



“Best Practices” for determining seal coat materials and for the proper placement of seal coat materials

This document is presented as a guideline for the best practices for determining the proper seal coat material and the placement of the material. It is intended as a guideline and is not to be considered all inclusive. The material supplier should be consulted for specific use and application guidelines for their specific material.

DESCRIPTION

- A. The intent is to prolong the life of existing asphalt pavement by inhibiting surface oxidation, water intrusion and petroleum degradation. This process also facilitates cleaning and enhances appearance.
- B. Provide two coats of quality plant mixed, mineral filled pavement sealer in all areas per the manufacturers recommendations.
- C. Provide third coat in high-traffic areas as needed.

MATERIALS

- A. **SEALER:** Refined coal tar or asphalt cement, combined with polymers, mineral fillers, emulsifiers, specialty chemicals and water.
- B. **AGGREGATE:** If required, use washed dry silica Sand or boiler slag, free of dust, trash, clay, organic materials or other contaminants. Sand added at 200 to 500 LBS per 100 gals of Sealer Emulsion.
- C. **WATER:** Use water for mixing that is potable and free of harmful soluble salts, Water temperature needs to be at least 50 degrees Fahrenheit. Water added at 20% to 30% of Sealer Emulsion Concentrate. (Water dilution may vary according to manufacturers recommendations)
- D. **OIL SPOT PRIMER:** Must be compatible with Sealer Emulsion.

MIXTURE CHART PER 100 GAL OF SEALER EMULSION

Application	SEALER Emulsion Concentrate	Water	Aggregate	Formula Rate of Application of Mix per Square Yard	
	Gallons	Gallons		LBS	Min. Gal.
1 st Seal Coat	100	20-30	200-500	0.1	0.15
2 nd Seal Coat	100	20-30	200-500	0.1	0.15

Additional coats may be added following the same spec for high traffic areas.

PRECAUTIONS

- A. Sealer should not be applied unless pavement temperature is at least 50 degrees and the air temperature is 50 degrees and rising, and no freezing temperatures are expected for at least 24 hours.
- B. Sealer should not be applied during rainy or wet weather, or when rain is anticipated within eight hours after application is completed.
- C. Since an emulsion may be damaged by freezing, it should be protected at all times when the temperature drops below 40 degrees.

Equipment

- A. Use application equipment that is capable of applying the required coverage rates evenly over the entire surface. To ensure this, equip all spray units with a pumping distribution system using positive displacement pumps. Equip all squeegee/brush units with squeegee/brushes that are properly adjusted and in good condition so that the application of seal coat materials is without streaks.
- B. The mixing part of the application equipment must be the tank type with a mechanically-powered, full-sweep mixer capable of homogeneously mixing the entire contents of the tank.
- C. Use of hand squeegee or brush application is to be restricted to places not accessible to the mechanized equipment or to accommodate neat trim work at curbs, etc. Material that is applied by hand is to meet the same standards as that applied by machine.

SURFACE PREPARATION

- A. Preparation of Aged Asphalt Pavement Surfaces
 - 1. Patching: Patch bituminous pavement surfaces that have been softened by petroleum derivatives or have failed due to any other cause. Remove damaged pavement to the full depth of the damage and replace with new bituminous pavement similar to that of the existing pavement, Complete patching a minimum of 30 to 90 days prior to sealing to allow new asphalt to cure.
 - 2. Crack Sealing: Remove all vegetation and debris from cracks to a minimum depth of 1/2". Fill all cracks, ignoring hairline cracks (less than 1/4" wide) with a hot rubberized crack sealant. Wider cracks (over 1 1/2' wide), should be repaired with a hot applied plant mix mastic suitable for wide crack repair or replaced as identified in # 1 above.
 - 3. Cleaning Existing Surface: Clean pavement surface immediately prior to placing the sealcoat by mechanical blowers and sweeping, or with water. When using water make sure there is no standing water on surface prior to sealing,
 - 4. Oil Spot Primer: Remove oil or grease that has not penetrated the asphalt pavement by scraping or by scrubbing with a detergent. After cleaning treat these areas with the oil spot primer per manufacturer's recommendations."

- B. Preparation of New Asphalt Pavement Surfaces
 - 1. Cure new asphalt pavement surfaces so that there is no concentration of oils on the surface.
 - 2. A period of at least 30 to 90 days at + 70 degrees daytime temperatures must elapse between the placement of new asphalt pavement course and the application of the seal coat.
 - 3. Perform a water-break-free test to confirm that the surface oils have degraded and dissipated. (Cast one gallon of clean water out over the surface. The water should sheet out and wet the surface uniformly without crawling or & showing oil rings.) If asphalt does not pass this test, additional time must be allowed for extra curing and retesting prior to sealing.
 - 4. Cleaning: Clean as detailed in 3.01 A.3 above. Oil Spot Priming: As needed, see 3.01 A.4 above.

MIXING AND APPLICATION OF SEALER EMULSION

- A. Mixing
 - 1. Blend the sealer emulsion mixture in the equipment described in section 2.03. The mixing must produce a smooth homogeneous mixture of uniform consistency. (Consult sealer emulsion supplier for Its recommended order of addition of the ingredients During the entire mixing and application process, no breaking, segregating or hardening of the emulsion, nor balling or lumping of the sand Is to be permitted.

2. Small additional increments of water may be needed to provide a workable consistency, but in no case is the water content to exceed the specified amount.

B. APPLICATION OF SEAL COAT

1. First Coat: Apply the mixture uniformly to obtain the rates specified in the mixture Chart on page one.
2. Drying Between Coats: Allow each coat to dry so that application-equipment may get back on previous coat without damage to select.
3. Second Coat: Apply the second coat as outlined for the first coat above.
4. Additional Coats: Additional coats may be applied over the entire surface or in heavy traffic areas such as drive lanes. Final Look: The finished surface must present a uniform texture.

C. DRYING AND INITIAL CURE

1. The final coat must be allowed to dry a minimum of eight hours in good drying conditions before opening to traffic, and dry enough to allow traffic without damage to sealer.
2. If marginal weather conditions exist during this eight-hour drying time, additional time will be required. In some cases this could exceed 24 hours. Check the surface before opening it to vehicle traffic.

D. STRIPING

1. If striping is required, use a compatible latex striping paint recommended by the sealer emulsion manufacturer.

GENERAL:

All seal coat application should follow the application method described by the product manufacturer, may be applied by brush, squeegee or mechanical equipment. (IE- First coat squeegee set, second coat sprayed or both coats sprayed, etc.

The Owner/ Developer/Property Manager should:

- Require References for all projects to all of the bidding contractors
- Obtain general liability and worker compensation insurance certificates from the contractor prior to allowing work to commence. Word of mouth is **NOT** sufficient proof of Insurance.
- Check for Local licenses (If required)
- Check for Local and State Sales tax licenses information
- Use Local Contractors whenever possible!

For more information, visit the Colorado Asphalt Pavement Association web site (http://www.coasphalt.com/resources/maintenance_preservation.htm) or Who Is CAPA (http://www.coasphalt.com/who_is_capa/membership_directory.htm) for contractor CAPA membership information.
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