

## Optima Series

### *Industrial Closed Gear Box Oils*

#### PRODUCT DESCRIPTION

**Optima Series**, is a high performance industrial gear oils developed for closed gear boxes under extreme operating conditions. It is formulated with quality base oils and specially developed additive package.

#### CHARACTERISTICS

- Its extreme pressure (EP) additive provides effective protection for industrial gears operating under high loads.
- Its high quality formulation ensures good demulsibility property.
- It controls sludge and deposit formation, so keeps system clean.
- It provides excellent protection against wear, rust and corrosion to increase operating efficiency of the gears and bearings.

#### APPLICATIONS

- It is suitable to use in closed gear boxes under extreme operating conditions.

#### PERFORMANCES

- AGMA 9005-E02
- AIST 224
- DIN 51517 Part 3

### TYPICAL PROPERTIES

SAE		68	100	150	220	320	460	680
Density@15°C, g/ml	ASTM D 4052	0,886	0,890	0,890	0,900	0,900	0,909	0,907
Viscosity@40°C, mm²/s	ASTM D 445	68,0	100,0	150,0	220,0	320,0	460,0	680,0
Viscosity@100°C, mm²/s	ASTM D 445	8,7	11,3	14,5	18,4	24,0	29,3	45,4
Viscosity Index	ASTM D 2270	99	98	95	92	95	91	113
Flash Point, °C	ASTM D 92	236	250	250	260	255	270	270
Pour Point, °C	ASTM D 97	-24	-24	-24	-24	-14	-12	-10
Timken OK Load, lbs	ASTM D 2782	85	95	95	95	95	95	95
4-ball Welding Load, kg	ASTM D 2783	≥250	≥250	≥250	≥250	≥250	≥250	≥250

### HEALTH AND SAFETY RECOMMENDATIONS

Waste oils must not be discharged into underground or surface water sources, sewage systems or garbage cans. Prolonged or repeated contact with used oils may cause skin diseases. Therefore sterilized gloves should always be used. If part of the skin comes into contact with waste oil, that part should be immediately washed with plenty of soap and water. In case of skin irritation or redness caused by contact, seek advice of your doctor immediately. For more information contact Material Safety Data Sheet (MSDS).

*The vehicle and equipment manufacturers specifications and relevant international standards were taken into consideration while preparing the content of this Technical Data Sheet. The expressions in the content of this Technical Data Sheet can not be considered as guarantee commitment or similar way in terms of product characteristics and product use in any applications.*

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