



MAK AMOCAM

Premium quality high viscosity index, extreme pressure oils for industrial gears

MAK Amocam is a range of premium quality, extreme pressure industrial gear lubricants blended from high viscosity index solvent refined high quality base oils. The superior quality sulphur-phosphorus additive chemistry imparts high level of antiwear and extreme pressure property. Their high load carrying capacity and anti-friction property offer excellent performance in industrial gears and other industrial applications. They offer extra protection to the gear teeth, bearings and seals in order to handle severe stresses that occur in heavy duty industrial gears. These oils are not corrosive to copper and copper alloys. Formulated with antifoam, antirust and antioxidation agents they offer excellent lubrication performance and long service life. MAK Amocam oils are compatible with seal materials and paints normally specified for use in industrial gear systems with mineral oils.

Grades: MAK Amocam range is available in the following ISO VG grades – **46, 68, 100, 150, 220, 320, 460, 680, 1000** and non-ISO VG grade – **257**

Applications:

MAK Amocam oils are designed primarily for the lubrication of all types of industrial enclosed gear drives functioning under severe stresses with circulation or splash lubrication systems operating at high load and speed conditions. These grades provide dependable performance for continuous service even at higher operating temperatures. These oils are intended for use in heavily loaded spur, bevel, helical gear units as well as plain antifriction bearings subjected to shock/ heavy loads and gear couplings. They are also recommended for the lubrication of worm gear units where severe sliding action occurs. Specific applications include heavy duty multi-stage industrial reduction gears units in steel plants, power plants, cement plants and also units found in conveyors, agitators, dryers, fans, mixers, presses, extruders etc.

MAK Amocam should not be used for automotive hypoid gears. The appropriate MAK Spirol oils should be used.

Performance/ Benefits:

Excellent EP Property – provides excellent load bearing capability and helps to reduce gear tooth and bearing wear

on both steel and bronze components. Extends the life and availability of the equipment.

Outstanding Oxidation Stability – outstanding resistance to the effects of oxidising agents. Resists sludge and deposit formation. Minimises filter choking and valve sticking. Ensures reliability, longer operating life and less maintenance.

Excellent Thermal Stability – provides resistance to thermal break down and capability to work under varied ambient and operating temperatures to offer optimum life and performance.

Resistance to Foaming – allows effective lubrication, precision control and efficient power transfer. Maintains system efficiency.

Excellent Wear Protection – excellent protection to the pump, valve and other system components. Operates on a wide range of load conditions – moderate to severe duty high load.

Superior Water Separation – allows excess water to be separated and drained from the system. Resists corrosion and surface fatigue on gears and bearings.

Good Antirust Property – provides protection from rusting and corrosion of the equipment.

Wide Range of Viscosities – caters to wide range of difficult and heavy duty applications

Excellent Compatibility – with internal gearbox paints, solid seals and liquid seals.

Increased System Reliability – by resisting thermal and chemical break down of the oil these oil minimises the risk of formation of the harmful sludge and deposit.

Specification:

- IS 8406:1993 (Reaffirmed 2016)
- IPSS: 1-09-003
- AIST 224
- David Brown S.1.53.101



- 12th FLS FZG-Niemann EP Test
- DIN 51517 Part 3 (CLP)
- AGMA 250.04 5 EP & AGMA 251.02.5 EP

Storage & Handling:

The product should be stored inside. Keep it properly sealed to avoid contamination. Avoid freezing. Shelf life is 3 yrs. under protected storage conditions.

Health & Safety:

They are unlikely to be hazardous when properly used in recommended applications. Contamination of the oil from other oils, greases, chemicals, dirty water etc. can occur during the use. It should be avoided. Regular monitoring of the in-use product is recommended.

Typical Physico-Chemical Data: MAK Amocam

Characteristics	Method	46	68	100	150	220
Colour	Visual	Brown	Brown	Brown	Brown	Brown
Appearance	Visual	Clear & Bright	Clear & Bright	Clear & Bright	Clear & Bright	Clear & Bright
Density, g/cc @15°C	ASTM D1298	0.8836	0.8856	0.8896	0.8946	0.8996
Kinematic Viscosity @40°C, cSt	ASTM D445	46.9	68.2	100.7	150.3	220.7
Kinematic Viscosity @100°C, cSt	ASTM D445	7.07	9.01	11.7	15.09	19.77
Viscosity Index	ASTM D2270	108	106	104	102	102
Flash Point, COC, °C	ASTM D92	220	226	246	248	256
Pour Point, °C	ASTM D97	-12	-12	-12	-9	-6
Copper Corrosion, 100°C, 3 hrs.	ASTM D130	1b	1b	1b	1b	1b
Foaming Characteristics/ Stability, ml	ASTM D892					
Sequence I/ II/ III		NIL	NIL	NIL	NIL	NIL
FZG Rating, FLS	ASTM D5182	12	12	12	12	12
Timken EP Test OK load, lb	ASTM D2782	65	65	65	65	65

Typical Physico-Chemical Data: MAK Amocam

Characteristics	Method	257	320	460	680	1000
Colour	Visual	Brown	Brown	Brown	Brown	Brown
Appearance	Visual	Clear & Bright	Clear & Bright	Clear & Bright	Clear & Bright	Clear & Bright
Density, g/cc @15°C	ASTM D1298	0.9012	0.9046	0.9081	0.9213	0.9326
Kinematic Viscosity @40°C, cSt	ASTM D445	257.6	320.4	460.8	680.2	1000.3
Kinematic Viscosity @100°C, cSt	ASTM D445	21.92	25.38	30.63	38.68	48.87
Viscosity Index	ASTM D2270	102	102	96	94	92
Flash Point, COC, °C	ASTM D92	260	262	264	268	280
Pour Point, °C	ASTM D97	-6	-3	-3	-3	-3
Copper Corrosion, 100°C, 3 hrs.	ASTM D130	1b	1b	1b	1b	1b
Foaming Characteristics/ Stability, ml	ASTM D892					
Sequence I/ II/ III		NIL	NIL	NIL	NIL	NIL
FZG Rating, FLS	ASTM D5182	12	12	12	12	12
Timken EP Test OK load, kg	ASTM D2782	65	65	65	65	65