



THE CHEMICAL DIVISION OF COLAS

TT

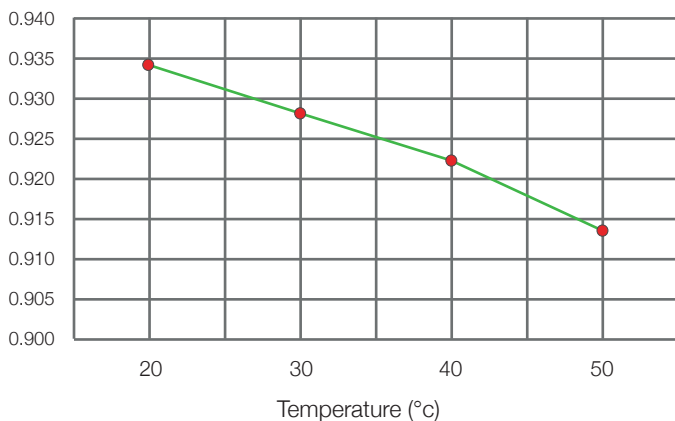


TT is a mix of fatty imidazoline derivatives and amidoamines designed for bitumen emulsions used in cold micro asphalt, with paraffinic or naphthenic bitumen and hydrochloric acid. It can be used with or without bitumen additive CDM, and with or without CQA-1 as a dope.

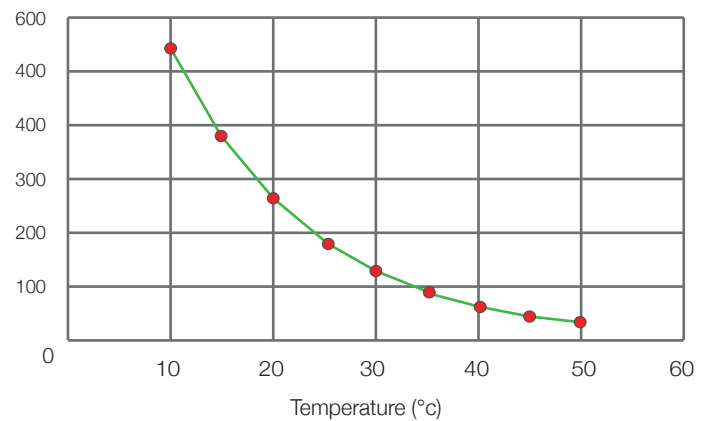


CHARACTERISTICS	METHODS	SPECIFICATIONS	TYPICAL VALUES
Physical state at 20°C	Visual test	Liquid	-
Alkalinity index (mg HCl/g)	MOPCST PC-006	>180	200
Density at 25°C (g/cm <sup>3</sup> )	CHEM 004	0.93 ± 0.05	-
Flash point, closed cup (°C)	EN 22719	>100	129
Viscosity at 25°C (mPa.s)	MOPCST PC-029	-	190
Cloud point (°C)	CHEM 003	-	<5°C

### DENSITY TT (g/cm<sup>3</sup>)



### VISCOSITY TT (mPa.s)



### FORMULATION EXAMPLES

<b>Application</b>	Micro surfacing	Micro surfacing
<b>Bitumen type (60% Emulsion)</b>	Naphthenic	Paraffinic
<b>Emulsifier TT</b>	8-12 Kg/T	7-16 Kg/T
<b>Bitumen Additive (Kg/T Bitumen)</b>	not required	7.0 -14 Kg/T CDM
<b>Aqueous phase pH</b>	2.0-2.5	2.0-2.5

CQA-1 can be used as a retardant if required

### STORAGE AND HANDLING CONDITIONS (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. 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 200Kg / IBC of 1000Kg

Revision n°1 (07/03/2016)