



Product Data

Magna™ SW D Range

Slideway oils

Description

Castrol Magna™ SW D is specially formulated for the lubrication of slideways on machine tools. It is based on powerful extreme pressure and lubricity additives in highly refined mineral oil offering constant glide behaviour, excellent adhesion and wear protection as well as excellent corrosion protection and ageing resistance.

Application

The Magna SW D range of products is designed to be used on all horizontal and vertical slideways where a high quality demulsifying lubricant is required for slideway protection and to maximize coolant life.

Magna SW D slideway oils are noted for their usual ability to overcome the stick-slip motion ordinarily associated with slow moving tool parts. They reduce machine tool carriage chatter and possess the necessary adhesive characteristics to prevent squeezing out of the lubricant.

Magna SW D covers the exacting demands in the following applications: planers, grinders, horizontal boring machines, shapers, jig borers, and milling machines.

It is especially suitable for plastic coated guideways. Possible swelling of the plastics won't occur like it can with the use of conventional, non-demulsifying slideway oils.

The Magna SW D range meets the requirements of:

- Cincinnati Machine P-47, P-50 and P-53 (depending on viscosity grade)
- DIN 51524-2, HLP

The Magna SW D range is classified as:

- CGLP according DIN 51502

Advantages

- Excellent demulsification and metalworking fluid compatibility help to prevent soluble oil emulsions on slideway surfaces and to keep the coolant in clean conditions
- High load carrying capacity prevents wear of highly loaded slideways and prolongs the life of machine parts
- Exceptional frictional characteristics prevents stick-slip. This provides high tool slide working accuracy and repeatable machining so that high quality surface finish and tolerances are maintained at low rejection rate levels
- Protects metals against staining and corrosion which keeps oil-wetted surfaces in good condition and avoids downtime and expensive slideway repair or replacement
- Very good filtration property keeps filters in oil supply unblocked

Typical Characteristics

Description	Test Method	Unit	SW D 32	SW D 68	SW D 100	SW D 150	SW D 220
ISO Viscosity Grade	ISO 3448	-	32	68	100	150	220
Density @ 15°C / 59°F	ASTM D4052/ ISO 12185	g/ml	0.87	0.88	0.89	0.89	0.90
Kinematic Viscosity @ 40°C / 104°F	ASTM D445/ ISO 3104	mm²/s	32	68	100	150	220
Kinematic Viscosity @ 100°C / 212°F	ASTM D445/ ISO 3104	mm²/s	5.3	8.6	11.4	14.9	18.8
Viscosity Index	ASTM D2270/ ISO 2909	-	102	101	93	91	95
Pour Point	ASTM D97/ ISO 3016	°C/ °F	-12 / 10	-28 / -18	-9 / 16	-12 / 10	-6 / 21
Flash Point - open cup method	ASTM D92/ ISO 2592	°C/ °F	204 / 399	246 / 475	232 / 450	238 / 460	245 / 473
Rust test - distilled water (24 hrs)	ASTM D665A/ ISO 7120	-	Pass				
Rust test - synthetic seawater (24 hrs)	ASTM D665B/ ISO 7120	-	Pass				
Copper corrosion (3 hrs@100°C/ 212°F)	ASTM D130/ ISO 2160	Rating	1b				
Four Ball Wear test - Wear Scar Diameter (400N / 75°C / 1200 rpm / 1 hr)	ASTM D2266	mm	0.35				
Four Ball Weld Load test - Weld Point	ASTM D2783	kgf	-	≤ 200			
Stick-slip ratio	Cincinnati Machine	Ratio	< 0.80				
Cincinnati Machine Specification	-	-	P-53	P-47	-	-	P-50

Subject to usual manufacturing tolerances.

Storage

To avoid product deterioration always keep the container/drum tightly sealed. Store the product in a cool, dry place away from direct sunlight. Prevent exposure to frost and avoid water ingress. For optimum product stability, it is preferable to store the product indoors between 5°C and 45 °C / 41°F and 113°F.

For more details, please refer to the product safety data sheet.

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