

Botnia Nordic CTO JNO

Crude Tall Oil

Date: 30/05/2018

Raw material

Pine (pinus silvestris)	60-75 %
Spruce (picea abies)	25-40 %

Typical product characteristics

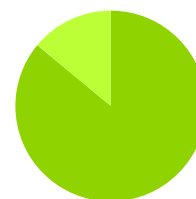
Property	Value	Method
Acid number	Typical 162 mg KOH/l (variance 159 -164)	SCAN-T 11:72
Resin acid	Typical 34 % (variance 32-36)	SCAN-T 14:78
Water content	Typical 0.5 % (variance 0.2-0.7)	ASTM D 890-98
Soap number	Typical 0.03 mg KOH/l (variance 0 -0.1)	PCTM 13

MILL CERTIFICATES

ISO 14001	Quality management system	✓
ISO 9001	Quality system	✓
PEFC™ COC	Chain of Custody, controlled sources	✓
FSC® COC/CW	Chain of Custody, controlled wood	✓
ISO 50001	Energy management system	✓
OHSAS 18001	Health and safety management system	✓
ISO 22000	Food safety management system	✓

ORIGIN OF RAW MATERIAL

Finland	86 %
Russia	14 %
PEFC	81 %
FSC	8 %



■ Finland ■ Russia



Metsä Fibre Oy, Joutseno mill
Address: FI-54120 Pulp, Finland