

# MATERIAL SAFETY DATA SHEET

NLU-1004  
02 00

Date of Preparation  
23-Feb-10

## SECTION 1 - PRODUCT AND COMPANY IDENTIFICATION

### PRODUCT NUMBER

NLU-1004 - 1 quart bottle

### PRODUCT NAME

E-900L Ball Screw Lubricant

### MANUFACTURER'S NAME

Nook Industrires  
4950 East 49th Street  
Cleveland, OH 44125-1018

Product Information	(800) 321-7800
Regulatory Information	(216) 566-2902
Medical Emergency	(216) 566-2917
Transportation Emergency*	(800) 424-9300

\* for Chemical Emergency ONLY (spill, leak, fire, exposure, or accident)

## SECTION 2 - COMPOSITION/INFORMATION ON INGREDIENTS

% By Weight	CAS NUMBER	INGREDIENT
1-5	90-30-2	1-Naphthylamine; N-Phenyl
<1	1330-78-5	Tricresyl Phospate
1-5	68411-46-1	Alkylated Diphenyl Amines

NOTE: This product contains 1.0% wt. P.A.N. (phenyl-alpha-naphthylamine) 90-30-2

## SECTION 3 - HAZARDS IDENTIFICATION

Under normal conditions of use, this product is not considered hazardous according to regulatory guidelines (See section 15).

### EMERGENCY OVERVIEW:

Light Amber Liquid. In case of fire, neurotoxic fumes may be generated. Caution-thermally decomposed residues may be neurotoxic. DOT ERG No. : NA. SEC: 0

**POTENTIAL HEALTH EFFECTS:** No significant effects expected.

**POTENTIAL ENVIRONMENTAL EFFECTS:** Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

For further health effects/toxicological data, see Section 11.

<b>HMIS Codes</b>	
Health	2
Flammability	1
Reactivity	0

## SECTION 4 - FIRST AID MEASURES

**EYE CONTACT:** Flush thoroughly with water. If irritation occurs, call a physician.

**SKIN CONTACT:** Wash contact areas with soap and water.

**INHALATION:** Remove from further exposure. If respiratory irritation, dizziness, nausea, or unconsciousness occurs, seek immediate medical assistance. If breathing has stopped, assist ventilation with bag-valve-mask device or use mouth-to-mouth resuscitation.

**INGESTION:** Seek immediate medical attention. Do not induce vomiting.

**NOTE TO PHYSICIANS:** Material if ingested may be aspirated into the lungs and can cause chemical pneumonitis. Treat appropriately.

## SECTION 5 - FIRE FIGHTING MEASURES

**EXTINGUISHING MEDIA:** Carbon dioxide, foam, dry chemical and water fog.

**SPECIAL FIRE FIGHTING PROCEDURES:** Water or foam may cause frothing. Use water to keep exposed containers cool.

Water spray may be used to flush spills away from exposure. Prevent runoff from fire control / dilution from entering streams, sewers, or drinking water supply.

**SPECIAL PROTECTIVE EQUIPMENT:** For fires in enclosed areas, fire fighters must use self-contained breathing apparatus.

**UNUSUAL FIRE AND EXPLOSION HAZARDS:** In case of fire, neurotoxic fumes may be generated.

Caution-thermally decomposed residues may be neurotoxic.

**COMBUSTION PRODUCTS:** Fumes, smoke, carbon monoxide, sulfur oxides, aldehydes and other decomposition products, in the case of incomplete combustion.

**Flash Point C(F):** 210(410) (ASTM D-92).

**Flammable Limits** (approximate % volume in air) - LEL: NE UEL: NE

## SECTION 6 - ACCIDENTAL RELEASE MEASURES

**NOTIFICATION PROCEDURES:** Report spills as required to appropriate authorities. U.S. Coast Guard regulations require reporting of spills that could reach any waterway including intermittent dry creeks. Report spill to Coast Guard toll free immediate number (800) 424-8802. In case of accident or road spill notify CHEMTREC (800) 424-9300.

**PROCEDURES IF MATERIAL IS RELEASED OR SPILLED:**

Absorb on fire retardant treated sawdust, diatomaceous earth, etc. Shovel up and dispose of at an appropriate waste disposal facility in accordance with current applicable laws and regulations, and product characteristics at time of disposal.

**ENVIRONMENTAL PRECAUTIONS:** Prevent spills from entering storm sewers or drains and contact with soil.

**PERSONAL PRECAUTIONS:** See Section 8

## SECTION 7 - HANDLING AND STORAGE

**HANDLING:** No special precautions are necessary beyond normal good hygiene practices. See Section 8 for additional personal protection advice when handling this product.

**STORAGE:** Do not store in open or unlabeled containers. Store away from strong oxidizing agents or combustible material.

