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## **PAVING ASPHALT AR-2000W**

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### **Description:**

AR-2000W is typically used as a recycling agent in the hot asphalt industry. This asphalt is viscosity graded on the rolling thin film oven, viscosity at 60°C or (140°F) in Pascal seconds, or Poise, depending on unit of measure.

The “AR” designate indicates an “Aged Residue” with the aging to simulate the asphalt hardening during hot plant mixing. This product is typically not modified asphalt.

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### **Storage /Handling:**

Personnel must be trained in the proper handling of AR-2000W and provided the information contained in the Material Safety Data Sheet (MSDS).

The Washington State Department of Transportation specifications state AR-2000W asphalts at hot mix plants may be heated to a maximum temperature of 177°C (350°F). However, the preferred storage temperatures for AR-2000W are from 135°C (275°F) to 163°C (325°F). These temperatures should be verified with your asphalt supplier. Unnecessarily high temperatures result in increased asphalt hardening and heating costs.

These asphalts must be stored in insulated tanks, which have hot oil, electric or high-pressure steam heating systems. We recommend that inspection of asphalt storage tank be done on a regular basis to prevent potential performance problems.

Because of the high temperatures of paving asphalts, extreme care must be exercised in handling them to prevent severe burns. Proper clothing must be worn with face shields, hard hats, long sleeve shirts, pants, boots and rubber-faced insulated gloves being required for protection.

When loading trucks and trailers or transferring paving asphalt into empty tanks care must be taken to prevent boiling-over due to the presence of water. If trucks or trailers have previously hauled a water-based product such as emulsified asphalt, they must be inspected for moisture and may require drying out before loading. Also, hoses and fittings must be inspected regularly for defects.

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**Usage:**

AR-2000W is used mostly in the hot mix recycling of asphalt pavements. This softer or lower viscosity asphalt is selected for this application due to the hard asphalt binder in the reclaimed asphalt pavement (RAP). AR-2000W is regularly used in reclaimed mixtures that have up to 10 to 15 percent RAP. With higher RAP content, we recommend a new mix design be done.

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**Mixing:**

The use of proper mixing temperatures for AR asphalts is not only important to achieving adequate asphalt coating and mix compaction, but also to the asphalt hardening and pavement properties. Very high mixing temperatures can result in a more brittle pavement while lower temperatures can result in a pavement that has increased tenderness. Therefore, it is important to consider the mixing temperatures recommended in the mix design or by the asphalt suppliers.

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**Additional Information:**

For additional information on AR-2000W, 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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