

Specification for HEI-WAY Latex-Modified Patching Material

Pennsylvania Department of Transportation listed as HEI-WAY Latex-Modified Permanent Patching Material in “Approved Construction Materials”, Bulletin 15, Miscellaneous Section.

DESCRIPTION. This material is a plant-mixed bituminous stockpile mixture consisting of mineral aggregate coated with a bituminous liquid. It exhibits the following qualities:

- 1) The mixture is workable according to seasonal temperatures.
- 2) The mixture yields a durable pavement patch when temporary patching methods are used.
- 3) The mixture is temperature stable, i.e. no drain down of the bitumen from the aggregate occurs in transit, placement, or in stockpile.
- 4) The mixture is thoroughly coated with bitumen.
- 5) The mixture does not strip when handled, stockpiled, or placed. The mixture passes a modified ASTM D1664 strip test.
- 6) The mixture does not require a tack coat for placement.
- 7) The mixture performs satisfactorily in the field.

MATERIALS. The materials and their uses meet applicable requirements of the Pennsylvania Department of Transportation Form 408, Sections 703.2 and 401.2, add Bituminous Material asphalt cement.

Modify or use appropriate modifiers, if necessary, to obtain a mix which results in a completed bituminous mixture meeting the above performance criteria.

<u>Class of Material</u>	<u>Type of Material</u>	<u>Penetration Range</u>
AC	Asphalt Cement	100-220

Bituminous material asphalt cement is used throughout the year.

Aggregates meet the requirements of Section 703.2, Type A.

Furnish the Latex-Modified completed asphalt mixture within these gradation limits.

Composition of Mixture (total % by weight passing square sieve openings)

<u>Passing Sieve</u>	<u>Percent Passing</u>	
1/2"	100%	
3/8"	85-100%	
#4	40-100%	
#8	10-45%	Change to 0-45%
#200	0-5%	

The minimum requirements for the percent residue of the bituminous material in the mixture are as follows:

Stone and Gravel	-	4.5%
Slag	-	5.5%

NOTE: The completed mixture will be furnished as specified above except the asphalt residue shall not be deficient by more than 0.5% from the above values and no individual test shall vary more than +/- 1.0%. No individual test for percent passing the #200 sieve shall exceed 5.4%.

Asphalt used in this mixture is asphalt cement modified with a styrene/butadiene copolymer designed to improve low temperature material qualities while adding desirable stability characteristics. The percent of solids in the copolymer is approximately 70%. The percent of copolymer in the material is between 2 to 5 percent.

The acceptance of the mixture shall be determined by Section 401.2(d), as applicable.

CONSTRUCTION REQUIREMENTS. All plants manufacturing mixtures of this specification shall be approved by the Department.

All mineral aggregates and bituminous materials are proportioned by weight or volume. The completed mixture shall be weatherproof. No emulsion runoff or leaching occurs. The completed mixture is stockable for extended periods of time (6 to 12 months), is fully serviceable when needed according to seasonality, and does not require retesting in the laboratory after 6 months to confirm performance and lab properties.

The temperature of the asphalt cement bituminous material, aggregate, and completed mixture are:

	<u>Temperature Range, Fahrenheit, °F</u>	
<u>Asphalt Cement</u>	<u>Aggregate</u>	<u>Mixture</u>
175 – 350	25-150	125 maximum

PERFORMANCE. Mixtures conforming to this specification are stockable, temperature stable, thoroughly coated, non-strippable mixtures that perform satisfactorily in the field.

METHOD OF MEASUREMENT AND PAYMENT. Per ton.