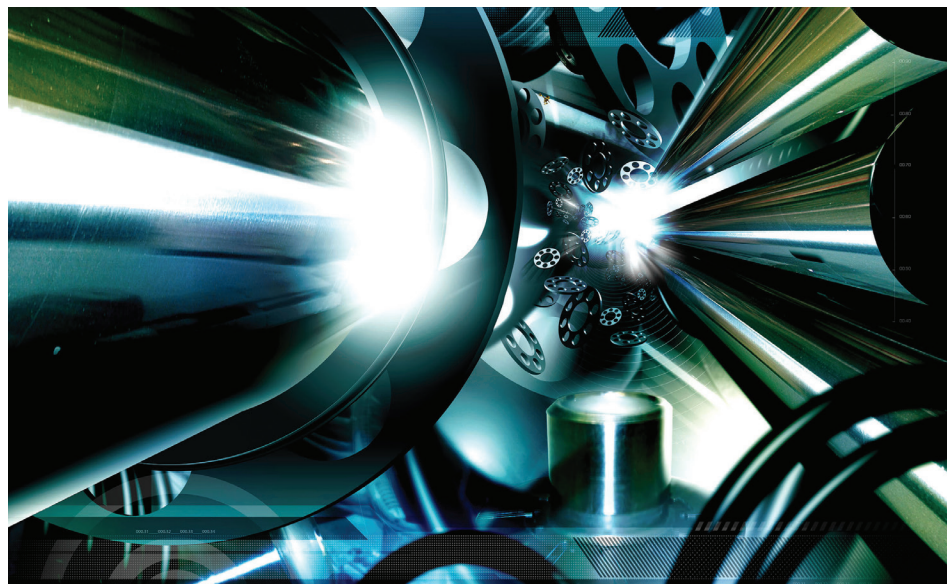


INDUSTRIAL | HYDRAULIC

HiTEC[®] 1811

Biodegradable Hydraulic Oil Additive



Ashless Antiwear Hydraulic Package for Biodegradable Fluids
using Vegetable and Ester Base Stocks



 **Afton**[®]
CHEMICAL
Passion for Solutions[®]



HiTEC® 1811 Biodegradable Hydraulic Oil Additive

Ashless Antiwear Hydraulic Package for Biodegradable Fluids using Vegetable and Ester Base Stocks

Key Performance Benefits

HiTEC® 1811 multipurpose ashless hydraulic additive is designed for biodegradable lubricants. It is particularly suited to formulate fluids based on Canola or sunflower oils.

HiTEC® 1811 additive benefits include:

- Zinc-free ashless anti-wear fluid
- Denison HF-6 approval
- Biodegradable
- 200 minute RBOT
- Chlorine free

Typical Formulations

Typical Formulations Using HiTEC® 1811	% wt.
ISO Viscosity Grade	46
HiTEC® 1811	4.0
Foam Inhibitor	0.01
Cargill Agri-Pure™ 80	95.99

Base Oils:

The oxidation performance of finished oils is significantly impacted by the vegetable oil selection.

Viscosity Grades:

Polymeric thickeners or viscosity index improvers may be used in combination with vegetable-based hydraulic oils. Compatibility of these polymers must be checked prior to implementation. In addition, these polymers may impact the biodegradation and low temperature properties of the oil.

Other Formulation Approaches:

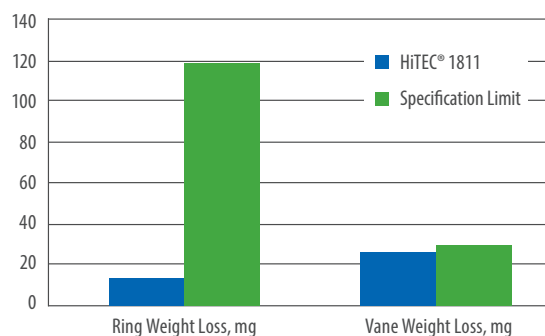
In order to assist with logistics this finished oil is available from Cargill for rebrand. Contact Cargill directly for information.

Vegetable based hydraulic oils may be used in a broad variety of applications where the operating temperatures are too extreme. In addition, contamination with water should be avoided.

Drain intervals are likely to be shorter with vegetable-based hydraulic fluids than with fluids based on mineral oils. Where there is any doubt, oil monitoring programs may be conducted.

HiTEC® 1811 Delivers Excellent Wear Protection

Vickers 104C Wear Test



Recommended Dosage

HiTEC® 1811 additive may be used in blends at 4.0% wt. Please contact your Afton Chemical representative for specific recommendations.

Typical Characteristics

Appearance:	Dark brown liquid
Density at 15°C, g/ml:	0.990
Density, lbs/gal:	8.26
Specific Gravity @ 15.6/15.6°C:	0.992
Flash Point, °C (PMCC):	105 min
Kinematic Viscosity at 40°C, mm ² /s:	71

Handling Information

Max Handling Temp: 80°C
Shelf Life: 18 months at ambient temperature