

# BIOHYDRAN TMP



Lubrication



Biodegradable synthetic hydraulic oils.

## APPLICATIONS

### Hydraulic system

- **BIOHYDRAN TMP** is a range of high performance synthetic ester-based biodegradable hydraulic fluids, based on renewables resources. The product is applied as replacement of hydraulic mineral oils in activities such as civil engineering, constructions, quarrying, gravel plies.
- **BIOHYDRAN TMP** is particularly recommended when there is a possible contamination of water : forestry operations, off-shore, river dredging, winter sport.
- **BIOHYDRAN TMP** can replace mineral oils after a complete drain of the circuit followed by a replacement of the filter.

## SPECIFICATIONS

### International specifications

- VDMA 24568 HEES
- ISO 15380 : HEES

## ADVANTAGES

- Outstanding viscosimetric performances and good low temperature behaviour offering a very wide range of operating temperatures.
- Good protection against rust and corrosion.
- Miscible with most mineral and biodegradable fluids.
- Outstanding anti-wear and anti - corrosion properties which protects the moving parts.
- Improved thermal and oxidation stability giving an increased service life of the fluid.
- Compatibility with the current elastomers used in the hydraulic circuits : VITON, PERBUNAN, NITRILE NBR, NEOPRENE, SILICONE...

TYPICAL CHARACTERISTICS	METHODS	UNITS	BIOHYDRAN TMP			
			32	46	68	100
Appearance	Visual	-	Clear			
Density at 15°C	ISO 3675	kg/m <sup>3</sup>	913	920	935	937
Viscosity at 40°C	ISO 3104	mm <sup>2</sup> /s	32	46	68	100
Viscosity at 100°C	ISO 3104	mm <sup>2</sup> /s	7,5	9,5	12,7	18.1
Viscosity index	ISO 2909	-	195	183	180	202
Cleveland flash point	ISO 2592	°C	268	285	300	> 300
Pour point	ISO 3016	°C	- 39	- 39	- 42	- 42
Biodegradability test rate after 21 days	CEC-L-33-A-93	%	> 90	> 90	> 90	> 90
FZG A/8,3/90	DIN 51354	Stage	11	11	11	11
Operating temperature		°C	-20 to +90	-20 to +90	-20 to +90	-20 to +90

Above characteristics are mean values given as an information.

**TOTAL LUBRIFIANTS**  
**Industrie & Spécialités**

23 june 2003 (supersedes 22 january 2002)

BIOHYDRAN TMP

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This lubricant used as recommended and for the application for which it has been designed does not present any particular risk.

A material safety data sheet conforming to the regulations in use in the E.C. can be obtained from your local commercial adviser or down loaded from

[www.quick-fds.com](http://www.quick-fds.com).

