

# Product Data Sheet

## NA-LUBE<sup>®</sup> AW-6310 (Formerly KX1090)



Science Road  
Norwalk, CT 06852  
(800) 431-7900  
Fax: (203) 866-0425  
E-Mail: lad@kingindustries.com

**NA-LUBE AW-6310** is an ashless multifunctional additive for industrial and automotive lubricants and greases. **NA-LUBE AW-6310**, when used at very low treat levels, exhibits excellent extreme pressure and antiwear properties as determined with the FZG test rig. Additionally, **NA-LUBE AW-6310** imparts outstanding steel corrosion protection and demulsibility to lubricants based on Group I, II and synthetic base stocks.

### CHEMICAL

**COMPOSITION:** Proprietary preparation of sulfur-phosphorus-nitrogen containing chemistry.

**APPEARANCE:** Clear amber moderately viscous liquid.

### TYPICAL

<b>PROPERTIES:</b>	Sulfur Content	9.1%
	Phosphorus Content	4.2%
	Nitrogen Content	3.0%
	Viscosity @ 40°C (ASTM D 445, DIN 51550)	173 mm <sup>2</sup> /s (cSt)
	Viscosity @ 100°C (ASTM D 445, DIN 51550)	14 mm <sup>2</sup> /s (cSt)
	Density @ 15.6°C (ASTM D 4052)	0.994 g/ml
	Weight Per Gallon @ 25°C	8.26 lbs
	Mineral Oil Content	none
	Flash Point, COC (ASTM D 92, DIN 51376)	130°C (266°F)

Note: The above analytical data are not specifications.

	<u>Typical Treat Levels</u>
<b>APPLICATIONS:</b>	
Metalworking Fluids	0.20% - 1.0%
Hydraulic Fluids	0.15% - 0.5%
Circulating Oils	0.15% - 0.5%
Paper Machine Oils	0.20% - 1.0%
Industrial and Automotive Gear Oils	0.30% - 1.5%

**NA-LUBE AW-6310** is a multifunctional ashless lubricant additive exhibiting excellent extreme pressure, antiwear, rust inhibiting and demulsification properties. By virtue of its specially selected raw materials, **NA-LUBE AW-6310** is an excellent additive (when used in combination with well selected phenolic and aminic antioxidants) for formulating ashless high performance EP rust and oxidation oils, hydraulic oils, paper machine oils, circulating oils, industrial and automotive gear oils and greases. At a low treat level of 0.10 - 0.15% in a severely hydrotreated paraffinic ISO VG 46 base oil, **NA-LUBE AW-6310** displays outstanding FZG performance (higher than 12 load stages). **NA-LUBE AW-6310** can also be used for formulating chlorine-free metalworking fluids when used in combination with NA-LUBE<sup>®</sup> EP-5130LC and a lubricity agent.

(see reverse side)

**NA-LUBE<sup>®</sup> AW-6310**  
(Formerly KX1090)

- ADVANTAGES:**
- \* Ashless multifunctional lubricant additive
  - \* Outstanding extreme pressure/antiwear performance at low treat levels as determined with the FZG gear test rig
  - \* Excellent rust protection and demulsification properties
  - \* Good thermal and hydrolytic stability
  - \* Good solubility in mineral oils and synthetic base stocks

**SOLUBILITY:** Soluble in petroleum and synthetic lubricant base stocks and most common solvents. Insoluble in water. However, it is recommended to verify the solubility in the base oils used and the compatibility with other additives.

**STANDARD PACKAGING:** 440 lbs (200 kg) closed head drum.

**STORAGE CONDITIONS:** Store in a cool dry place away from any direct sources of heat and moisture. Maximum recommended storage temperature: 46°C (115°F)

**SHELF LIFE:** Best if used within 18 months from the date of manufacture.

**HANDLING:** Avoid all personal contact. Observe good personal hygiene. For additional information, it is advised to consult the Material Safety Data Sheet (MSDS) for **NA-LUBE AW-6310**.

**REGISTRATION:** Please refer to Section 15 of the Material Safety Data Sheet for information.

For Samples or Technical Service, contact King Industries or your King representative.

King Industries, Inc.  
Science Road  
Norwalk, CT 06852-0588  
Tel: 203-866-5551  
Fax: 203-866-0425  
E-mail: LAD@kingindustries.com

King Industries International, Inc.  
Noordkade 64, 2741 EZ Waddinxveen  
The Netherlands  
Tel: +31-182-631360  
Fax: +31-182-621002  
E-mail: info@kingintl.nl

NA-LUBE<sup>®</sup> is a registered trademark of King Industries, Inc.

v:\lad\TechnicalLiterature\CurntTDS\NALUBE\AW6310\_03  
Revision date: 29 JUL 2004

The conditions of your use and application of our products, technical assistance and information (whether verbal, written or by way of product evaluations), including any suggested formulations and recommendations, are beyond our control. Therefore, it is imperative that you test our products, technical assistance and information to determine to your own satisfaction whether they are suitable for your intended uses and applications. Such testing has not necessarily been done by King Industries, Inc. ("King"). The facts, recommendations and suggestions herein stated are believed to be reliable; however, no guaranty or warranty of their accuracy is made. EXCEPT AS STATED, THERE ARE NO WARRANTIES, EXPRESS OR IMPLIED, OF MERCHANTABILITY, FITNESS OR OTHERWISE. KING SHALL NOT BE HELD LIABLE FOR SPECIAL, INCIDENTAL, CONSEQUENTIAL OR EXEMPLARY DAMAGES. Any statement inconsistent herewith is not authorized and shall not bind King. Nothing herein shall be construed as a recommendation to use any product(s) in conflict with patents covering any material or its use. No license is implied or granted under the claims of any patent. Sales or use of all products are pursuant to Standard Terms and Conditions stated in King sales documents.