



Hi-Tec Oil Traders Pty Ltd ABN 28 053 837 362

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www.hi-tecoils.com.au

PRODUCT DATA SHEET

MACHINE OILS 68 to 680

DESCRIPTION

Hi-Tec Machine Oils are premium industrial extreme pressure gear and bearing oils especially suitable where high loads and/or high temperatures are encountered and where water contaminating influences cannot be avoided. **Hi-Tec Machine Oils** have excellent anti-friction characteristics for use in bearings, steel gear transmissions and steel phosphobronze gear units.

Hi-Tec Machine Oils do not contain obsolete lead containing EP additives. Rather, they are manufactured with the latest sulphur-phosphorus EP additives combined with highly refined paraffinic base oils and special additives to further enhance anti-oxidation, anti-corrosion, anti-rust and anti-foam tendencies so that longer service life is realised. **Hi-Tec Machine Oils** are available in most ISO viscosity grades.

RECOMMENDATIONS

Hi-Tec Machine Oils are recommended where high load and high temperature conditions occur in:

- Industrial enclosed gear drives lubricated by splash or circulation methods.
- Heavy duty industrial journals, plain and anti-friction bearings, chain drives, slide guides, etc.
- The lower viscosity grades for rock drills, hydraulics and automotive manual gearboxes which specify API GL1, GL2 and GL3.

Hi-Tec Machine Oils are may also be used in less severe service conditions.



AUSTRALIAN FAMILY OWNED SINCE 1989





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CHARACTERISTICS

- **EXTREME PRESSURE/ANTI-WEAR.** Minimal wear to all moving surfaces assures long life service to equipment. The tough, tenacious oil films under **HIGH LOAD STRESS** conditions resist the wiping-off tendencies where high sliding velocities occur between the mating gear teeth of gear units.
- **NON CORROSIVE.** **Hi-Tec Machine Oils** are virtually inert. They protect against corrosion to all common metals used in gears and bearings: steel, bronze and other copper alloys, babbitts, nickel, chromium, cadmium, etc.
- **RUST INHIBITORS** protect against rust development in systems where water contamination may occur.
- **DEMULSIBILITY.** Quick water separation to assure effective lubrication is a special characteristic of **Hi-Tec Machine Oils**. This is a necessary requirement in the heavy duty operation in some steel mill services where water contamination is difficult to avoid.
- **OXIDATION RESISTANCE.** High temperature resistance to oxidation avoids viscosity thickening and other undesirable oxidation products such as gums, acidity development and deposition insolubles, all of which may otherwise result in premature shortened gear oil and equipment service life.

OEM SPECIFICATIONS.

Hi-Tec Machine Oils meet many international equipment manufacturers' specifications including:

US Steel 224
AGMA 250.04
AGMA 251.02
AGMA 9005—D94
AGMA 9005—E02
DIN 51517 Part 3
ISO 12925-1 CKC/CKD
David Brown DB S1.53.101 (E)



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TYPICAL TEST

MACHINE OILS

ISO Viscosity Grade	68	100	150	220	320	460	680
Product Code	2608	2610	2612	2614	2616	2618	2620
Density, Kg/Lt at 15°C	0.889	0.894	0.898	0.902	0.906	0.907	0.907
Viscosity, cSt at 40°C	68.0	100	150	220	320	460	680
at 100°C	8.64	11.2	14.8	19.0	24.1	30.0	36.0
Viscosity Index	98	97	98	97	96	94	86
Flash Point, COC, °C	243	261	261	267	273	306	310
Pour Point, °C	-24	-24	-24	-21	-21	-18	-5
Carbon Residue Conradson %	0.03	0.08	0.25	0.42	0.52	0.68	-
Rust Prevention, Salt Water	Pass	Pass	Pass	Pass	Pass	Pass	Pass
Copper Strip Corrosion - 3 Hours 100°C	1b	1b	1b	1b	1b	1b	1b
Oxidation Resistance, Viscosity - Increase %, 300 Hours 121°C	3.5 max	3.5 max	3.5 max	3.5 max	3.5 max	3.5 max	3.5 max
Foam Characteristics - All Sequences After Settling	Nil	Nil	Nil	Nil	Nil	Nil	Nil
Ash, % Mass	Nil	Nil	Nil	Nil	Nil	Nil	Nil
Sulphur*, % Mass	0.310	0.310	0.310	0.310	0.310	0.310	0.310
Phosphorus, % Mass	0.034	0.034	0.034	0.034	0.034	0.034	0.034
FZG, Pass Stages	12	12	12	12	12	12	12
Timken Pass, Kg (min)	28	28	28	28	28	28	28
Four Ball Weld Load, Pass (min)	260	260	260	260	260	260	260
AGMA EP Number	2	3	4	5	6	7	8
SAE Gear Oil Equivalent	80W	85	90	90	110	140	140

* Excluding Sulphur due to base oil

"Hi-Tec Oil Traders Pty Ltd (Hi-Tec Oils) has endeavoured to ensure that all information, representations and specifications contained in this product data sheet are accurate at the time of publication. This general information should be used in conjunction with appropriate inquiries by users of the product including consultation with the vehicle or equipment manufacturers published information.

It is the responsibility of users of the product to use the product safely. Users should consult the safety data sheets for each product at www.hi-tecoils.com.au. Hi-Tec Oils takes no responsibility for injury or damage if the product is used in an inappropriate or unsafe manner. Our product warranty and product quality statement can be viewed at www.hi-tecoils.com.au"

Effective: February 2015

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