

**SECTION 919
GROUND TIRE RUBBER
FOR USE IN ASPHALT RUBBER BINDER**

919-1 Description.

This Specification governs ground tire rubber for use in asphalt rubber binders for use in a variety of paving applications.

919-2 General Requirements.

The ground tire rubber shall be produced from tires by an ambient grinding method. The entire process or a final separate grinding process shall be at or above ordinary room temperature. The rubber shall be sufficiently dry so as to be free flowing and to prevent foaming when mixed with asphalt cement. The rubber shall be substantially free from contaminants including fabric, metal, mineral, and other non-rubber substances. Up to 4% (by weight of rubber) of talc or other inert dusting agent, may be added to prevent sticking and caking of the particles.

The ground tire rubber used shall be one of the products listed on the Department's Qualified Products List (QPL). Manufacturers seeking evaluation of their product shall submit an application in accordance with Section 6.

919-3 Physical Requirements.

The physical properties of the ground tire rubber shall be determined in accordance with FM 5-559, and shall meet the following requirements:

- Specific Gravity 1.10 ± 0.06
- Moisture Content Maximum 0.75%
- Metal Contaminants Maximum 0.01%

Gradation - The gradation shall meet the limits shown in Table 919-1 for the type of rubber specified.

Table 919-1 Gradations of Ground Tire Rubber			
Sieve Size % Passing	Type A	Type B	Type C
No. 16 [1.18 mm]	---	---	100
No. 30 [600 μm]	---	100	70-100
No. 50 [300 μm]	100	40-60	20-40
No. 100 [150 μm]	50-80	---	---

919-4 Chemical Requirements.

The chemical composition of the ground tire rubber shall be determined in accordance with ASTM D 297 and shall meet the following requirements:

- Acetone Extract..... Maximum 25%
- Rubber Hydrocarbon Content.....40 to 55%
- Ash Content Maximum 8%*
- Carbon Black Content.....20 to 40%
- Natural Rubber.....16 to 45%

* 10% for Type A rubber

919-5 Packaging and Identification Requirements.

The ground tire rubber shall be supplied in moisture resistant packaging such as either disposable bags or other appropriate bulk containers. Each container or bag of ground tire rubber shall be labeled with the manufacturer's designation for the rubber and the specific type, maximum nominal size, weight and manufacturer's batch or LOT designation.

919-6 Certification Requirements.

The Contractor shall provide the Engineer a certification conforming to the requirements of Section 6 from the manufacturer, confirming that the ground tire rubber meets the requirements of this Section.