9.02 FAST PRIME COAT

Bitumen Emulsion Prime Coat

Description

FAST PRIME COAT is emulsified bitumen; it is supplied as brown liquid, ready to dilute and use, available in three grades, Rapid Set, Medium Set and Slow Set.

Properties

Appearance	: Brown liquid			
Residue	: 55 - 60 %			
Saybolt Furol viscosity	: 20 Sec. – 30 Sec. @ 25 °C			
Particle size	: 5 – 6 microns			
Settlement 5 days	: < 3%			
Setting time at 30 °C	:	Rapid	Medium	Slow
Initial set – hours	:	2	4	6
Final set – hours	:	5	24	24

Uses

The major purpose of prime coat is to protect the underlying layers from wet weather by providing a temporary waterproofing layer, Additional benefits of prime coat is to stabilizing or binding the surface fines together and promoting bond to the HMA layer. Prime coat increased the bond strength at the interface between a compacted base and asphalt layer.

Advantages

- Penetrate rapidly into the absorbent surface and bind the granular material together.
- Harden or toughen the surface
- Money and time saving is achieved, as no heating is required, protect environment.
- Partially waterproof the treated areas to make them resistant to water erosion
- Plug capillary voids.
- Does not affect the base bitumen properties
- Provide adhesion between the base and the next course.
- Provide protection from wind, water, and traffic erosion.

Compliance to ASTM / BS / AASHTO Standards
ASTM D140, ASTM D244, ASTM D977 & D2397 BS 434, AASHTO M-140

Surface Preparation

FAST PRIME COAT can be applied in some situations without any preparation. However, the beneficial effects will be reduced by an extremely dry material, the presence of highly compacted areas, potholes, and high spots. To optimize the performance of FAST PRIME COAT, the following steps should be employed:

Grading

Using a road grader, an angled dozer, or shovels and rakes, remove, mix and replace the top 50 to 150 mm (2 to 6 in.) of material. Insure that the surface is free from local high spots and potholes, and that the material is evenly mixed and distributed to avoid segregated pockets of coarse or fine gradation. In the case where planning section is not required, the top surface should be scarified for 12.5 to 25 mm

Application

Prime coat must be diluted prior to the application, and dilution ratio will be 3:1 or 2:1 (Emulsion: Water)
Check the compatibility of water with emulsion in laboratory, prior to the emulsion dilution at site
Diluted prime coat coverage rate 0.85 Kg. / m2 is equal to 0.70 Kg. / m2 of un-diluted material.
Note: - Normal rate of application 0.65 – 1.75 Kg. / m2 as specified in NHA's General Specification.
Allow penetrating and drying. Usually traffic should not be allowed on to this for 24 hours but if traffic must use the road a thin layer of sand can be spread. Final surfacing may be done next day.

Technical support

Fast Chem Construction provides a technical advisory service for on-site assistance and advice on selection of prime coat grade, as per the properties of aggregate and site conditions.

Precaution / Limitation

FAST PRIME COAT shall not be applied when the ambient temperature is below 10° C (50° F), or when rain is imminent.

Check the compatibility of water with emulsion in laboratory, prior to the emulsion dilution at site.

FAST PRIME COAT may be harmful to growing plants, since like any other oil, it seals pores and interferes with intake of carbon dioxide. Reasonable care should be taken to prevent spray on crops. Also, since the product is black, reasonable care should be taken to prevent spraying on buildings, fences, and other areas where dark stains are undesirable.

Avoid skin and eye contact, in case of contact, use plenty of water and seek medical advice, use the appropriate means if self-protection, the emulsion is nontoxic, it must not be disposed to surface and still water.

Traffic should be kept off the treated surfaces until the product has penetrated and the surface is no longer tacky. There should be no pickup of the treated materials on shoes or tires.

If puddles develop in low spots, clean sand or soil should be applied to blot them.

FAST PRIME COAT does not fall into the hazard classifications of current regulations. However, it should not be swallowed or allowed to come into contact with skin and eyes.

Suitable protective gloves and goggles should be worn. Splashes on the skin should be removed with water. In case of contact with eyes rinse immediately with plenty of water and seek medical advice. If swallowed seek medical attention immediately do not induce vomiting.

Protect Environment

The primary pollutants of concern from asphalt paving operations are volatile organic compounds (VOC). Cutback asphalts are the major source of VOCs as only minor amounts of VOCs are emitted from emulsified asphalts and asphalt cements. VOC emissions from cutback asphalts result from the evaporation of the petroleum distillate used to liquefy the asphalt cement. VOC emissions can occur at both the job site and the mixing plant; however, the largest source of emissions was reported as from the road.
Asphalt emulsions are typically used in place of cutback asphalts to eliminate VOC emissions. The use of cutback asphalt is regulated in many jurisdictions to help reduce VOC emissions. Prohibitions on the use of cutback, either permanently or during certain times of the year, are common in jurisdictions that have either reached, or are nearing non-attainment for ozone requirements of the Clean Air Act.

Storage

FAST PRIME COAT has a shelf life of 12 months provided the temperature is kept within the range of 5 °C to 50 °C. Should the temperature of the product fall outside this range then contact your local office for advice.

Freezing point: **Approximately below 0°C**

Health and safety
For further information consult the Material Safety Data Sheet available for this product.

Fire
FAST PRIME COAT is water base and non-flammable.

Estimating – packaging
FAST PRIME COAT is available in 218 kg. (Gross) Drums and bulk supply.

WARRANTY

This product is warranted to be free of defects in material and workmanship, and conform to FAST Construction Chemicals ("FAST") quality control standards. All recommendations, statements and technical data herein are based on tests we believe to be reliable and correct, but accuracy and completeness of said tests are not guaranteed and are not to be construed as a warranty or guaranty of any kind, expressed or implied including but not limited to, an implied warranty of merchantability or an implied warranty of fitness for a particular purpose.

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