

EMULSIFIED ASPHALT CMS-2

Description:

CMS-2 is a cationic medium setting type emulsified asphalt. The product supplied by U.S. Oil is for the construction of bituminous surface treatments (chip seals). The CMS-2 is not formulated for mixing.

CMS-2 from U.S. Oil & Refining Co. meets the current specification requirements of the Washington State Department of Transportation for this grade. However, it is manufactured to have a viscosity range typical for chip sealing.

Storage /Handling:

Personnel must be trained in the proper handling of CMS-2 and provided the information contained in the Material Safety Data Sheet (MSDS).

CMS-2 must be stored at a temperature of 66°C to 77°C (150°F to 170°F), with the storage tank being insulated and having either hot water or low density electric heating. The tank must be circulated or mixed twice weekly to assure product uniformity.

Other emulsions, including CMS-2 type from other asphalt suppliers, must NOT be mixed with U.S. Oil CMS-2. The distributor spraybar, asphalt pump and lines must be flushed thoroughly shortly after completion of work to prevent possible pump seizing and plugged nozzles (using proper safety and environmental procedures).

Usage:

CMS-2 is applied using conventional asphalt distributors having the following nozzles (based on recommendations from equipment manufacturers).

| <u>Distributor Type</u> | <u>Nozzle</u> Application <u>Range, Gal./Yd</u> | <u>Nozzle Size</u> |
|-------------------------|---|--------------------|
| Bearcar | 0.20-0.45 | No. 2 |
| | 0.25-0.60 | No. 3 |
| | 0.35-0.95 | No. 4 |
| Etnyre | 0.20-0.55 | V-Slot, #3352205 |
| | 0.35-0.95 | V-Slot, #3352204 |
| Rosco | 0.25-0.55 | No. 1 |

0.40-0.85

No. 2

The best results are obtained when the application temperature for CMS-2 is from 60°C to 71°C (140°F to 160°F).

CMS-2 emulsion is used primarily for chip sealing when using dirtier aggregates and those that have a higher fines content (No. 200 sieve greater than 2.0 percent by washed gradation). CMS-2 is a more stable (slower breaking) emulsion than CRS-2, the possibility for emulsion wash-off by rain is increased. Also, the length of time for traffic control may need to be extended from that normally used for CRS-2.

CMS-2 is also used for the filling of cracks prior to chip sealing. To achieve good performance as a crack filler, the chip seal must be placed the same year as when the cracks are poured.

Additional Information:

For additional information on CMS-2, contact the Asphalt Division of U.S. Oil & Refining Co., 3001 Marshall Avenue, Tacoma, Washington, 98421, Telephone: 253-383-1651 and Fax: 253-572-1717

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