

### FUNCTIONAL HF-546

#### ADDITIVE PACKAGE BIODEGRADABLE HYDRAULIC FLUID

##### APPLICATION:

**FUNCTIONAL HF-546** is an additive package for an ISO 46 hydraulic fluid based on biodegradable esters or vegetable oils. **FUNCTIONAL HF-546** provides excellent oxidation and corrosion protection, extreme-pressure / anti-wear activity, foam resistance, and cold flow properties as well as resistance to water. The thickener is formed with a highly shear stable polymer with a PSSI between 5% and 10%. For high performance, we recommend using high-oleic version of the vegetable oils to meet stringent oxidation requirement.

##### COMPOSITION:

**FUNCTIONAL HF-546** is a mixture of oxidation, wear, form and both ferrous and non-ferrous corrosion inhibitors as well as demulsifiers, designed to give optimum performance in biodegradable esters and vegetable oils. The product is ashless and contains no metals.

Typical properties	
Appearance	Hazy, Amber Liquid
Odor	Mild
Specific Gravity	0.95
Lbs per Gallon	7.9
Flash Point	> 150 °C (302 °F)
Kinematic Viscosity	60- 80 cSt at 100 °C

##### TREATMENT LEVEL:

**FUNCTIONAL HF-546** is used at 4.4% by weight in a suitable biodegradable vegetable oil to make an ISO 46 product. When replacing a mineral based hydraulic fluid with a vegetable based fluid, it is strongly recommended that the end user check the fluids performance at regular intervals until an experienced base line is established.

##### HANDLING:

Use normal safe procedures for handling or blending **FUNCTIONAL HF-546**. Heating before blending is not required. Review the current Material Safety Data Sheet before using.

This Technical Data Sheet and the Material Safety Data Sheet contain information believed to be accurate and reliable. No warranty is made, however, to information beyond the control of FUNCTIONAL PRODUCTS INC. The engineering and management personnel of the user are responsible for determining the suitability of this or any product for any specific application, and this information is offered to them for that purpose.

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Functional Products, Inc. 8282 Bavaria Rd. Macedonia, Ohio 44056

Ph; 330-963-3060 Fax: 330-963-3322

QMS certified to ISO 9001:2008 (with Design)