

## Oak Palm Base 4050

### High performance ester TMPTO lubricant base fluid

Oak Palm Base 4050 is an ISO 46, low viscosity, Group V, trimethylolpropane ester with superior lubricating properties, high viscosity index, excellent hydrolytic and oxidative stability. Synthesised from natural oils, Oak Palm Base 4050 is renewable and biodegradable.

#### Typical Characteristics

Measurement	Unit	Typical value
Visual appearance		Clear liquid
Colour Lovibond	5 1/4" cell	3.0-0.3
Density @ 20°C	g/ml	0.910
Kinematic viscosity @ 40°C	mm <sup>2</sup> /s	46
Kinematic viscosity @ 100°C	mm <sup>2</sup> /s	9.5
Viscosity index		196
Acid value	mg KOH/g	0.4
Saponification value	mg KOH/g	180
Iodine value	g/100g	82
Hydroxyl value	mg KOH/g	10
Cloud point	°C	-15
Pour point	°C	-45
Flash point (COC)	°C	318
Oxidation stability (RBOT)	minutes	17
Weld load (ASTM D-2783)	Kg	200
Last non-seizure load (ASTM D-2783)	Kg	50
Wear scar diameter at 392N (ASTM D-4172)	mm	0.638
Copper Corrosion (ASTM D-130)		1b
Foam property	ml/ml	
Sequence I		0/0
Sequence II		0/0
Sequence III		0/0
C18:1	%	≤ 75
C18:2	%	≥ 13
C18:3	%	<1.0
Renewability	%	100
Biodegradability OECD 301B	%	100 – 12 day period

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### Features and benefits

Features	Benefit
Biodegradability	Compliance with local environmental regulation
Effective at low treat rates	Efficient formulations
Good lubricity	Improved surface finish, increased efficiency
High viscosity index	Temperature stability
High flash point	Safer operation
Hydrolytic stability	Longer life, increased productivity
Low misting	Healthier operation environment
High renewability content	Reduced impact on limited natural resources

### Applications and recommended uses

Oak Chemicals recommends this product is used at the following typical treat rates:

- Ferrous metal rolling oil: 5 – 90%
- Hydraulic fluid: up to 98%
- Fire resistant hydraulic fluid: up to 98%
- Air compressors: up to 99%
- Metalworking fluids – neat and water soluble cutting and grinding: 5 – 90%
- Metalworking fluids – neat and water soluble drawing and stamping: 5 – 90%

### Sales and technical support

With experience working with lubricant industry formulators, Oak Chemicals technical specialists are able to offer expertise and support in selecting the most effective products for your application. For further or advice, please contact your local Oak Chemicals sales office, visit our website [www.oakchemicals.com](http://www.oakchemicals.com) or email [management@oakchemicals.com](mailto:management@oakchemicals.com)

For complete safety, health, personnel protection and first aid information, refer to the Material Safety Data Sheet (MSDS) which can be requested by website or phone Oak Chemicals.

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