**SPECIAL PRECAUTIONS:** Prevent small spills and leakages to avoid slip hazard.

**EMPTY CONTAINER WARNING:** Empty containers retain residue (liquid and/or vapor) and can be dangerous. DO NOT PRESSURIZE, CUT, WELD, BRAZE, SOLDER, DRILL, GRIND OR EXPOSE SUCH CONTAINERS TO HEAT, FLAME, SPARKS, STATIC ELECTRICITY, OR OTHER SOURCES OF IGNITION; THEY MAY EXPLODE AND CAUSE INJURY OR DEATH. Do not attempt to refill or clean container since residue is difficult to remove. Empty drums should be completely drained, properly bunged and promptly returned to a drum reconditioner. All containers should be disposed of in an environmentally safe manner and in accordance with governmental regulations.

## SECTION 8 - EXPOSURE CONTROLS/PERSONAL PROTECTION

**OCCUPATIONAL EXPOSURE LIMITS:** When mists/aerosols can occur, the following are recommended:

5 mg/m<sup>3</sup> (as oil mist)- ACGIH Threshold Limit Value (TLV), 10 mg/m<sup>3</sup> (as oil mist)

ACGIH Short Term Exposure Limit (STEL), 5 mg/m<sup>3</sup> (as oil mist) - OSHA Permissible Exposure Limit (PEL)

**VENTILATION:** Use in well ventilated area.

**RESPIRATORY PROTECTION:** No special requirements under ordinary conditions of use and with adequate ventilation.

**EYE PROTECTION:** Normal industrial eye protection practices should be employed.

**SKIN PROTECTION:** No special equipment required. However, good personal hygiene practices should always be followed.

## SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

**APPEARANCE:** Liquid

**COLOR:** Light Amber

**ODOR:** Mild

**ODOR THRESHOLD-ppm:** NE

**pH:** NA

**BOILING POINT C(F):** > 316(600)

**MELTING POINT C(F):** NA

**FLASH POINT C(F):** 210(410) (ASTM D-92)

**FLAMMABILITY:** NE

**AUTO FLAMMABILITY:** NE

**EXPLOSIVE PROPERTIES:** NA

**OXIDIZING PROPERTIES:** NA

**VAPOR PRESSURE-mmHg 20 C:** < 0.1

**VAPOR DENSITY:** NE

**EVAPORATION RATE:** NE

**RELATIVE DENSITY, 15/4 C:** 0.96

**SOLUBILITY IN WATER:** Negligible

**PARTITION COEFFICIENT:** NE

**VISCOSITY AT 40 C, cSt:** 13.3

**VISCOSITY AT 100 C, cSt:** 3

**POUR POINT C(F):** -62(-80)

**FREEZING POINT C(F):** NE

**VOLATILE ORGANIC COMPOUND:** NE

NA = Not Applicable

NE = Not Established

D= Decomposes

## SECTION 10 - STABILITY AND REACTIVITY

**STABILITY (THERMAL, LIGHT, ETC.):** Stable.

**CONDITIONS TO AVOID:** Extreme heat.

**INCOMPATIBILITY (MATERIALS TO AVOID):** Strong oxidizers.

**HAZARDOUS DECOMPOSITION PRODUCTS:** Product does not decompose at ambient temperatures.

**HAZARDOUS POLYMERIZATION:** Will not occur.

## SECTION 11 - TOXICOLOGICAL INFORMATION

### ACUTE TOXICOLOGY

**ORAL TOXICITY (RATS):** Practically non-toxic (LD50: greater than 2000mg/kg).

Based on testing of similar products and/or the components.

**DERMAL TOXICITY (RABBITS):** Practically non-toxic (LD50: greater than 2000 mg/kg).

Based on testing of similar products and/or the components.

**INHALATION TOXICITY (RATS):** Not established

**EYE IRRITATION (RABBITS):** Practically non-irritating. (Draize score: greater than 6 but 15 or less).

Based on testing of similar products and/or the components.

**SKIN IRRITATION (RABBITS):** Practically non-irritating. (Primary Irritation Index: greater than 0.5 but less than 3).

Based on testing of similar products and/or the components.

### NEUROTOXICOLOGY (SUMMARY)

This lubricant contains trimethylol propane ester and tricresyl phosphates. It has been determined that during fires neurotoxic trimethylol propane phosphate may be formed, which when inhaled may impair central nervous system function. In addition, thermally decomposed (and cooled) residues may be neurotoxic.

