

# Mineral oil based industrial gear oil



#### **Description**

**IGO** is series of high quality lead-free extra-pressure lubricants for the use of all types of closed system industrial gears ranging from normal to heavy-duty applications. The lubricants are formulated from base oils with a high viscosity index with an optimum balance of additives to provide good protection against corrosion and wear, provide high oxidation resistance, and prevent the formation of foam.

### **Applications**

**IGO** can be used for all types of closed systems industrial gears in conditions ranging from normal to heavy-duty operation with high loads requiring this type of lubricant. **IGO** is also suitable for use in circulatory lubrication system, spraying or misting.

#### **Specification Meets**

**IGO** meets the DIN 51 517 Part III CLP, US Steel 224, ISO 12925-1 CKD, AGMA 9005 - D94 EP, CINCINNATI MILACRON, DAVID BROWN, SEB 181226 type CLP.

#### **Advantages**

- Good rust and corrosion protection
- ► Good seal compatibility
- Excellent extreme-pressure & anti-wear properties
- ► Very good resistance to oil oxidation & degradation
- Very good resistance to foaming and emulsion formation

## Typical Data of IGO

Characteristics	Unit	IGO							Test Method
		68	100	150	220	320	460	680	rest Method
Color		L 3.0	L 3.5	L3.5	L 3.5	L 3.5	L3.5	L 3.5	ASTM D 1500
Density @ 15 °C	kg/L	0.8740	0.8812	0.8885	0.8930	0.8990	0.9041	0.9070	ASTM D 4052
Viscosity @ 40 °C	cSt	68.10	99.3	149.7	227.5	331.3	461.1	672.83	ASTM D 445
Viscosity @ 100 °C		5.52	11.13	14.75	19.30	24.17	30.74	44.62	
Viscosity Index		102	97	98	96	96	97	117	ASTM D 2270
Flash Point (COC)	°C	235	240	246	244	250	256	246	ASTM D 92
Pour Point	°C	-15	-24	-15	-12	-15	-9	-9	ASTM D 97
Sequence I	mL	10/0	10/0	10/0	0/0	10/0	0/0	10/0	ASTM D 892
Sequence II		0/0	0/0	10/0	10/0	10/0	10/0	10/0	
Sequence III		0/0	0/0	0/0	0/0	10/0	0/0	0/0	
FZG, Scuffing Load Capacity, Fail Stage		12	12	12	12	12	12	12	ASTM D 5182
Timken, OK Load	lbs	60	60	60	60	60	60	60	ASTM D 2782
Four-Ball EP:									
Load Wear Index	kgf	45	45	45	45	45	45	45	ASTM D 2783
Weld Point		250	250	250	250	250	250	250	

<sup>\*</sup> the typical characteristic mentioned represent mean values

PT PANA OIL INDONESIA

customersupport@panaoil.id www.panaoil.id

Page 1/1 ver. 160522