

Product Data Sheet

Effective Date 01.08.2014

Version 1.0



PETRONAS



PETRONAS GEAR SYN MPC

Micropitting Resistance EP Synthetic Gear Oils

PETRONAS GEAR SYN MPC Series extreme pressure synthetic gear oils are a family of products particularly suited to gear applications requiring micropitting resistance. They are available in ISO grades 220, 320 and 460. These products are formulated with polyalphaolefin (PAO) base stocks in order to provide performance greatly superior to conventional petroleum oils. The molecular structure of PAO resembles that of high quality petroleum oils. Indeed, PAO fluids are fully compatible with petroleum based oils while offering significantly improved load carrying ability, excellent wear and rust protection, high viscosity index, high flash point, low pour point, outstanding oxidative stability, and cleaner running systems.

Applications

- Particularly suited to gear applications in which extreme service conditions
- All types of enclosed gear drives
- Bearings, including plain, rolling elements and antifriction types
- Applications requiring high micropitting resistance such as in Wind Turbine Gear systems

Features and Benefits

- Excellent oxidation and thermal stability
- High operating temperature range
- Lower maintenance costs
- Excellent load carrying ability
- Extended lubricant life
- Improved cleanliness
- Compatible with paints, gaskets, and seals used with conventional petroleum based oils
- Compatible with petroleum oils, therefore allowing minimal effort to changeover

Specifications, Approval and Recommendation

- Meets FLENDERS GmbH approval requirement as a High Micropitting Resistant Lubricant
- Gear SYN MPC 220 meets Cincinnati Machine (CM-P) P-74 approval requirement
- Meets or exceeds the requirements of:
 - o ANSI/AGMA 9005 (Table 3)
 - o AISE 224 (formerly USS 224)
 - o DIN 51517 part 3
 - o David Brown S1.53.101
 - o Cincinnati Machine P-35 (ISO 460) and P-59 (320)

Compatibility

- No special precautions related to compatibility are required when changing over from a mineral oil lubricant to PETRONAS Synthetic hydrocarbon based lubricant.

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Typical Properties

Characteristics	220	320	460
Kinematic Viscosity, cSt			
@ 40 °C	219	299	451
@ 100 °C	24.8	32.3	45
Viscosity Index	142	149	156
Pour Point, °C	-54	-45	-42
Flash Point, °C	264	260	264
Foaming Tendency, ml (Seq I,II)	0-0	0-0	0-0
Micropitting Resistance Test (FVA, 54/11)	High	High	High
FZG Gear Test, Pass Stage	12	12	12
Density @ 15.6 °C, Kg/L	0.899	0.899	0.908

* All technical data is provided for reference only.

Health, Safety and Environment

For further assistance on product MSDS, recommendation or technical queries, please liaise with the regional technical services engineer or contact HQ technical engineers.