



Overview

BioFlo AWS SF Hydraulic Fluids are sheen-free semi-synthetic, readily biodegradable, zinc-free, anti-wear hydraulic oils formulated from renewable base stocks to meet the performance requirements of mobile and industrial hydraulic systems. These high lubricity base oils are paired with environmentally friendly additive technologies to minimize ecological impact. These lubricants offer excellent thermal and oxidative stability, assuring superior service life with minimal viscosity change over a broad range of operating temperatures. BioFlo AWS SF fluids has been additized to contain Sheen-Free properties and are suitable for use in all conventional hydraulic systems, especially environmentally sensitive applications.



BioFlo AWS SF fluids are formulated featuring our proprietary **eSyn™** technology.

Typical Properties

Property	ASTM Test Method	AWS SF 15	AWS SF 22	AWS SF 32	AWS SF 46	AWS SF 68
Product Code		BF2100115SF	BF2100122SF	BF2100132SF	BF2100146SF	BF100168SF
ISO Grade		15	22	32	46	68
Specific Gravity	D-1298	.90	.87	.87	.87	.90
Viscosity, @40°C, cSt	D-445	15	22	32	46	68
Viscosity, @100°C, cSt	D-445	4	5	7	10	14
Viscosity Index (VI)	D-2270	>190	>180	>215	>215	>215
Pour Point, °F (°C)	D-97	-45 (-42)	-30 (-34)	-30 (-34)	-30 (-34)	-30 (-34)
Flash Point, °F (°C)	D-92	>400 (204)	>325 (163)	>325 (163)	>470 (243)	>470 (243)
FZG Load Stage	DIN 51354	11	11	11	11	11
Copper Corrosion	D-4048	1A	1A	1A	1A	1A
Rust Test, A&B	D-665	Pass	Pass	Pass	Pass	Pass
4 Ball Wear, Scar, mm	D-172	<0.50	<0.50	<0.50	<0.50	<0.50
Dielectric Breakdown Volt, kV	D-877	>45	>45	>45	>45	>45
Readily Biodegradable (meaning>60%)				Pass	Pass	
Biodegradability, %	OECD 301B			>76	>78	
Minimally Toxic				Pass	Pass	
Algae (EC 50), 72 hr, mg/L	OECD 201			>20k mg/L	>32k mg/L	
Daphnia (EC 50), 48 hr, mg/L	OECD 202			>5k mg/L	>10k mg/L	
Fish (LC 50), 96 hr, mg/L	OECD 203			>34k mg/L	>40k mg/L	
Not Bioaccumulative, (Calculated value as per EPA standard)				Pass	Pass	
Bio-based Content, %	D-6866			>86	>86	



Key Attributes/Approvals



- USDA BioPreferred Program
- Classified as Environmentally Acceptable Lubricants (EAL's) per the EPA's 2013 U.S. Vessel General Permit (VGP). Viscosity grades 32 & 46 only.

Any industry (construction, refuse, mining, dredging, marine, agriculture, oil & gas, plant operations, etc.) utilizing mobile or stationary hydraulically powered equipment, especially hydraulic systems where a release into the environment is possible or where a leak or spill could reach a waste stream.

See the product Safety Data Sheet (SDS) for emergency, proper handling, and disposal information.