

## PRODUCT NAME

**BioFlo EPIC TO-4 -Heavy-Duty Full Synthetic Transmission Fluid**

## MANUFACTURER

BioBlend Renewable Resources, LLC.  
1500 Jarvis Ave.  
Elk Grove Village IL, 60007  
888.BIO.BLND (888.246.2563)

## DESCRIPTION

BioFlo EPIC TO-4 Fluid is a full synthetic transmission fluid formulated for use in the most severe environments. EPIC 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. EPIC 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 AND BENEFITS

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

## PACKAGING

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

## 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
- Komatsu KES 07.868.1
- Sperry Vickers Eaton M29505 and I-290-S
- Allison C-4

## STORAGE AND SHELF LIFE

**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.

**Shelf Life** - Product shelf life is 24 months from date of packaging. In some cases product can last longer, please contact your BioBlend representative for proper testing and confirmation instructions.

## 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. Intentional misuse by concentrating and inhaling the product can be harmful or fatal.

## APPLICATION

- Follow recommendations provided in your equipment's owner's manual
- Follow your organization's manuals and/or best practices for preparation, cleaning, conversion, application and ongoing maintenance practices
- If you have further questions, please contact BioBlend Tech Services by filling out the contact us form on [bioblend.com](http://bioblend.com)

## AVAILABILITY

Worldwide

## TECHNICAL SERVICES

For additional information including the Safety Data Sheet (SDS), Frequently Asked Questions, and Glossary please visit [bioblend.com](http://bioblend.com).

## APPROVALS AND CERTIFICATIONS

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

## TYPICAL PROPERTIES

Property	Test Method	EPIC TO-4			Requirement		
		SAE 10W	SAE 30	SAE 50	SAE 10W	SAE 30	SAE 50
Product Code		BF2112010	BF2112030	BF2112050			
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			
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
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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