

CSEA

Chip Seal Emulsified Asphalt – Cationic Polymer Modified



DESCRIPTION

CSEA is a cationic polymer modified rapid set asphalt emulsion of moderate to high viscosity used for chip seal and SAMI pavement preservation applications. It is specially designed to resist tracking, flushing, and stone loss in relatively higher temperature climates and extreme ADT conditions.

CSEA employs both a chemical and thermal water breaking mechanism that allows for quick sweeping and return to traffic*.

CSEA adheres well to most aggregates because the majority of them are negatively charged**. **CSEA**** provides superior stone retention in shaded or otherwise challenging applications*.

*Weather, aggregate, and application conditions can play a factor in sweeping, return to traffic time, and chip retention.

**Large quantities of fines or P-200's (> 2 – 3%) on the aggregate can reduce adhesion.

FEATURES/BENEFITS

- Mobility resistance in challenging conditions
- Rapid breaking
- Polymer modification
- Works well with most aggregates
- Superior chip retention
- Provides water resistant seal

APPLICATION

Recommended application conditions of **CSEA** are 55° F and rising with roadbed temperatures of 55° F to 130° F. Do not apply in foggy or rainy weather. Chip retention can be compromised if placed after August in northern states' climates. **CSEA** should be applied at the recommended rates; however, variances must be made for the size and gradation of the aggregate (Typical aggregates for single layer chip seals range from ¼" to 3/8") and the absorption characteristics of the pavement being treated. Surfaces should be clean, swept, and dry before application of the **CSEA** binder. The chips must be placed before a significant portion of the emulsion has started to break.

SPECIFICATIONS – TECHNICAL DATA

CSEA

<u>Emulsion Tests</u>	<u>Specification</u>	<u>Typical Results</u>
Viscosity, SFS @ 50°C, sec	75 – 400	200
Sieve, %	< 0.10	<0.05
Residue by distillation, %	≥ 68.0	68.5 +/-
Pen, dmm	70 – 100	90
Demulsibility, %	≥ 50.0	60 - 90
Elastic Recovery @10°C, %	≥ 75.0	75 - 80
Toughness and Tenacity, 25°C, Nm,	≥9.0/7.0	≥11.0/8.50

Product Handling Guidelines

- Emulsion must **not** be blended with other emulsions.
- Direct contact heat should only be done when absolutely necessary. This should be done sporadically and with recirculation or agitation if possible. Note: Emulsion which directly contacts any heat source above 210°F will experience break and separation.
- Contact your technical representative for instructions regarding storage and handling of rapid set polymer modified emulsions.
- Emulsion separation will occur if frozen or boiled.

APPLICATION RECOMMENDATIONS

CSEA should be applied between 0.39 and 0.46 gallons/SY depending on the texture, porosity etc. of the surface and at emulsion temperatures 170° - 190°F (77° - 88°C).



AWARD WINNING ASPHALT PAVING & SUPPLY SINCE 1959

Michigan Paving & Materials Co.

1950 Williams St.
Alma, MI 48801

Tel: 989-402-5932



Michigan Paving & Materials Co.

3125 E Front Street
Monroe, MI 48161

Tel: 734-241-9189