## **Product Information**



A PRODUCT OF VALVOLINE, A DIVISION OF ASHLAND INC.

## Valvoline® R & O Oils

**Valvoline R & O Oils** contains top-tier ashless rust and oxidation inhibition (R&O) chemistry in a high paraffinic, high saturates base oil for use in both steam and gas turbines. It is also highly suitable for use in circulating and hydraulic systems where oils are used for long periods of time. In addition to the rust and oxidation inhibition, these oils also exhibit excellent water demulsibility and anti-foam characteristics.

**Valvoline R & O Oils** meet the performance requirements of General Electric GEK 32568, for their Frame 7 turbines, and Solar ES9-224. In addition, they also meet Cincinnati Machine P-38, P-55, and P-54, Parker Denison HF-0 bench tests, DIN 51524 Part 1, DIN 51515 Part 1, US Steel 125, US Steel 135, AFNOR NFE 48-603, and other specifications. In ISO 32 to ISO 68, the typical Turbine Oxidation Stability Test (D943) is 6,500 - 7,000 hours.

Other applications include use in compressors, air tools, air line lubricators, vacuum pumps, light duty gears where R&O (rust and oxidation inhibited) oils are specified, select heat transfer, and general lubrication applications.

Meets Performance of	Viscosity Grade							
Cincinnati Machine P-38	32							
Cincinnati Machine P-55		46						
Cincinnati Machine P-54			68					
Parker Denison HF-1	32	46	68	100	150	220	320	460
DIN 51524 Part I	32	46	68	100	150	220	320	460
U.S. Steel 125,135	32	46	68	100	150	220	320	460
AFNOR NFE-48603HL	32	46	68	100	150	220	320	460
Mil-L-17672C	32	46	68	100	150	220	320	460
Joy Mining TO-L, TO-M			68			220		
Typical Properties	32	46	68	100	150	220	320	460
API Gravity @ 60° F	31.2	29.9	28.9	28.4	28.1	27.7	24.1	27.2
Viscosity @ 40°C (cSt)	31	44	65	96	142	208	315	460
Viscosity @ 100°C (cSt)	5	7	8	11	14	18	23	31
Viscosity Index	95	95	95	95	95	94	97	97
Color	1.5	1.5	3	4	4	4	5	5
Pour Point (°F)	-25	-20	-10	-5	-5	0	5	5
Flash Point (°F)	425	440	480	490	>490	>490	>490	>490
Fire Point (°F)	450	470	515	530	>530	>530	>530	>530
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Part Numbers								
Bulk	VV702320	VV702360	VV702400	VV702440	VV702480	VV702520	VV702560	743354
55 Gallon Drum	VV70232	VV70236	VV70240	VV70244	VV70248			

In a <u>clean</u>, <u>dry condition</u>, this oil will typically exceed 30 kv when tested by ASTM D-877 Dielectric Breakdown Voltage of Insulating Liquids.

Refer to Valvoline Inc.'s Material Safety Data Sheet for health and safety information.

This information only applies to products manufactured in the following location(s): USA, Canada.

Effective Date: Expiration Date: Replaces: Author's Initials: Code 9/23/10 N/A 7/23/2010 JRT PI 1003

