Subsection 4.24
Asphalt Antistripping Agents

I. Description: Furnish and incorporate all required asphalt antistripping agents in asphalt concrete paving mixtures and asphalt-stabilized base mixtures to meet moisture resistance testing requirements.

II. Materials:

A. **Lime:** Provide hydrated lime or commercial lime slurry in accordance with DMS-6350, "Lime and Lime Slurry."

B. **Liquid Antistripping Agent:** Provide a liquid antistripping agent that is uniform and shows no evidence of crystallization, settling, or separation. Ensure that all liquid antistripping agents arrive in:

1. Properly labeled and unopened containers, as shipped from the manufacturer, or
2. Sealed tank trucks with an invoice to show contents and quantities.
3. Provide product information to the ODR including:
4. Material safety data sheet,
5. Specific gravity of the agent at the manufacturer's recommended addition temperature,
6. Manufacturer's recommended dosage range, and
7. Handling and storage instructions.

III. Equipment: Provide all equipment to store, handle, dispense, meter, and mix asphalt antistripping agents.

IV. Construction:

A. **Laboratory Design Evaluation and Production Mixture Verification**: Provide a laboratory mixture design and production mixture that meet moisture resistance requirements. During design and production, evaluate proposed asphalt pavement or base mixtures according to the moisture resistance requirements in the asphalt mixture specification. Governing specifications require the Contractor to design the mixture, and is responsible for the moisture susceptibility evaluation. The ODR or Engineer will verify for compliance. If an antistripping agent is required, determine the dosage needed to achieve the moisture resistance requirements during design. Use this addition rate in the production mixture. When using lime, add between 0.5% and 2.0% of hydrated lime or commercial lime slurry solids by weight of the individual aggregate treated. When using a liquid antistripping agent, add it to the binder in accordance with the manufacturer's instructions and

do not exceed the manufacturer's maximum recommended dosage rate. If the production mixture does not meet moisture resistance requirements, stop production and correct the problem.

B. **Addition of Antistrip Agents at the Mix Plant:** Connect the measuring device for the addition of the asphalt antistripping agent into the automatic plant controls to automatically adjust the supply to plant production and provide a consistent percentage in the mixture. Set automatic plant controls so that an interruption of asphalt antistripping agent's flow causes plant shutdown.

C. **Lime:** Incorporate lime in a manner that thoroughly and uniformly distributes lime onto the aggregate surface or into the mixture. Use metering equipment, as approved, to ensure the required quantity of lime is used.

D. **Hydrated Lime:** Add lime to the aggregate by one of the following methods, unless otherwise shown on the plans:

1. Mix in an approved pug mill mixer with damp aggregate containing water at least 2% above saturated surface dry conditions.

2. Add into the drum-mix plant immediately before asphalt binder addition or in the pug mill of the weigh-batch plant before asphalt binder addition. If a weigh-batch plant is used, dry mix aggregates and lime before adding asphalt binder.

E. **Commercial Lime Slurry:** Add lime to the aggregate by one of the following methods, unless otherwise shown on the plans:

1. Mix in a suitable pug mill mixer with the aggregate.

2. During mixture production, mix with aggregate between the plant cold feeds and the dryer or mixing drum.

F. **Liquid Antistripping Agent:** Incorporate into the binder as follows:

1. Handle in accordance with the manufacturer's recommendations.

2. Add at the manufacturer's recommended addition temperature.

3. Add into the asphalt line by means of an in-line-metering device, in accordance with Subsection 4.26, "Weighing and Measuring Equipment," and a blending device to disperse the agent.

4. Place the metering and blending devices in an approved location.

V. **Measurement and Payment:** The work performed, materials furnished, equipment, labor, tools, and incidentals will not be measured or paid for directly, but is subsidiary or is included in payment quantity for pertinent Items.

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