



## Univis™ N Series

### Hydraulic Oil

#### Product Description

Univis™ N Series oils are premium high performance anti-wear hydraulic oils designed to satisfy a wide range of hydraulic equipment requirements. The products exhibit high viscosity indexes contributing to their excellent low and high temperature properties making them an excellent choice for equipment that is subjected to a wide range of start-up and operating temperatures. Univis N Series oils are formulated with good shear stability allowing their use in high-pressure high-temperature operating environments for extended periods of time. They provide long oil/filter life and optimum equipment protection reducing both maintenance costs and product disposal costs. Univis N Series oils are formulated with select high-quality base oils and a carefully selected additive system that provide very good anti-wear properties, rust and corrosion protection, good demulsibility, oxidation resistance, good anti-foam and fast air release properties. They are designed to work with systems operating under moderate conditions where high levels of anti-wear protection are needed.

#### Features and Benefits

The use of the Univis N Series hydraulic oils can result in less wear and corrosion. This results in longer running periods and lower maintenance costs. Their excellent oxidation and thermal stability safely allow extended life capability while controlling sludge and deposit formation. Univis N has very good flow characteristics at low temperatures and good protection at elevated temperatures.

- High viscosity index and good shear stability maintain excellent viscosity characteristics for long periods of time
- Low pour points sustains good fluidity conditions at low temperatures
- High performance and smooth hydraulic operations derived from fast air release, very good foam control and good water separability
- Exceptional corrosion protection reduces the negative effects of moisture on system components
- Effective oxidation and thermal stability characteristics reduce deposits and improve valve performance

#### Applications

- Univis N can be used in a wide variety of industrial, mobile and marine applications
- Systems where low start-up and high operating temperatures are typical
- Hydraulic systems requiring anti-wear oils
- Systems containing gears and bearings where mild anti-wear characteristics are desirable
- Systems requiring a high degree of load-carrying capability and anti-wear protection
- Applications where moisture is present and good corrosion protection is an asset
- Machines employing a wide range of components using various metallurgy in their designs

#### Specifications and Approvals (\*)

<b>Univis N Series meets or exceeds the requirements of:</b>	<b>15</b>	<b>22</b>	<b>32</b>	<b>46</b>	<b>68</b>
DIN 51524-3 2006-9			X	X	X
ISO L-HV (ISO 11158, 1997)			X	X	X

<b>Univis N Series is recommended by ExxonMobil for use in applications requiring:</b>	<b>15</b>	<b>22</b>	<b>32</b>	<b>46</b>	<b>68</b>
Denison HF-0			X	X	X
Eaton I-286-S			X	X	X
Eaton M-2950-S			X	X	X

(\*) Specific Claims set may vary, please contact your local ExxonMobil Technical Help Desk.

## Typical Properties

	<b>Univis N 15</b>	<b>Univis N 22</b>	<b>Univis N 32</b>	<b>Univis N 46</b>	<b>Univis N 68</b>
ISO Viscosity Grade	15	22	32	46	68
Viscosity, ASTM D 445, cSt @ 40°C					
cSt @ 40°C	15	22	32	46	68
cSt @ 100°C	3.83	5.03	6.39	8.19	11.0
Viscosity Index, ASTM D 2270	151	151	151	152	151
Brookfield Viscosity @ -20° C, ASTM D 2983, cP	400	800	1740	3240	-
Copper Strip Corrosion, ASTM D 130	1A	1A	1A	1A	1A
Rust Characteristics, ASTM D 665B	Pass	Pass	Pass	Pass	Pass
Pour Point, °C, ASTM D 97	-51	-48	-48	-48	-42
Flash Point, °C, ASTM D 92	174	186	208	216	222
Emulsion, Time to 3 ml Emulsion @ 54°C, ASTM D 1401, minutes (max)	10	10	5	10	10
Density 15°C, ASTM D 1298, kg/L	0.857	0.865	0.876	0.875	0.879

## 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.

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