



# PRODUCT DATA SHEET



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## CLEAR GEAR LUBRICANT

**Clear Gear Lubricant** is a high viscosity, synthetic fluid gear lubricant specifically formulated to provide superior lubrication of Type 2 open gear systems used in mills, kilns, driers, pelletizers, agglomerators and similar equipment. **Clear Gear Lubricant** is formulated to operate in the full fluid film or hydrodynamic mode of lubrication virtually eliminating metal-to-metal contact. **Clear Gear Lubricant Light** is especially suited for immersion type lubrication of low speed gears. **Clear Gear Lubricant All Grades** are approved by Metso Minerals. **Clear Gear Lubricant Medium** and **Heavy** are approved by Outotec. **Clear Gear Lubricant** exceeds ANSI/AGMA 9005-E02 Specification Annex D minimum viscosity recommendations for open gearing - intermittent lubricant application.

### *Applications*

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- ◆ Mills, kilns, driers and other Type 2 open gear systems

### *Features and Benefits*

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|----------------------------|--|
| ◆ Cleans gears and shrouds | Removes hard open gear lubricant residues from gears within a few shifts and from shrouds within a few weeks.              |
| ◆ Reduces consumption      | Reduces consumption up to 50% or more. Reduces purchasing and inventory costs.   |
| ◆ Completely fluid         | Easily drains to waste.  |
| ◆ Completely clear         | Ensures easy gear tooth inspections - both dynamic and static. Gives the impression of a clean, well-maintained mill area. |
| ◆ Friction modified        | Proven to reduce energy consumption and pinion temperature.  |

### *General Description*

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**Clear Gear Lubricant** is a clear open gear lubricant based on synthetic hydrocarbon technology. The product utilizes a proprietary gear lubricant additive package for maximum Extreme Pressure and anti-wear performance in conjunction with friction modifiers and superior rust and corrosion protection. **Clear Gear Lubricant** is suitable for spray and immersion application and it is completely fluid for superior drainage and waste collection.

**Clear Gear Lubricant** is available in five grades: Light, Medium, Standard, Heavy and Extra Heavy.

**Product No. 301192, 301688, 301193, 301689, 301194**

# CLEAR GEAR LUBRICANT

## TYPICAL PROPERTIES

<b><u>Product No.</u></b>	<b><u>301192</u></b>	<b><u>301688</u></b>	<b><u>301193</u></b>	<b><u>301689</u></b>	<b><u>301194</u></b>
<b><u>Old Product No.</u></b>	<b><u>21322</u></b>	<b><u>21324</u></b>	<b><u>21325</u></b>	<b><u>21326</u></b>	<b><u>21328</u></b>
Bel-Ray Name Grade	Light	Medium	Standard	Heavy	Extra Heavy
Viscosity, ASTM D445 (DIN 51561)					
@ 40°C, cSt	4,270	10,859	14751	28,204	45,273
@ 100°C, cSt	239.5	472.8	594.7	997.9	1,354
Viscosity, ASTM D2161					
@ 100°F, SUS	22,856	58,832	91,949	154,166	249,548
@ 210°F, SUS	1,162.2	2,302.4	3,018.7	4,873.3	6,631.5
Viscosity Index, ASTM D2270	179	194	195	219	223
Pour Point, ASTM D97					
°C	-18	-6	0	3	3
(°F)	(0)	(21)	(32)	(37)	(37)
4-Ball EP Test, ASTM D2783					
Weld Load, kg	250	250	250	250	250
Load Wear Index, kg	66.5	66.5	66.5	66.5	66.5
4-Ball Wear Test, ASTM D4172					
@ 1200 rpm, 40 kg, 1 hr, 75°C					
Scar Diameter, mm	0.42	0.42	0.42	0.42	0.42
Timken EP Test, ASTM D2782					
OK Load, kg (lb)	40.8 (90)	40.8 (90)	40.8 (90)	40.8 (90)	40.8 (90)
FZG A/2.76/50, DIN 51354					
Scuffing Load Stage	>12	>12	>12	>12	>12
Work Related Weight Loss, mg/kWh	<0.2	<0.2	<0.2	<0.2	<0.2
Useful (Ambient) Temperature Range					
°C	-15 to +10	-3 to +40	0 to +50	+6 to +50	+6 to +50
(°F)	(5 to 50)	(27 to 77)	(32 to 122)	(43 to 122)	(43 to 122)
Color	Straw to Light Green	Straw to Light Green	Straw to Light Green	Straw to Light Green	Straw to Light Green