



THE CHEMICAL DIVISION OF COLAS

TT

Product Information

TT is a mix of fatty imidazoline derivatives and amidoamines designed for bitumen emulsions used in cold micro asphalt, with paraffinic or naphthenic bitumen and hydrochloric acid. It can be used with or without bitumen additive CDM, and with or without CQA-1 as a dope.

Storage & Handling (refer to Chemoran guide)

TT must be protected from exposure to water. When mixed with water, a chemical reaction can occur which leads to a reduction in some of the emulsifier's properties. Water will sink to the bottom of the emulsifier container and form a clouded viscous layer. The clear unaffected emulsifier should be carefully decanted off without disturbing this layer and used as soon as possible.

TT must be protected from long-term exposure to atmospheric moisture. This takes place slowly on the emulsifier surface exposed to moist air. It is identified as a viscous clear skin which may lead to a reduction of product performance.

Formulation Example (CQA-1 can be used as a retardant if required)

Application	Bitumen Type (60% Emulsion)	Emulsifier TT	Bitumen Additive (kg/t Bitumen)	Aqueous Phase pH
Micro surfacing	Naphthenic	8-12 kg/t	not required	2.0-2.5
Micro surfacing	Paraffinic	7-16 kg/t	7.0-14 kg/t CDM	2.0-2.5

Table of Parameters

Characteristics	Methods	Specification	Typical Values
Physical state at 20°C	Visual test	Liquid	-
Alkalinity index (mgHCl/g)	MOPCST PC-006	>180	200
Flash point, closed cup (°C)	EN 22719	>100	129
Cloud point (°C)	CHEM 003	-	<5°C

Bulk storage tanks are more likely to experience this due to long storage periods and open vents. Smaller containers with small amounts of emulsifiers can be damaged on long storage especially if they are not fully sealed.

TT must be protected from frost. Continued cold weather storage can lead to major increase in the viscosity and some precipitation may take place at temperatures below the cloud point. If this occurs TT should be heated or agitated thoroughly to insure a homogeneous mixture before use.

Packing

Drum of 190kg / IBC of 920kg

Temp.	Density	Viscosity
°C	(g/cm ³)	(mPa.s)
10	-	541.779
20	0.934	270.692
30	0.928	133.461
40	0.922	69.82
50	0.914	32.131