

CENTURY™ Pine-based, Branched Fatty Acids

Renewable Long Chain Fatty Acid with Excellent Stability

CENTURY Pine-based, Branched Fatty Acids enable formulators to achieve their desired levels of thermal, oxidative and odor stability. These benefits are the result of the product's ability to combine the physical properties of oleic acid with the chemical stability of stearic acid via a clay-catalyzed fatty acid rearrangement process.



CENTURY Pine-based, Branched Fatty Acids

deliver improved performance in a wide range of applications. Lubricants, detergents and metalworking fluids typically see better thermal and oxidative stability as well as improved metal surface affinity compared to standard linear, long-chain, unsaturated fatty acid types. In asphalt paving, the product can enhance asphaltene and maltene compatibility while serving as a surfactant to stabilize asphalt emulsions.

CENTURY Pine-based, Branched Fatty Acids are derived from tall oil fatty acids (TOFA), which is a biobased material originated from pine trees. Therefore, it is not as sensitive to seasonal changes compared to other plant-derived alternatives while also offering constant high quality. The product is natural, non-edible, not genetically modified and has an overall lower carbon footprint compared to vegetable alternatives.

Key Advantages

Ultraviolet (UV) Resistance

Thermal, Oxidative & Odor Stability

Metal Surface Affinity

Emulsion Stability

Pigments & Mineral Particles Stabilizer

Low Carbon Footprint

Biobased Material

Potential Applications

- ▶ Lubricants
- ▶ Metalworking Fluids
- ▶ Coatings
- ▶ Soaps & Detergents
- ▶ Oilfield Chemicals
- ▶ Asphalt Paving
- ▶ Mining
- ▶ Printing Inks
- ▶ Flooring Emulsions

CENTURY Pine-based, Branched Fatty Acids offer a unique mixture of branched and straight-chain saturated/unsaturated C₁₈ fatty acids and differ in unsaturation level and viscosity. CENTURY D1 and CENTURY MO5 contain both saturated and unsaturated C₁₈ fatty acids, with branched chain iso-oleic acids constituting the main portion, and with virtually no polyunsaturated fatty acids.

Monomer Acid Types

	CENTURY™ D1	CENTURY™ MO5
Acid Value	175	174
Color, Gardner	3	3
Saponification Number	185	185
Iodine Value	75	72
Titer, °C	35	35
Viscosity at 40°C (104°F), cSt	35	165
Compositional Data		
% Lights, <C16	4.8	1.6
% Palmitic acid	4.2	3.0
% Stearic acid	11.8	12.8
% Isostearic acid	15.3	17.8
% Aromatic, branched and cyclic acids	26.9	26.2
% Other iso-acids	16.4	18.2
% Other acids	6.0	8.7
% Other components/unidentified	11.3	7.6



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