



LAKE ASPHALT
OF TRINIDAD AND TOBAGO (1978) LIMITED

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MATERIAL SAFETY DATA SHEET
(M S D S)

1. Product Identification

Product Name: Trinidad Lake Asphalt (TLA)

Origin: Naturally Occurring

Common Names: Dried Asphalt (DA), Trinidad Refined Asphalt (Epure)

Chemical Composition: A stable colloidal mix of bituminous compounds and mineral matter.

Approximate Percentages of Components:

Bitumen Content	-	53 - 55%
Mineral Matter	-	35- 37.5%
Water of Hydration of Minerals	-	4.3%
Other Organic matter	-	3.2%

2. Physical and Chemical Properties

Appearance: Black or Dull Grey (Solid appearance)

Behaviour: Trinidad Lake Asphalt (TLA) is considered to be a thermoplastic material. At ambient temperatures, it is actually a semi-solid or can be classified as a gel-sol but appears solid at first glance. If left in the open, it will slowly change shape to suit area in which it is kept.

Properties:

	<u>Test Methods</u>	<u>Values</u>
Penetration (25 °C)	ASTM D5	0 - 5
Specific Gravity	ASTM D70	1.3 – 1.5g/cm ³
Softening Point (RB)	ASTM D36	89 - 99°C

Chemical Data: Bitumen content comprises mainly:

- a) Saturated polycyclic compounds containing oxygen, sulphur and clay minerals of general chemical formula – C_nH_{2n+2} .
- b) Polar Aromatic and naphthenic compounds of general chemical formula - C_nH_{2n-2} . Also contained are aromatic compounds of formula C_nH_{2n} and aliphatic compounds.

Mineral matter comprises – Silica, Alumina, Ferric Oxide and other trace compounds.

3. Fire Protection

Flash Point: (ASTM D92) 255 - 260°C

Fire Point: (Cleveland Open Cup) (ASTM D92) 305 – 310°C

Extinguishing Media Foam is most effective.

Note: *DO NOT USE WATER.* Water contamination in hot, molten material is a particular hazard (160 – 170°C) and immediate evaporation or spitting can result in the risk of operator burns and the spread of fire, under fire conditions.

4. Potential Hazards and First Aid

Processing of TLA demands that the material is heated to 160-170°C and applied hot. The risk of being burned by the heating operation from hot TLA or from the flame/heater supplying the heat is the greatest hazard.

Suitable protective wear – boots, gloves, approved eye protection and body clothing should be worn during the handling or processing of TLA (hot).

In the event of an accidental skin contact with the hot DA, NO ATTEMPT SHOULD BE MADE TO REMOVE MATERIAL FROM THE SKIN. IMMEDIATELY PLUNGE AFFECTED BODY PART UNDER COLD RUNNING WATER FOR UP TO TEN MINUTES OR LONGER IF LAYER IS THICK.

Once it has been cooled, no further harm will occur and the material can be removed. The use of liberal amounts of warm medicinal paraffin or a blend of paraffin and kerosene may be used. Care must be taken after the removal to wash the skin thoroughly with soap and water applying appropriate skin cleansing cream.

NOTE: Only medically approved solvents may be used to remove TLA from burns as irritation or further skin damage may be caused by the use of others.

SEEK MEDICAL ADVICE ON ALL CASES OF SERIOUS BURNS FROM TLA.

If hot TLA is splashed into eyes, it should be cooled immediately with cold running water for at least five minutes. Seek immediate medical attention.

5. Physiological Data

There is little or no evidence of any serious hazards to health associated with bitumen.

In long-term animal studies, no bitumen material has been shown conclusively to be an animal carcinogen in the undiluted state.

There is no evidence from animal tests or human experience that bitumen is associated with long term effects in man resulting from normal or extended exposures.

Epidemiological surveys carried out have failed to demonstrate any adverse health effects related to human exposure.

In accordance with good hygiene practice any one involved in handling TLA or products utilising DA should have adequate washing facilities – warm water, soap, approved solvents, skin cleanser and clean towels.

Thorough washing of skin should be encouraged after handling bitumen materials by the use of notices, leaflets or other communicable means.