



## SUNOCO CHALLENGE PAO SYNTHETIC FLUIDS

### OVERVIEW

**SUNOCO CHALLENGE PAO SYNTHETIC FLUIDS** are synthetic gearbox, bearing, and circulating oils that are formulated from premium polyalphaolefin (PAO) base fluids for enclosed systems requiring ashless antioxidants and anti-wear. These oils have been designed to provide proper lubrication under hydrodynamic and mild boundary lubrication conditions. They are recommended for gear systems where moderate loads and high temperatures are expected, including worm gears containing soft metals such as bronze, brass and copper.

### FEATURES & BENEFITS

**SUNOCO CHALLENGE PAO SYNTHETIC FLUIDS** are 100% synthetic PAO lubricants formulated for wide operating temperature ranges. Their low pour points and high flash points provide increased thermal and oxidative stability over mineral based lubricants. They possess inherently high viscosity indexes that impart greater film thickness at higher temperatures while still providing excellent cold-flow properties at start-up and lower operating temperatures. These fluids reduce power consumption, operating temps, and help prolong the life of equipment. **SUNOCO CHALLENGE PAO SYNTHETIC FLUIDS** utilize select additives to enhance oxidation and thermal stability for longer lubricant life and to protect against rust and corrosion, wear, and foaming.

### APPLICATIONS

**SUNOCO CHALLENGE PAO SYNTHETIC FLUIDS** are designed to be multipurpose lubricants that can be used a wide variety of industrial applications. They are essentially compatible with most all materials used in the production of seals, hoses, gaskets and paint. They are recommended for use in the lubrication of heavily loaded gears and plain or roller bearing elements under severe high or low temperature operation. **SUNOCO CHALLENGE PAO SYNTHETIC FLUIDS** are particularly suited to replace mineral oils in applications where shorten lubricant life and the associated high maintenance costs have occurred. Key applications include: vacuum pumps, hydraulic systems, blowers, enclosed spur, helical, bevel & worm gear units, plain and roller contact bearings, circulating and splash lubricated systems, and mist systems.

### TYPICAL PROPERTIES

Product Code	9643	9653	9663	9673	9683	9693	9803	9813	7293
ISO Viscosity Grade	32	46	68	100	150	220	320	460	680
Viscosity, cSt @ 40 °C	31.6	46	67.3	99.1	149.1	231.7	340.9	480.2	728
Viscosity, cSt @ 100 °C	5.8	7.8	10.9	14.4	19.8	27.6	37.2	48.3	67.5
Viscosity Index	126	138	153	150	153	154	157	160	166
Flash Point, °C, min.	232	246	266	266	243	249	255	243	266
Pour Point, °C, max.	-54	-40	-43	-43	-44	-45	-48	-48	-43
Copper Corrosion	1A	1A	1A	1A	1A	1A	1A	1A	1A
Rust Prevention	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
FZG Gear	11	11	12+	12+	12+	12+	12+	12+	12+

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