

SECTION 4

APPROVALS REQUIRED AND SOUGHT SECTION APPENDICES

Appendix 4.1: TOTAL BIOHYDRAN TMP Fact Sheet

BIOHYDRAN TMP



Hydraulic oil



Biodegradable Hydraulic Fluid complying with the European Ecolabel criteria.

APPLICATIONS

Hydraulic systems

- BIOHYDRAN TMP is a biodegradable synthetic hydraulic fluid offering good lubricating properties. It was designed for demanding hydraulic systems requiring hydraulic fluids with re-enforced anti-wear properties.
- BIOHYDRAN TMP is recommended for use when incidental spillage in environmentally sensitive areas can occur, eg : forestry works, navigation, off-shore, water catchment areas, ski resorts, hydroelectric stations etc...

SPECIFICATIONS

Specification European Ecolabel

- ISO 15380: HEES
- Registration number : FR / 27 / 02 AFNOR CERTIFICATION.
Reduced harm for water and soil during use. Reduced CO₂ emissions.
For more information on the European Ecolabel, please consult:
<http://ec.europa.eu/environment/ecolabel/>

Swedish Standard

- Meets the requirements of the Swedish Standard SS 15 54 34.

ADVANTAGES

- Produced with renewable raw materials, BIOHYDRAN TMP is contributes to CO₂-emission reduction.
- High natural viscosity index gives BIOHYDRAN TMP a wide temperature operating window (-20°C to 80°C).
- The very high shear stability of BIOHYDRAN TMP will ensure the hydraulic equipment is kept to an optimum efficiency during the fluid service life.
- The good lubricating properties, as well as the very good wear and corrosion protection, will extend the life of the hydraulic system's moving components

TECHNICAL ADVICES

- As recommended in ISO 15380, please check with the equipment supplier to see whether the installation is suitable for the use of synthetic ester hydraulic fluids.
- NBR seals is swelling more in synthetic esters than in classical mineral base oils.
- Contact our technical service for advice changing from HM or HV fluids to Biodegradable HEES hydraulic fluids.

TYPICAL CHARACTERISTICS	METHODS	UNITS	BIOHYDRAN TMP			
			32	46	68	100
Appearance	visual	-	Clear	Clear	Clear	Clear
Density at 15°C	ISO 3675	kg/m ³	913	920	923	927
Kinematic Viscosity at 40°C	ISO 3104	mm ² /s	32	46	68	100
Kinematic Viscosity at 100°C	ISO 3104	mm ² /s	7,4	9,3	12,2	15,7
Viscosity Index	ISO 2909	-	195	185	180	175
Flash Point	ISO 2592	°C	270	280	300	300
Pour Point	ISO 3016	°C	- 42	- 42	- 39	- 33

Above characteristics are mean values given as an information

TOTAL LUBRIFIANTS
Industrie & Spécialités
02-04-2012 (Supersedes 12-09-2011)
BIOHYDRAN TMP
1/1



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-ltd.com