crumb Rubber Modifier

The facility authorization for Crumb Rubber Modifier will expire in one (1) year from the date of successful audit. To renew, Manufacturer/Supplier should submit its package with current information approximately three (3) months prior to expiration. The package will consist of but not be limited to,

- A. Any changes in manufacturer or supplier production quality control or quality control testing that may have occurred since the last submittal period. Include any information regarding changes to the overall quality control program. For no changes, indicate in writing.
- B. Any changes to suppliers involved in the waste tire chain of custody (generator/hauler/collector) that may result in deviation from waste tires taken from vehicles owned and operated in the United States. For no changes, indicate in writing.
- C. A two-pound test sample of CRM with current quality control test data as proof of compliance to Section 37-2.04B and Section 39-3 of the 2015 Standard Specifications.

Caltrans may test project supplied CRM at its discretion and reserves the right to remove a product from the list at any time. Caltrans will notify the

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Manufacturer/Supplier of failing test results and any change to their approval status.

If you have any questions about the Crumb Rubber Modifier Authorization and Acceptance Criteria, please contact Sanchita Dey by phone at (916) 227-7912 or via e-mail sent to <sanchita.dey@dot.ca.gov>.