



# Product Datasheet

## FOR2X

### General Information

**FOR2X** is characterized as a tall oil fatty acid (TOFA) with high fatty acid content and low content of rosin acids and unsaponifiables. The light colour together with excellent colour stability and air drying properties are derived from its origin, the northern pine. Same reason gives **FOR2X** good cold performance properties.

The superior chemical reactivity of **FOR2X** is due to its long carbon chain (C18), the acid function of carboxyl group (-COOH) and the unsaturation of the double bonds. That is why for2x is an excellent raw material for alkyd resins, dimer acids, fa-esters, fa-soaps, fa-ethoxylates, fa-amines and many other chemicals.

### Specification of FOR2X

Analysis	Value	Method
Acid value	min. 193	SCAN-T 11:72
Cloud point, °C	min. -3	ASTM D 2500-99
Colour Gardner, photometer	max. 5	ASTM D 61166-97
Free rosin acids, %	max. 2,1	SCAN-T 14:78
Unsaponifiables, %	max. 2	SCAN-T 13:74

### Typical analyses of FOR2X

Analysis	Value	Method
Acid value	197	SCAN-T 11:72
Cloud point, °C	-7	ASTM D 2500-99
Colour Gardner, photometer	3.6	ASTM D 6166-97
Density at 20°C, kg/m <sup>3</sup>	904	SCAN-T 2:65
Flash point, closed cup, °C	205	ASTM D 93-00
Free fatty acids, %	97	ASTM D 5974-00
Free rosin acids, %	1.9	SCAN-T 14:78
Iodine value, Wijs	155	ASTM D 5768-95
Pour point, °C	-15	SCAN-T 5:67
Saponification value	198	SCAN-T 12:72
Unsaponifiables, %	1.7	ASTM D 6166-97
Viscosity at 20°C, mPaS	30	ASTM D 2196-99

### Product handling

**FOR2X** should be delivered at around 20 °C and the recommended minimum storage temperature is 10 °C. If **FOR2X** is subjected to cold temperatures during storage or transportation it may become cloudy or show some precipitation. This is a normal characteristic and not a defect. If affected, the material should be gently heated to max. 30 °C and circulated or agitated to restore the clear and bright condition.

### Delivery form

Liquid in road tanker, rail tank wagon, ISO-container, flexitank, IBC-container or 188 kgs net in steel drums.

**EINECS number** 263-107-3  
**CAS number** 61790-12-3  
**CN-code** 38231300

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In all applications of **FOR2X** it is the sole responsibility of the buyer to respect and comply with any valid intellectual property rights of third parties.