### SENSITIZATION (SUMMARY)

This product contains 1.0% wt. phenyl-alpha-naphthylamine (PAN). Human repeated insult patch testing with lubricants containing 1.0% (w/w) PAN caused no reactions indicative of sensitization in over 449 human subjects. A similar jet oil formulation (containing 0.75% w/w PAN) was evaluated in a guinea pig sensitization test (Buehler) and found not to cause skin sensitization. In a separate study, guinea pigs that were highly sensitized to pure PAN were found to tolerate a challenge concentration of 1.0% (w/w) PAN in mineral oil with no sensitization response.

## SECTION 12 - ECOLOGICAL INFORMATION

**ENVIRONMENTAL FATE AND EFFECTS:** This environmental assessment was conducted using information on the individual components as no test data was available for this specific formulation.

**ECOTOXICITY:** This product is expected to be harmful to aquatic organisms.

May cause long-term adverse effects in the aquatic environment.

**MOBILITY:** Not established.

**PERSISTENCE AND DEGRADABILITY:** Not established.

**BIOACCUMULATIVE POTENTIAL:** Not established.

## SECTION 13 - DISPOSAL CONSIDERATIONS

**WASTE DISPOSAL:** Product is suitable for burning in an enclosed controlled burner for fuel value or disposal by supervised incineration PROVIDED THAT THE INCINERATION TEMPERATURE EXCEEDS 650 DEGREES C.

**RCRA INFORMATION:** The unused product, in our opinion, is not specifically listed by the EPA as a hazardous waste (40 CFR, Part 261D), nor is it formulated to contain materials which are listed hazardous wastes. It does not exhibit the hazardous characteristics of ignitability, corrosivity, or reactivity and is not formulated with contaminants as determined by the Toxicity Characteristic Leaching Procedure (TCLP). However, used product may be regulated.

## SECTION 14 - TRANSPORT INFORMATION

USA DOT: NOT REGULATED BY USA DOT.

RID/ADR: NOT REGULATED BY RID/ADR.

IMO: NOT REGULATED BY IMO.

IATA: NOT REGULATED BY IATA.

## SECTION 15 - REGULATORY INFORMATION

**US OSHA HAZARD COMMUNICATION STANDARD:** Product assessed in accordance with OSHA 29 CFR 1910.1200 and determined not to be hazardous.

**EU Labeling:** Product is dangerous as defined by the European Union Dangerous Substances/Preparations Directives.

Symbol: Not applicable.

Risk Phrase(s): R52/53.

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Safety Phrase(s): Not applicable.

**Governmental Inventory Status:** All components comply with TSCA.

U.S. Superfund Amendments and Reauthorization Act (SARA) Title III:

This product contains no "EXTREMELY HAZARDOUS SUBSTANCES".

SARA (311/312) REPORTABLE HAZARD CATEGORIES: None.

This product contains no chemicals subject to the supplier notification requirements of SARA (313) toxic release program.

The following product ingredients are cited on the lists below:

CHEMICAL NAME	CAS NUMBER	LIST CITATIONS		
NO REPORTABLE INGREDIENTS				
REGULATORY LISTS SEARCHED				
1 = ACGIH AL	6 = IARC 1	11 = TSCA 4	16 = CA P65 CARC	21 = LA RTK
2 = ACGIH A1	7 = IARC 2A	12 = TSCA 5a2	17 = CA P65 REPRO	22 = MI 293
3 = ACGIH A2	8 = IARC 2B	13 = TSCA 5e	18 = CA RTK	23 = MN RTK
4 = NTP CARC	9 = OSHA CARC	14 = TSCA 6	19 = FL RTK	24 = NJ RTK
5 = NTP SUS	10 = OSHA Z	15 = TSCA 12b	20 = IL RTK	25 = PA RTK
				<b>26 = RI RTK</b>

Code key: CARC=Carcinogen; SUS=Suspected Carcinogen; REPRO=Reproductive

## SECTION 16 - OTHER INFORMATION

USE: Ball Screw Lubrication

NOTE: NOT FORMULATED TO CONTAIN PCBS.

Health studies have shown that many hydrocarbons pose potential human health risks which may vary from person to person. Information provided on this MSDS reflects intended use. This product should not be used for other applications. In any case, the following

**INJECTION INJURY WARNING:** If product is injected into or under the skin, or into any part of the body, regardless of the appearance of the wound or its size, the individual should be evaluated immediately by a physician as a surgical emergency. Even though initial reduce the ultimate extent of injury, symptoms from high pressure injection may be minimal or absent, early surgical treatment within the first few hours may significantly

**INDUSTRIAL LABEL:** Under normal conditions of intended use, this product does not pose a risk to health. Excessive exposure may result in eye, skin or respiratory irritation. Always observe good hygiene measures. First Aid: Wash skin with soap and water. Flush eyes with water. If Read and understand the MSDS before using this product. overcome by fumes or vapor, remove to fresh air. If ingested do not induce vomiting. If symptoms persist seek medical assistance.