



## Product One Voice Q&A

**Product:** AMSOIL Biodegradable Hydraulic Oil (BHO)

**Product Area:** Industrial

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**1. Question:**

What is AMSOIL Biodegradable Hydraulic Oil?

**Answer:**

AMSOIL Biodegradable Hydraulic Oil (BHO) is a bio-based ISO VG 46 hydraulic fluid that is formulated with a blend of high oleic vegetable oils, synthetic esters and ashless additives. It is designed to provide a biodegradable solution for mobile and stationary applications operated in environmentally sensitive areas.

**2. Question:**

Will AMSOIL BHO replace the current AMSOIL Biodegradable Hydraulic Oil (TBI)?

**Answer:**

Yes, AMSOIL BHO will replace TBI. AMSOIL BHO is a bio-based product with improved biodegradable properties. It is manufactured with renewable resources and meets US Federal bio-based procurement guidelines as defined in section 9002 of the Farm Security and Rural Investment Act of 2002. AMSOIL has also generated toxicity data on BHO which was not available with TBI. The improved biodegradation and low toxicity, as well as meeting the Farm Security and Rural Investment Act will greatly aid AMSOIL Dealers in selling the new product.

**3. Question:**

Vegetable-based hydraulic oils have traditionally been unstable. Has this changed?

**Answer:**

Yes, this has changed. High oleic oils are unique and were previously unavailable. New manufacturing techniques have greatly improved the quality and stability. New formulary techniques and additives have advanced in recent years adding stability to these products. To demonstrate the improved performance, AMSOIL conducted testing against Mobil EAL, a leading biodegradable hydraulic oil. AMSOIL BHO tested better in thermal/oxidative stability and demonstrated improved stability and performance qualities.

**4. Question:**

What tests outline AMSOIL Biodegradable Hydraulic Oil's biodegradability and toxicity performance?

**Answer:**

Biodegradability

- 95% biodegradable per CEC-L-33-T-93
- Modified Sturm OECD 301B                      Readily Biodegradable (Pw 1)\*

Aquatic Toxicity

- Fathead Minnow, 96h LC50, ppm              >10,000 ppm
- Daphnia Magna, 48h, EC50, ppm              >10,000 WAF

\* Pw1 is the top environmental persistence classification for this test – aerobic fresh water

**5. Question:**

What performance tests were run on AMSOIL Biodegradable Hydraulic Oil?

**Answer:**

AMSOIL Biodegradable Hydraulic Oil has been thoroughly tested and proven to provide outstanding performance and wear protection in extended pump testing and it meets the Vickers M2950-S and I-286-S standards. It is hydrolytically stable and oxidation resistant as tested in ASTM D-1401 and ASTM D-2272. It provides excellent rust and corrosion protection and the 12 stage FZG rating ensures excellent gear and bearing wear resistance. It has a pour point of -33°C and will operate under high loads and temperatures up to 82°C.

**6. Question:**

What are the main applications for AMSOIL Biodegradable Hydraulic Oil?

**Answer:**

AMSOIL Biodegradable Hydraulic Oil can be used in any mobile or stationary application requiring an ISO VG 46 fluid where leakage or spillage presents an environmental hazard. This includes construction, logging, farming, lawn and turf care or any environmentally sensitive task where biodegradability and low aquatic toxicity is desired.

**7. Question:**

Is BHO compatible with TBI and other mineral-based fluids?

**Answer:**

AMSOIL BHO is compatible with TBI and most synthetic and petroleum based hydraulic oils. AMSOIL recommends that the system be completely drained prior to filling with BHO for best performance. Excessive contamination by other fluids will negatively affect biodegradability and aquatic toxicity performance.

**8. Question:**

What package sizes will BHO be available in?

**Answer:**

- 5 gallon pails
- 55 gallon drums
- 275 gallon totes

**9. Question:**

Will AMSOIL Biodegradable Hydraulic Oil be available in other viscosities?

**Answer:**

There is no plan to introduce other viscosities at this time, but the need to expand the AMSOIL Biodegradable Hydraulic Oil line will be continuously reevaluated.

**10. Question:**

How long will TBI be available?

**Answer:**

Effective immediately, TBI stock has been discontinued and is no longer available.

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