

## Crude Tall Oil – Mixed wood Tall Oil (MTO), grade 1 Product Datasheet

Item number: 10-008

### General information

Crude Tall Oil is a viscous oily liquid of brown and dark brown color with unpleasant odor. The oil composition depends on the wood species when cooking the sulfate pulp. The properties of the product depend upon the Kraft cooking process raw material, which can be:

- a) Soft wood – Soft wood Tall Oil (STO)
- b) Hard wood – Hard wood Tall Oil (HTO)
- c) Mixed wood – Mixed wood Tall Oil of 1<sup>st</sup> and 2<sup>nd</sup> grades (MTO)

Crude tall oil is a natural blend of resin and fatty acids, neutral and oxidized substances. Resin acids are high-molecular unsaturated acids of cyclic diterpene structure. Main acids are abietic and primaric ones.

Fatty acids are high-molecular, mainly unsaturated carboxylic acids of linear structure with different unsaturation degree. Main acids are oleinic acid, linoleic acid and their isomers. There is also a dash of saturated acids such as palmic acid, stearic acid and others. Unsaponifiable substances are aliphatic hydrocarbons, terpenic compounds, phenols and others.

Tall oil is insoluble in water, soluble on organic solvents, non-toxic.

### Specification and typical analysis

Properties	Standard MTO 1 <sup>st</sup> grade	Typical analysis
Appearance	brown or dark brown color oily liquid	
Acid number, mg KOH per 1 g of product	min. 130	144
Resin acids, % wt.	min. 30	35
Unsuaponifiable matter, % wt.	max. 18	11
Lignin and solid particles, %, wt.	max. 2	0,4
Mass part of fatty acids, resin acids and Unsuaponifiable matter, %	not determined	not determined
Water, % wt.	max. 2	1,8
Ash content, %, wt.	not determined	0,1

### Delivery form

The product is usually supplied in tank containers or flexi tanks.