



# BIO-BASE Renewable Base Fluids

## Performance Base Fluids for Industrial Applications

The **BIO-BASE** series are renewable low viscosity base fluids with characteristics similar to naphthenics (high solvency) but combined with very high VI, high biodegradability, and high response to antioxidants.<sup>1</sup>

Parameter	Method	BIO-BASE 4	BIO-BASE 10	BIO-BASE 15	BIO-BASE 22	
Kinematic Viscosity	40°C (mm <sup>2</sup> /s)	EN ISO 3104	3.9	10	15	21
	100°C (mm <sup>2</sup> /s)	EN ISO 3104	1.5	3.2	4.4	5.7
Viscosity Index	ASTM D2270	157	207	235	240	
Density 15°C (kg/m <sup>3</sup> )	ASTM D4052	804	813	820	830	
Pour Point (°C)	ASTM D5950	-28	-38	-37	-36	
Flashpoint (°C)	ASTM D93	150	145	145	145	
Aniline Point (°C)	ASTM D611	85	88	84	78	
Color	ASTM D1500	<1.5	<0.5	<0.5	<0.5	
Total Acid Number (mg KOH/g)	ASTM D974	<0.1	<0.3	<0.3	<0.3	
Hydrolytic Stability: Acid Number Increase (mg KOH/g)	ASTM D664-17a (mod)	120h: 0.00 192h: 0.05	120h: 0.00 192h: 0.01	120h: 0.00 192h: 0.06	120h: 0.00 192h: 0.05	
Biobased Carbon (%) <sup>2</sup>	ASTM D6866	≥98	≥98	≥98	≥98	
Readily Biodegradable	OECD 301B	Yes	Yes	Yes	Yes	
Estimated PCF <sup>3</sup>	kg CO <sub>2</sub> eq/kg	-2.0	-1.7	-1.3	-0.9	

Table represents typical values

### Environment & Safety

**BIO-BASE 22** is unlabeled and with a biodegradability of 70% within 28 days according to OECD 301B.

**BIO-BASE 4, 10 & 15** carries hazard statement H304 (see MSDS), with a biodegradability of 88% within 28 days according to OECD 301B.

<sup>1</sup> Oxidation stability on par with Group II-base oils using standard phenolic/aminic inhibitors.

<sup>2</sup> Test method max total error ±3 %

<sup>3</sup> Estimated Product Carbon Footprint Cradle to gate.

### Product Composition & Manufacturing

Unique combination of renewable hydrocarbons and fatty acid derived materials. Miscible with many other types of base oil.

Developed and manufactured by Biobase Sweden AB. Bio-based products according to EN 16575:2014.

