



**TECHNICAL  
DATA  
SHEET**

# HYDRAULIC BIO-D 32 & 46

**Biodegradable Hydraulic Oil**

**Product code: See below**

**Product Description:**

Hydraulic BIO-D are superior biodegradable hydraulic oils manufactured from natural refined rapeseed oil. It is fortified with proprietary additives to provide exemplary anti-wear and high temperature performance that is as good as if not better than that found in mineral oil based grades.

Hydraulic BIO-D oils are completely free of zinc and all other heavy metals thus avoiding environmental pollution through spillage or leakage.

**Benefits:**

- Very high level of biodegradability
- High oxidation stability
- Extended drain intervals
- Environmentally friendly

**Applications:**

Hydraulic BIO-D is recommended as a replacement for mineral oil based hydraulic oils, particularly where spillage or loss in plant and equipment used near to, or for the construction of, waterways and reservoirs. Hydraulic BIO-D oils are also recommended for all applications where some contact with humans or animals is a possibility. These applications include elevators, door openers, aircraft baggage handlers, people movers and total system losses, that frequently occur from burst hoses on hard worked hydraulic equipment.

**It is important that if this product is being used for the first time in a hydraulic system that has contained a different grade, then adequate flushing should be carried out.**

**Product Specification:**

Biodegradability (CEC-L-33-T-82)	>98%
DIN	51524 Part 3 (except D943)
ISO	11158 category HV (except D943)

### Typical Test Data:

Grade	BD 32	BD 46
Product Code	U422	U423
Specific Gravity @15.6°C	0.923	0.925
KV @ 40°C (cSt)	32	45
KV @ 100°C (cSt)	7.4	9.7
Viscosity Index	209	208
Flash Point (°C)	210	220
Pour Point (°C)	-30	-25
Biodegradability (%)	>98%	>98%
FZG test (DIN 51354) [A/8.3/90]	>11	-
Vickers vane pump (IP 281)		-
-Wt loss ring (mg)	19	
-Wt loss vanes (mg)	0	
Rust prevention (ASTM D 665)		-
-Procedure A	Pass	
-Procedure B	Pass	
Copper corrosion (ASTM D130)	1a	-
Air release (IP 313)	4 mins	-
Foam (ASTM D 892)		-
-5 mins blowing. Seq 1/2/3	0/0/0	
-10 min settling. Seq 1/2/3	0/0/0	

### Health & Safety:

Please refer to the health and safety data sheet, a copy of which is freely available to all of our customers.