



CUTTERS & FLUX OIL

CUTTERS and FLUX OIL for the reduction of viscosity of Bitumen Binders

Compliant with AAPA Advisory Note 21 and AS 3568.

DESCRIPTION:

CUTTERS- Bituminous Products bitumen cutters are highly refined hydrocarbon solvents produced especially for temporarily reducing the viscosity of road grade bitumen.

FLUX OIL- Bituminous Products bitumen flux oil is a higher boiling point fraction than cutters and will impart long term reduction in viscosity of road grade bitumen.

CUTTER LA

(Dangerous Goods)



Bituminous Products **Cutter LA** is a clear, refined petroleum based hydrocarbon solvent. It is used as a cutter for road-grade bitumen. It provides a binder with a temporarily lower viscosity. The reduced viscosity of the binder causes it to more easily coat spread aggregate thereby forming a stronger bond or adhesion. Lower viscosity can be achieved at lower temperatures.

Cutter LA has relatively low boiling point range and increased evaporation rate causing it to rapidly volatilize after spraying. With time the cutter will fully evaporate leaving the residual bitumen behind at its original pre-cut viscosity.

The rate of evaporation will depend on a number of factors including, the chemical nature of the bitumen, spraying temperatures, ambient temperatures and humidity and binder film thicknesses or application rates.

Note that Cutter LA is Class 3 Dangerous Goods Flammable Liquid

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CUTTER HF

(non- dangerous goods)

Bituminous Products **Cutter HF** is a clear refined petroleum based hydrocarbon solvent. It is used as a cutter for road-grade bitumen. It also provides a bitumen binder with a temporarily lower viscosity without the hazards associated with Dangerous Goods. The reduced viscosity of the binder causes it to more easily coat spread aggregate thereby forming a stronger bond or adhesion. Lower viscosity can be achieved at lower temperatures.

Cutter HF has a higher boiling range (and flash point) than Cutter LA which means that the evaporation rate will be slower than Cutter LA, but depending on the nature of the bitumen, it will eventually evaporate from the binder after spraying. Once fully evaporated from the residual bitumen, its viscosity will be restored to its original pre-cut viscosity.

The rate of evaporation will be slower and will also depend on the chemical nature of the bitumen, spraying temperatures, ambient temperatures and humidity and binder film thicknesses or application rates.

Note that Cutter HF is *not* Class 3 Dangerous Goods, it is however classified as a C1 Combustible Liquid

FLUX OIL

(non- dangerous goods)

Bituminous Products Bitumen **Flux Oil** is a distilled hydrocarbon fraction with a higher boiling range (less volatile) than cutters. **Flux Oil** is designed to flux road grade bitumen to provide a much longer term reduction in viscosity.

As with cutters, **flux oil** reduces the viscosity of the binder and causes it to more easily coat the newly spread aggregate thereby forming a stronger bond or adhesion but it does not readily evaporate. Lower viscosity can also be achieved at lower temperatures.

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The rate of evaporation will be a lot slower than cutters and will result in a virtually permanent reduction in viscosity. Whilst very slow, **flux oil** will eventually evaporate and the rate will also depend on the chemical nature of the bitumen, spraying temperatures, ambient temperatures and humidity and binder film thicknesses or application rates.

Note that Flux Oil is *not* Class 3 Dangerous Goods, it is however classified as a C1 Combustible Liquid

PROPERTIES

Property	Test Method	Cutter LA	Cutter HF	Flux Oil
Appearance	Visual	Clear and free from water, sediment and suspended matter		
Flash point, °C	ASTM D93/ ASTM D3828	38 min	61.5 min	61.5 min
Aromatic content, %	ASTM D1319	15 min	15 min	15 min
Density at 15°C, kg/m ³	ASTM D1298/ AS 2341.6	0.775 – 0.830	0.780 – 0.840	0.820 – 0.860
Distillation, Initial boiling point Final boiling point	ASTM D86	140 min	150 min	175 min
	ASTM D86	270 max	290 max	360 max

BITUMINOUS PRODUCTS

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