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## **EMULSIFIED ASPHALT, CRS-2P**

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### **Description:**

CRS-2P is a cationic rapid setting type emulsified asphalt which has been modified by the addition of polymers. This emulsion is used for the construction of bituminous surface treatments/chip seals.

CRS-2P meets the current specification requirements of the Washington State Department of Transportation.

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### **Advantages:**

The following advantages have been reported for chip seals when using CRS-2P:

1. An asphalt binder less soft in hot weather and less brittle in cold weather.
2. Improved asphalt binder adhesion and strength for increased cover aggregate/chip retention.
3. The ability for earlier sweeping to remove excess chips.
4. The surface treatment of roads, streets and highways with higher traffic volumes and speeds.
5. Allows for the use of larger size chips.

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### **Storage /Handling:**

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

CRS-2P must be stored at temperatures from 66°C to 83°C (150°F to 180°F) with the storage tank having either hot water or low density electric heating. The tanks must be circulated or mixed twice weekly to assure product uniformity. The emulsion must be used within one week after delivery.

It is very important that emulsions, including CRS-2P type from other asphalt suppliers, NOT be mixed with U.S. Oil CRS-2P to avoid the potential loss of the modifiers performance. The distributor spraybar, asphalt pump, meter on mixing equipment and lines must be flushed thoroughly after completion of work (using proper safety and environmental procedures).

## Usage:

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

<u>Distributor Type</u>	<u>Nozzle</u>	<u>Nozzle Size</u>
	<u>Application</u>	
	<u>Range, Gal./Yd</u>	
Bearcat	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 is from 60°C to 77°C (140°F to 170°F).

The application rates for CRS-2P are normally the same as for conventional CRS-2 rapid setting emulsions, depending on aggregate size.

The aggregate quality must be equivalent to that when using a CRS-2. A crushed aggregate with good durability and cleanliness is required for CRS-2P chip sealing.

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## Additional Information:

For additional information on CRS-2P, 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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