Mobil Vactra Oil Numbered Series

Way and Slide Lubricants

Product Description

The Mobil Vactra Oil Numbered Series are premium-quality lubricants specifically designed to fully meet the requirements for accuracy and parts finish of today's high production machine tools. They are formulated from high-quality base stocks and performance balanced with a progressive additive system that provides low frictional properties, excellent corrosion protection and foam resistance. A unique advanced additive package helps reduce stick-slip and chatter under thin film, boundary lubrication conditions. This allows smooth, uniform motion at design travel speeds. The Mobil Vactra Oil Numbered Series have been optimised to provide excellent separability from aqueous coolants in coolant systems while minimising the corrosive effects of high pH coolants on lubricated surfaces.The base stocks and additive package have been carefully selected to protect slides and ways while still providing good filterability. This is important because reduced flow or plugged applicator filters will increase stick-slip, chatter and wear. The metal-wetting and adhesive agents form uniform films that resist squeezing from way surfaces while the machine is not in operation.

Features and Benefits

The Mobil Vactra Oil Numbered Series oils have been developed and specifically designed to provide an extra margin of machinery protection by satisfying the stringent demands of the slide ways while meeting the requirements of the other lubricated components of the machine tools. They exhibit excellent lubricity and load-carrying performance contributing significantly to improving the production of quality parts. Their outstanding oxidation and thermal stability characteristics improve machine cleanliness, provide desirable filterability properties and reduce the need for frequent maintenance services. The Mobil Vactra Oil Numbered Series provide excellent separability from water and aqueous coolants reducing the potential negative effects of cross contamination enhancing the service life and performance of both the lubricant and the coolants.

Features	Advantages and Potential Benefits
Low Frictional Characteristics	Helps eliminate chatter and stick-slip of slides and waysImproves finish and quality of partsHelps reduce wear
Lubricity	Helps reduce wear and increases smoothness of sliding action
Adhesiveness	Prevents removal of lubricant from critical surfacesProtects surfaces from attack of high pH coolants
Water and Aqueous Separability	Extends lubricant life and performanceImproves aqueous coolant life
Oxidation/Chemical Stability	Extends oil service lifeKeeps sliding surfaces and other lubricated components cleanHelps reduce filter change frequencies
Rust and Corrosion Protection	Helps reduce the deterioration of sliding services and associated maintenance Improves the quality and productive capacity of finished parts

Features	Advantages and Potential Benefits
Filterability	Allows removal of fine abrasives that could damage components or parts finish Reduces filter change frequencies
Multi-Metal Compatibility	Works with ferrous and non-ferrous materials

Applications

Mobil Vactra Oil Numbered Series products are recommended both as slideway lubricants and as fluids for moderate service machine tool hydraulic systems. These oils are designed for use with all combinations of cast iron, steel and non-metallic way materials. Mobil Vactra Oil Numbered Series may be applied by hand, forced-feed lubricator or in flood application by circulation system. Their extreme pressure properties make them suitable for all types of gears found in machine tools. They should not be used in circulation systems where bulk oil temperatures exceed 66ºC.

- Mobil Vactra Oil No. 2 is recommended for horizontal slideways on small to medium size machine tools. It is also suitable for flood application in large machines
- Mobil Vactra Oil No. 3 is recommended for dual-purpose gear and way lubrication systems
- Mobil Vactra Oil No. 4 is the normal recommendation for large machines where way pressures are high or good precision is required. It is also recommended for vertical and inclined slideways where drain-down can be a problem
- Mobil Vactra Oil Numbered Series can be used for lubrication of ballscrews, linear guides, headstocks, translating screws, spur and bevel gears, and lightly loaded worm gears
- Applications where conventional mineral oil contamination of the aqueous coolants shortens coolant batch life

Specifications and Approvals

Mobil Vactra Numbered Series has the following builder approvals:	No. 1	No. 2	No. 3	No, 4
Cincinnati Machine				
P-53	X			
P-47		X		
P-50				X

Typical Properties

Mobil Vactra Oil Numbered Series	No. 1	No. 2	No. 3	No. 4
ISO Viscosity Grade	32	68	150	220
Viscosity, ASTM D 445				
cSt @ 40ºC	31.5	67.78	155.9	220.9
cSt @ 100ºC	5.27	8.6	14.5	18.3
Viscosity Index, ASTM D 2270	96	96	96	96
Copper Strip Corrosion, ASTM D 130, 3 h @ 100ºC	1B	1B	1B	1B
Rust Protection, ASTM D 665A	Pass	Pass	Pass	Pass

Mobil Vactra Oil Numbered Series	No. 1	No. 2	No. 3	No. 4
FZG Load Support, DIN 51354, Fail Stage	13	13	13	13
4-Ball Wear, Scar Dia, 20 Kg, 54ºC, 1800 RPM,1 hr, ASTM D 4172, mm	0.25	.25	0.25	0.25
Weld Load, 4-Ball EP, ASTM D 2783, kg	200	200	200	200
Pour Point,ºC, ASTM D 97	-30	-33	-6	-3
Flash Point,ºC, ASTM D 92	216	228	248	240
Specific Gravity 15C/15C, ASTM D 1298	0.869	0.883	0.887	0.892

Health and Safety

Based on available information, this product is not expected to produce adverse effects on health when used for the intended application and the recommendations provided in the Material Safety Data Sheet (MSDS) are followed. MSDS's are available upon request through your sales contract office, or via the Internet. This product should not be used for purposes other than its intended use. If disposing of used product, take care to protect the environment.