

DROSERA MS



Machine tools

TOTAL

High performance multifunctional zinc free oils for machine tools.

APPLICATIONS

- Machine tool slide ways under all conditions of speed and load (grades 68 to 320).
- Hydraulic circuits for hydraulic pumps and motors (grades 32 and 46).
- Gear boxes and feed mechanisms of all types with or without wet electro magnetic clutches (grades 68 to 320).
- High speed machine spindles (grades 5, 10, 15 and 22) and very high speed (grade 2).
- Hydrodynamic lubrication of mill roll stands during grinding (VG 460).
- Particularly suitable for centralized lubrication systems.
- **One single comprehensive range of lubricating products for all parts of machine tools (hydraulics, slides, gears).**
- **Simplification of storage and maintenance, cost reduction.**
- Viscosity grades 68 to 150 are also well suited to cold heading applications.

SPECIFICATIONS

- ISO 6743/2 : FD2 ; FD5 ; FD10 ; FD 22 ; FD 32
- ISO 6743/4 : HG32 ; HG46
- ISO 6743/13 : GA68 ; GA100 ; GA150 ; GA220 ; GA320 ; GA 460
- DIN 51502 : CGLP46 ; CGLP68 ; CGLP100 ; CGLP150 ; CGLP220 ; CGLP320 ; CGLP 460
- DIN51517 Part 3 , CLP 46 ; CLP 68 ; CLP 100 ; CLP 150 ; CLP 220 ; CLP 320 ; CLP 460
- CINCINNATI MACHINE : P65-P62-P47-P50-P53-P45.

ADVANTAGES

- **Excellent extreme-pressure properties**
- **Excellent anti-stick-slip properties.**
- **Strong stickiness grades 68 to 320.**
- **Very low coefficient of friction.**
- **Antioilmist properties.**
- High viscosity index.
- Total compatibility with seals.
- Low pour point.
- Very good foaming resistance.
- Very good oxidation resistance
- Very good protection against rust
- Very good anti-wear properties.
- Good filterability.

TYPICAL CHARACTERISTICS	METHODS	UNITS	DROSERA MS												
			2	5	10	15	22	32	46	68	100	150	220	320	460
Density	ISO 3675	kg/m ³	802	845	845	850	860	870	880	885	886	890	900	900	905
Viscosity at 40°C	ISO 3104	mm ² /s	2.2	5	10	15	22	32	46	68	100	150	220	320	460
Viscosity index	ISO 2909	-	-	-	85	100	100	104	104	103	100	99	99	98	95
Flash point Cleveland	ISO 2592	°C	92	130	150	150	190	210	230	240	250	260	260	260	260
Pour point	ISO 3016	°C	-30	-21	-21	-21	-21	-21	-18	-15	-15	-15	-12	-9	-6
Aniline point	ISO 2977	°C	90	90	90	94	98	100	102	103	109	110	110	110	110

Above characteristics are mean values given as an information.

TOTAL LUBRIFIANTS
Industrie & Spécialités
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DROSERA MS
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This lubricant used as recommended and for the application for which it has been designed does not present any particular risk.
A material safety data sheet conforming to the regulations in use in the E.C. is obtainable via your commercial adviser www.quick-fds.com.