

DESCRIPTION

Synthetic biodegradable hydraulic oil for hydraulic circuits.

APPLICATIONS

- **BIOHYDRAN TMP** is a range of high quality synthetic biodegradable hydraulic oils.
- Suitable for any hydraulic system operating in severe conditions that requires a fluid with good wear control, a high viscosity number and good long-term stability.
- **BIOHYDRAN TMP** is particularly recommended when there is a danger of contaminating water, forests or special environments: offshore operations, dredging, fishing and so on.

PROPERTIES

- 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.
- Compatible with the elastomers normally used in hydraulic circuits: VITON, PERBUNAN, NITRILE NBR, NEOPRENE, SILICONE...

SPECIFICATIONS

- ISO 15380:HEES
- European ECOLABEL, registration no. FR/27/02
- Environmentally Acceptable Lubricants (EAL) for 2013 Vessel General Permit (VGP)
- Meets the requirements of the Swedish Standard SS155434
- VDMA 24568: HEES

CHARACTERISTICS

CHARACTERISTICS	METHODS	UNITS	BIOHYDRAN TMP			
			32	46	68	100
ISO Grade			32	46	68	100
Density at 15 °C	ISO 3675	kg/m ³	913	920	935	937
Kinematic viscosity at 40 °C	ISO 3104	mm ² /s	32	46	68	100
Kinematic viscosity at 100 °C	ISO 3104	mm ² /s	7.5	9.5	12.7	18.1
Viscosity index	ISO 2909	-	195	183	180	202
Flash Point (COC)	ASTM D 92	°C	268	285	300	>300
Pour Point	ISO 3016	°C	- 39	- 39	- 42	- 42
Biodegradability	OECD 301 B	%	>60%	>60%	>60%	>60%

Characteristics of this chart are indicative typical values

HANDLING, HEALTH AND SAFETY

Lubricants consisting of synthetic oils with specific additives.

In normal conditions of use, these lubricants present no particular toxic hazard.

All lubricants, of any kind, should always be handled with great care, particularly avoiding any contact with the skin.

Prevent any risk of splashing, and keep away from combustible materials.

Store under cover and away from any risk of contamination.

A safety data sheet complying with current legislation is available on [www. quickfds.com](http://www.quickfds.com) or www.lubmarine.com.

The values shown above are typical values at the date of publication. TOTAL Lubmarine reserves the right to change these typical values without prior notice.



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