

Residue at 163° C. (326° F.) 3 hrs - 200 grams	Not less than	58 %
Total combined amount of all saponifiable substances, including petroleum acids	Not more than	1 %
Demulsibility	Not more than	40 %

The petroleum asphalt contained in the emulsion shall conform to the following requirements:

Penetration at 25° C. (77° F)	150 to 200
Solubility in carbon tetrachloride	Not less than 98.5%
Solubility in carbon disulphide	Not less than 99 %
Ductility at 25° C. (77° F)	Not less than 100 cm.
Loss at 163° C. (325° F.) 5 hrs.	Not more than 2.5%
Ash	Not more than ½ of 1 %

TABLE OF QUANTITIES.

(Quantities are per Square Yard).

Fin- ished Thick- ness Inches	Coarse Stone		First Appl. Mixing Emul. A sph. Gals.	Key stone* 3/4" - 1/4" Lbs	Second Appl. Pen. Emul. Asph. Gals.	Coarse Stone Chips* 3/8 to 10 mesh Lbs.	Third Appl. Pen. Emul. Asph. Gals.	TOTAL STONE		Total Emul. Asph. Gals.
	Size	Lbs.						Lbs.	Cu.Yd.	
1-1/4"	1"	100	0.45	12.5	0.45	12.5	0.3	125	.049	1.2
	to 1/2"	to 115	to 0.5	to 20	to 0.5	to 15	to 0.5	to 150	to .059	to 1.5

(Assumed weight of aggregate 2550 Lbs. per Cubic yard.)

\* Sizes indicated refer to standard A S T M circular opening screens and 10 mesh sieves. Not more than 10% of the material shall be either coarser or finer than maximum and minimum sizes indicated.

CONSTRUCTION METHODS.

PREPARATION OF EXISTING ROAD SURFACE.

The surface of the existing roadway shall be brought to the required cross-section and compacted either under traffic or by rolling with a three-wheel self-propelled roller, weighing not less than ten (10) Tons. All holes and depressions shall be filled with added material of such character as will bind with the old road surface, and then compacted. If the bituminous macadam surface is being constructed over a road which has previously been treated with bitumen, all holes and depressions shall be cleaned of loose material, filled with stone or gravel, either premixed or penetrated by hand pouring, and compacted after aeration. Surfaces which are badly broken up shall be scarified and rolled. If the scarified materials fails to compact, it shall be given a light coating of Asphalt Emulsion, aerated and rolled.

The entire surface to be treated shall then be cleansed of loose material by means of a rotary broom, blade, or by hand.

CONSTRUCTING BITUMINOUS SURFACE COURSE.

**COARSE AGGREGATE** Coarse Aggregate (see Table) shall then be spread uniformly over the prepared surface, either from stock-piles along the shoulders or from dump trucks using a spreading device, and in sufficient quantity to secure a compacted thickness of (see Table).

**ROLLING** This course of graded aggregate shall then be thoroughly compacted by means of a self propelled roller not less than ten (10) tons in weight. All major depressions, after rolling, shall be eliminated, either by addition of like material or loosening and adding aggregate, these areas being rolled to compaction.

**FIRST EMULSION APPLICATION** There shall then be applied, by means of a suitable distributor, Asphalt Emulsion, Quick-Break, as hereinbefore specified, at a rate as determined by the Engineer from the above table.

Immediately following the application of this emulsion, the next course of Mineral Aggregate as specified in above table shall be applied in sufficient quantity to fill all surface voids, broomed and rolled, brooming to continue during the rolling to insure the desired distribution.

**SECOND EMULSION APPLICATION** When the surface voids have been filled, a second application of Asphalt Emulsion shall be made as determined by the Engineer from the above table.

There shall then be applied Stone Chips as specified in table, either from stock piles along the shoulders or from dump trucks equipped with a spreading device the same to be spread uniformly over the previous course, using broom, if necessary.

**THIRD EMULSION APPLICATION** Asphalt Emulsion as specified in table shall then be applied at a rate of approximately 0.3 gallon per square yard of surface area.

**ROLLING** After sufficient aeration, this course shall then be rolled by means of a self-propelled roller, weighing not less than six (6) Tons, until full compaction has been secured. This surface may then be opened to traffic.