



Magna™ SW Range

Slideway oils

Description

Castrol Magna™ SW Range is specially formulated for the lubrication of slideways on machine tools. The products are blends of refined mineral oil and powerful additives that provides all-round properties combining controlled friction characteristics with high film strength and high load carrying performance to eliminate 'stick slip'.

Application

The Magna SW 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 32 is a light viscosity, combined hydraulic and slideway lubricant. Applications include lightly loaded slideways such as found on small centre lathes and combined hydraulic and slideway systems such as in reciprocating grinding machines.

Magna SW 68 is a medium viscosity slideway lubricant suitable for use in most machine tool lubrication systems specifying an ISO VG 68 oil.

Magna SW 220 is formulated for use with heavily loaded slideway applications or where there is a vertical or inclined slideway.

Advantages

- Excellent 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
- High load carrying capacity prevents wear of highly loaded slideways and prolongs the life of machine parts
- Good demulsification and metalworking fluid compatibility help to prevent soluble oil emulsions on slideway surfaces and to keep the coolant in clean conditions
- Protects metals against staining and corrosion which keeps oil-wetted surfaces in good condition and avoids downtime and expensive slideway repair or replacement

Typical Characteristics

Description	Test Method	Unit	SW 32	SW 68	SW 220
Appearance	Visual	-	Clear amber fluid	Clear amber fluid	Clear amber fluid
ISO viscosity grade	ISO 3448	-	32	68	220
Density @ 20°C / 68°F	ASTM D4052 / ISO 12185	g/ml	0.88	0.88	0.89
Kinematic Viscosity @ 100°C / 212°F	ASTM D445 / ISO 3104	mm ² /s	5.3	9.2	19.5
Kinematic Viscosity @ 40°C / 104°F	ASTM D445 / ISO 3104	mm ² /s	32	68	220
Viscosity Index	ASTM D2270	None	96	110	100
Pour point	ASTM D97 / ISO 3016	°C / °F	-12/10	-11 / 12	-10 / 14
Flash Point - open cup method	ASTM D92 / ISO 2592	°C / °F	216/421	218 / 424	254 / 489
Rust test - distilled water (24 hrs)	ASTM D665A / ISO 7210	Rating	Pass	Pass	Pass
Rust test - synthetic seawater (24 hrs)	ASTM D665B / ISO 7210	Rating	Pass	Pass	Pass
Copper corrosion (3 hrs@100°C/212°F)	ASTM D130 / ISO 2160	Rating	1b	1b	1b
Four ball wear test (400N, 75°C, 1200 rpm, 1 hr), scar diameter	ASTM D2266	mm	-	0.35	
Stick-slip ratio	Cincinnati Machine	-	-	< 0.8	
Cincinnati Machine specification		-	-	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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