PRODUCT HIGHLIGHTS

- PLANT BASED RAW MATERIAL
- NON-BIOACCUMULATION AND NON-TOXIC
- BIODEGRADABLE IN 28 DAYS
- IN MALAYSIA
- COMPLIANCE WITH INTERNATIONAL STANDARD
- SUPERIOR OIL PERFORMANCE
- CERTIFICATE NO.: MyHP00231/22

Available in 18 Litres pail & 209 Litres drum

PRODUCT APPLICATION

FARM MACHINES	CONSTRUCTION	MACHINE INDUSTRY	EARTHMOVING AND FORESTRY HYDRAULIC SYSTEM
			

MOVE FURTHER LAST LONGER

DISTRIBUTED BY:
UMW GRANTT INTERNATIONAL SDN. BHD.
201401027124 (1103214-V)
Jalan Utas 15/7, 40200 Shah Alam
Selangor Darul Ehsan, Malaysia
Phone number: +603 5163 5000

MANUFACTURED BY:
LUBETECH SDN. BHD.
198301000769 (96002-P)

umwgranttlube
www.granttlubricants.com

PREMIUM PRODUCT BY
UMW

GRANTT

LUBRICANTS

BIODEGRADABLE BIO VG 46 & 68 HYDRAULIC OIL

MyHP00231/22

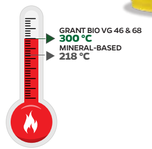
28 DAYS BIODEGRADABLE

BIODEGRADABLE BIO VG 46 & 68 HYDRAULIC OIL

GRANTT BIO VG HYDRAULIC OIL is an environmentally-friendly oil which is easily broken down by natural bacteria. It is made up of a natural oil base and preservatives that provide excellent lubrication qualities and is equal to typical lubricants.

It meets the ISO 15380 triglyceride (HETG) requirements for environmentally-friendly lubricants. It is designed to give maximum protection in hydraulic equipment used in sensitive areas within the environment.

60% higher than other products in the market. Higher VI results in a much stable fluid change to temperature over a wider temperature range.



Up to 300 °C, compared to typical hydraulics which can only be up to 218 °C. Higher flashpoint is more suitable for higher temperature equipment or machines.

CERTIFIED SUSTAINABLE PALM OIL™
RSPO

The base stock of the product is used from renewable resources from Certified Sustainable Palm Oil (CSPO) suppliers.

TECHNICAL DATA COMPARISON

PARAMETERS	MINERAL BASED AW 46	GRANTT BIO VG 46
Kinematic Viscosity at 40 °C	46	46
Kinematic viscosity at 100 °C	6.8	8.3
Viscosity Index	108	182
Flash point, °C	210	250
Density at 15 °C, kg/m^3	0.86	0.91
Pour point, °C	-6	0
Biodegradability, %	< 60 within 28 days	> 60 within 28 days

PARAMETERS	MINERAL BASED AW 68	GRANTT BIO VG 68
Kinematic Viscosity at 40 °C	68	68
Kinematic viscosity at 100 °C	9.1	11.5
Viscosity Index	100	161
Flash point, °C	218	300
Density at 15 °C, kg/m^3	0.88	0.91
Pour point, °C	-6	0
Biodegradability, %	< 60 within 28 days	> 60 within 28 days

VISCOSITY INDEX

GRANTT BIO VG vs MINERAL-BASED HYDRAULICS OIL

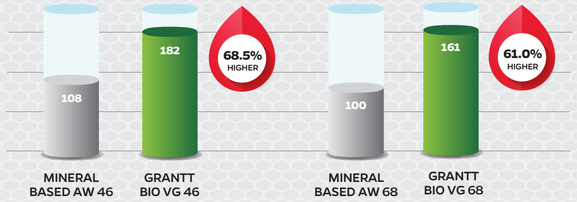
The Viscosity Index (VI) measures how effectively fluid can maintain its consistency in different temperatures.

Higher VI for both GRANTT BIO VG 46 and VG 68 makes it more stable over a wider temperature range.

Higher VI lubricants can create lubricating coatings that can reduce repairs for equipment and machines.

PARAMETERS	MINERAL BASED	GRANTT BIO VG
VG 46	108	182
VG 68	100	161

VG 46 AND VG 68 VISCOSITY INDEX



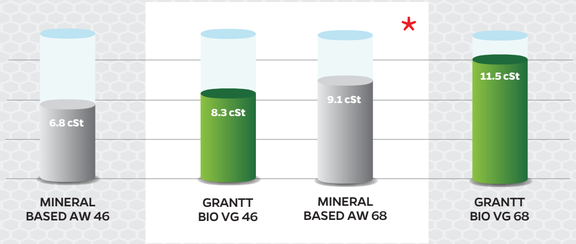
GRANTT BIO VG vs MINERAL-BASED HYDRAULICS OIL

Viscosity measures how hard or easy it is for hydraulic fluids to work. Fluids that are too thin (low viscosity) will not seal well. This can cause leakage and repair work for certain parts.

GRANTT BIO VG 46 has similar viscosity to mineral-based AW 68 at 100°C. It can be used to replace mineral-based AW 68 to improve machine performance and reduce fluid costs.

PARAMETERS	MINERAL BASED	GRANTT BIO VG
VG 46	6.8 cSt	8.3 cSt
VG 68	9.1 cSt	11.5 cSt

VG 46 AND VG 68 VISCOSITY AT 100 &C TEMPERATURE



FLASHPOINT

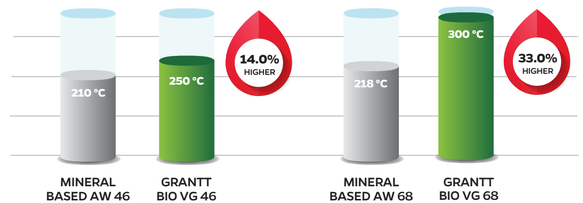
GRANTT BIO VG vs MINERAL-BASED HYDRAULICS OIL

Flashpoint is the safety measurement for lubricants when they turn to vapour from heat. It can help avoid fires and explosions.

Higher flashpoint temperature for GRANTT BIO VG 46 and VG 68 compared to typical hydraulics means it is better for higher temperature equipment or machines.

PARAMETERS	MINERAL BASED	GRANTT BIO VG
VG 46	210°C	250°C
VG 68	218°C	300°C

VG 46 AND VG 68 FLASHPOINT, °C



WEAR PERFORMANCE : 4-BALL METHOD

GRANTT BIO VG vs MINERAL-BASED HYDRAULICS OIL

A 4-ball wear test measures the effectiveness of a lubricant in preventing wearing of equipment. **GRANTT BIO VG 46 and VG 68** have lower wear scar diameter compared to typical hydraulics. A small scar means lesser wear has been caused and the lubricant quality of the sample fuel is better.

PARAMETERS	MINERAL BASED	GRANTT BIO VG
VG 46	0.53 mm	0.44 mm
VG 68	0.44 mm	0.33 mm

VG 46 AND VG 68 SCAR DIAMETER, MM