

DESCRIPTION

BioFlo FS TO-4 Fluid is a full synthetic transmission fluid formulated for use in the most severe environments. FS TO-4 is designed with the highest quality synthetic ester base oils and additives for superior performance. The product is also an environmentally acceptable lubricant that is biodegradable and has ultra-low toxicity. BioFlo FS TO-4 is suitable for use in applications requiring TO-4 fluids as well as the obsolete TO-2 specification. Additional OEM applications are listed below.

FEATURES & BENEFITS

- Full Synthetic formulation
- Suitable for use in extreme temperatures
- Meets CAT TO-4 Specification

SUITABLE USES

Suitable for use where the following specifications are required:

- Caterpillar TO-4
- Caterpillar TO-4M (Specific viscosity required, consult your BB Rep for more information)
- Caterpillar TO-2
- TO-4 5W-30 (*SAE 30 ONLY)
- Komatsu KES 07.868.1
- Sperry Vickers Eaton M29505 and I-290-S
- Allison C-4

APPLICATION / TECHNICAL SUPPORT

- Follow recommendations provided in your equipment owner's manual
- Follow your organization's best practices for preparation, cleaning, conversion, application, and ongoing maintenance practices
- **Technical Support** - If you have further questions, please fill out contact form on bioblend.com and one of our team will contact you to review your question(s)

APPROVALS / CERTIFICATIONS

- Classified as Environmentally Acceptable Lubricants (EAL's) as per EPA standards for biodegradability, toxicity and bioaccumulation in aquatic environments.
- **eSyn Certified**

PACKAGE SIZES

- 5 Gallon Pails
- 55 Gallon Drums
- 275 Gallon Totes

STORAGE

Keep in a cool, dry and well-ventilated place. Store in a properly labelled, original container. Containers which are opened must be carefully resealed and kept upright to prevent leakage. To help maintain product quality, do not store in heat or direct sunlight.

CAUTIONS

Ensure adequate ventilation. Do not breathe vapor/dust. Use personal protective equipment and avoid contact with skin, eyes, and clothing. Wash thoroughly after handling. See the safety data sheet (SDS) for emergency, proper handling, and disposal information.

AVAILABILITY

Worldwide

TYPICAL PROPERTIES

Property	Test Method	FS TO-4			Requirement		
		SAE 10W	*SAE 30	SAE 50	SAE 10W	SAE 30	SAE 50
Product Code		BFFSTO410	BFFSTO430	BFFSTO450			
Kinematic Viscosity @ 100 C, cSt	ASTM D445	6.6	11	18.1	4.1 Min	9.3-12.5	16.3-21.9
Kinematic Viscosity @ 40 C, cSt	ASTM D445	39.3	76.5	192.6			
Viscosity Index (VI)	ASTM D2270		145				
Mini Rotary Viscometer, cP (30,000 max)	ASTM D4684	4200	4200	6000		30,000 Max	
Testing Temperature, C		-25	-15	-5	-25	-15	-5
Brookfield Viscosity, cP (15,000 max)	ASTM D2983	17,900	16,900	25,700		150,000 Max	
Testing Temperature, C		-35	-25	-15	-35	-25	-15
High Temperature/High Shear Viscosity @ 150 C, cP	ASTM D4683	2.2	3.2	5.1	2.1	2.9	4.5
Limits, minimum		2.1	2.9	4.5	2.1	2.9	4.5
Fluid Compatibility	Caterpillar	Pass	Pass	Pass	No sediment or precipitation		
Flash Point, C min	ASTM D92	Pass	Pass	Pass	160 C	160 C	160 C
Fire Point, C min	ASTM D92	Pass	Pass	Pass	175 C	175 C	175 C
Pour Point, C (F)	ASTM D97		-47 (-52)				
Foaming, Sequences I, II, III 25/0, 50/0, 25/0	ASTM D-892	Pass	Pass	Pass			
Rust Test	ASTM D665A	No Rust	No Rust	No Rust	No Rust	No Rust	No Rust
	ASTM D665B	No Rust	No Rust	No Rust	No Rust	No Rust	No Rust
Copper Corrosion	ASTM D130	1a	1a	1a	1a	1a	1a
Gear Wear	ASTM D4172B	0.22	0.22	0.22	< 0.5 mm	< 0.5 mm	< 0.5 mm
Biodegradability, PASS (meaning>60%), %	OECD 301B	Pass >60	Pass >60	Pass >60			

The values quoted above are typical of normal production. They do not constitute a specification.

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APPROVALS / CERTIFICATIONS LOGOS

