



ISO 9001



Protect Environment

Always Think

Green



# Bituaqua Seal Coat\*

## Bitumen emulsion fog/seal coat

### Uses

Asphalt pavement becomes more brittle after exposure to ultra-violet sunlight and hot and cold temperatures. Traffic wears asphalt-off of the pavement surface and initiates micro-damage of fatigue cracking. A very light layer of new asphalt and rejuvenating coat seal and waterproof the surface, fills in the micro-cracks and prolongs the pavement life. A fog seal is a light application of a slow-setting asphalt emulsion applied by a distributor. Fog seals cover small cracks and surface voids, reduce raveling, and enrich dry pavements. A fog seal is an inexpensive way to rejuvenate and seal pavement surfaces. Fog seals are often applied on a routine schedule (typically every three to five years) to prolong pavement life.

### Advantages

- The asphalt emulsion seals the pavement from water penetration.
- The treatment blackens pavement, adding differentiation to pavement lanes.
- The asphalt renews aged asphalt pavements that have become dry and brittle and prevents raveling.
- The low viscosity material flows into cracks and surface voids.
- Fog seals can be used in conjunction with chip to prevent or repair chip loss.
- Fog seals are the least expensive pavement preservation treatment to prolong pavement life and delay major maintenance or reconstruction.

### Compliance to ASTM / BS / AASHTO Standards

ASTM D140, ASTM D244, ASTM D977,  
BS 434, AASHTO D242-38

### Description

**Bituaqua Seal Coat\*** is a bitumen emulsion seal coat; it is supplied as brown liquid. **Bituaqua Seal Coat\*** is a specially-designed product for sealing of asphalt pavement surface.

### Properties

Appearance	: Brown liquid
Particle size	: 5 – 6 microns
Settlement 5 days	: < 3%
Setting time at 30 °C	: 4 – 8 hours

### Surface Preparation

Immediately before applying a fog/seal coat, the pavement surface must be cleaned with a road sweeper, power broom, or flushed with a water pump-unit to remove dust, dirt, and debris. The pavement completed 24 hours prior to the application of the fog/seal coat to allow for adequate drying.

### Application

Properly calibrated distributor trucks or spray machine shall be used to apply the fog/seal coat emulsion. Spray nozzles with 4 to 5 mm (1/8" to 3/16") openings are recommended. The emulsion may be heated to 50°C (122 °F) maximum in cold weather, although, generally the emulsion is sprayed at ambient temperature. The emulsion application rate is dependent on the surface conditions. Do a test area to check the correct application rate. Typical application rate for fog/seal coat is 0.15 to 0.50 Kg. / m<sup>2</sup>.

Seal coat must be diluted prior to the application, and dilution ratio will be 1:0.50 – 1:1 (Emulsion : Water)

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

### Technical support

Pakistan Bitumen Company provides a technical advisory service for on-site assistance and advice on selection of right products, as per the properties of aggregate and site conditions.



## Precaution / Limitation

**Bituaqua Seal Coat\*** shall not be applied when the ambient temperature is below 10° C (50° F), or when rain is imminent.

**Bituaqua Seal 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 non toxic, 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

**Bituaqua Seal 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

**Bituaqua Seal 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

**Bituaqua Seal Coat\*** is water base and non flammable.

## Estimating – packaging

**Bituaqua Seal Coat\*** is available in 218 kg. Drums and bulk supply.

\* Denotes the trademark registered

## REGIONAL SALES OFFICES IN PAKISTAN:

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