



INDUSTRIAL
LUBRICANTS &
SERVICES LIMITED

Technical Data sheet

ILS-SPINDLE OIL ZZ 2

Light bodied Machine Oil

Description

ILS SPINDLE OIL ZZ 2 is based upon highly refined mineral oil enhanced with rust and oxidation inhibitors and formulated especially for the lubrication of high speed and precision machine tool spindle bearings.

Typical Applications

ILS SPINDLE OIL ZZ 2 is specially formulated to provide outstanding protection against rust and oxidation while demonstrating good lubricity. These types of oils are also referred to as "R and O" oils.

ILS SPINDLE OIL ZZ 2 is designed for use in all types of spindle bearings, including high-speed spindle bearings.

ILS SPINDLE OIL ZZ 2 is fully compatible with elastomer materials commonly used for static and dynamic seals, such as nitrile, silicone and fluorinated (e.g. Viton) polymers.

ILS SPINDLE OIL ZZ 2 is classified as follows:

DIN 51502 classification – HL

ISO 6743/4 - Hydraulic Oils Type HL

ISO 6743/2 – Spindle Oils Type FC

ILS SPINDLE OIL ZZ 2 meets or exceeds the following industry specifications:

Cincinnati Lamb (formerly Milacron) P-65 (FC-2) - Spindle Oil 2

Advantages

- Good thermal and oxidative stability leads to longer operating life, reduction in lubricant costs and minimises deposit formation giving a cleaner system.
- Good protection of yellow metal and ferrous components helps maintain and prolong equipment life.
- Excellent water separation and hydrolytic stability means reduced down time through prolonged lubricant life and increased equipment reliability.

- Controlled foaming to provide consistent lubrication under the high agitation conditions found in spindle bearings.

Typical Properties

	METHOD	UNIT	SPINDLE OIL ZZ 2
Appearance	Visual	-	Clear, colorless to pale amber liquid
Density @ 15°C	ISO 12185 / ASTM D4052	kg/m ³	780
Viscosity @ 40°C (cSt)	ISO 3104 / ASTM D445	mm ² /s	2
Viscosity @ 100°C (cSt)	ISO 3104 / ASTM D445	mm ² /s	0.95
Pour Point	ISO 3016 / ASTM D97	°C	-40
Demulsification 54°C, mins t 40/37/3	ASTM D1401	minutes	10
Flash Point - open cup method	ISO 2592 / ASTM D92	°C	92

Note: Data is typical and does not constitute a specification

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