

**STATE OF OHIO
DEPARTMENT OF TRANSPORTATION**

**SUPPLEMENTAL SPECIFICATION 803
RUBBERIZED OPEN GRADED ASPHALT FRICTION COURSE**

4/15/2005

803.01	Description
803.02	Materials
803.03	Mixing Plants
803.04	Mixing
803.05	Weather Limitations
803.06	Compaction
803.07	Acceptance
803.08	Method of Measurement
803.09	Basis of Payment

803.01 Description. This work shall consist of constructing a surface course of aggregate, asphalt cement and rubber compound mixed in a central plant and spread and compacted on a prepared surface.

Comply with the requirements of 401 with the following deviations:

803.02 Materials. Furnish materials conforming to:

Asphalt binder	702.01, PG 58-28
Aggregates	703.05 *
Mineral filler	703.07
Rubber compound	702.14 **

* Meet the aggregate requirements of 703.05, except provide coarse aggregate which is crushed air-cooled slag with a minimum of 95 percent mechanically crushed particles. A mechanically crushed particle is defined as a particle having rough angular edges. Particles exhibiting mechanically crushed characteristics will be counted as mechanically crushed regardless of how the fracture occurred.

** Provide a quantity of asphalt binder and rubber compound as required to produce a composition of 95 $\pm$ 0.3 percent asphalt binder to 5 $\pm$ 0.3 percent rubber solids by weight. Provide a combined asphalt binder and rubber solids content as directed by the Laboratory within the limits of 6.0 to 12.0 percent by weight of total mix.

Proportion the aggregates such that the resulting blend is within the following limits:

Sieve	Total Percent Passing
1/2 inch (12.5 mm)	100
3/8 inch (9.5 mm)	85 - 96
No. 4 (4.75 mm)	28 - 45
No. 8 (2.36 mm)	9 - 17
No. 200 (75 μ m)	2 - 5

Submit a proposed aggregate blend on an aggregate blend sheet a minimum of 6 weeks before the start of production. Submit the following samples of proposed individual mix components to the Laboratory for design purposes a minimum of 6 weeks before start of production:

1. three 50-pound (25-kilogram) bags of each type of aggregate
2. one 50-pound (25-kilogram) bag of mineral filler, if used
3. five 1-gallon (4-liter) samples of the asphalt binder
4. one 0.25-gallon (1-liter) sample of the rubber compound

Submit test data and a letter of certification to the Laboratory from the manufacturer of the rubber compound for design approval. This test data and letter of certification must not be more than three months old.

803.03 Mixing Plants. Use a mixing plant with provisions for proportioning the rubber compound into the mixer. If a drum mix type plant is to be used, plant operation and a test load of the proposed mix is subject to approval by the Laboratory before the start of production.

803.04 Mixing. Mix the aggregate and the asphalt binder until all the aggregate is coated, but for not less than a 10 second period. After this initial mixing period, add the rubber compound to the coated aggregate in the mixer and mix for not less than an additional 30 seconds. Provide a mixture at a temperature when discharged from the mixer of between 290 to 350 °F (145 to 175 °C) as established by the Laboratory.

803.05 Weather Limitations. Never place this asphalt mixture unless the surface temperature is at least 55 °F (13 °C) and rising.

803.06 Compaction. Compact the mixture using a minimum of one (1) pass of a static tandem steel wheel roller. Use rollers with a maximum capacity of 2030 square yards per hour (1700 square meters per hour).

803.07 Acceptance. Acceptance will be in accordance with 403. Production is considered acceptable if the following tolerances and the design bands are not exceeded:

Mix	Characteristic	Deviation of the Mean from the Design	Range
	Binder content	±0.5 percent	1.0
	3/8 inch (9.5 mm) sieve	±5 percent	10
	No. 4 (4.75 mm) sieve	±5 percent	10
	No. 8 (2.36 mm) sieve	±4 percent	8
	No. 200 (75 µm) sieve	±2 percent	4

803.08 Method of Measurement. The conversion factors for this mix, listed in the following table, are based on the average dry rodded weight of the crushed air-cooled slag, tested in accordance with AASHTO T19 by the Department.

Dry Rodded Weight	Conversion Factor
pounds/cubic foot (kg/m ³)	ponds/cubic yard (kg/m)
less than 90 (1450)	3400 (2020)
90 to 100 (1450 to 1600)	3800 (2250)
more than 100 (1600)	4100 (2430)

803.09 Basis of Payment. The Department will pay for accepted quantities, complete in place, at the contract price as follows:

Item	Unit	Description
803	Cubic Yard (Cubic Meter)	Rubberized open graded asphalt friction course