

# MATERIAL SAFETY DATA SHEET

NLU-1001  
02 00

Date of Preparation  
8-Dec-11

## SECTION 1 - PRODUCT AND COMPANY IDENTIFICATION

### PRODUCT NUMBER

NLU-1001 - 1 lb. can

### PRODUCT NAME

PAG-1

### MANUFACTURER'S NAME

Nook Industries, Inc.  
4950 E. 49th Street  
Cleveland, OH 44125

#### HMIS Codes

Health	1
Flammability	1
Reactivity	0

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

Concentration	INGREDIENT	CASRN
50-80	Lubricant Base Oil (Petroleum)	Various
15-40	Additives	Proprietary
1-3	Calcium Dodecylbenzenesulfonate	26264-06-2

## SECTION 3 - HAZARDS IDENTIFICATION

### APPEARANCE / ODOR

Tan Semi-Solid / Petroleum

### POTENTIAL HEALTH EFFECTS

**Eye:** Eye irritant. Contact may cause stinging, watering, redness, and swelling.

**Skin:** Contact may cause mild skin irritation including redness and a burning sensation. Repeated exposure may cause skin dryness or cracking. No information available on skin absorption.

**Inhalation (Breathing):** No information available on acute toxicity. Inhalation is not an expected route of exposure.

**Ingestion (Swallowing):** Low degree of toxicity by ingestion.

**Signs and Symptoms:** Inhalation of oil mists or vapors generated at elevated temperatures may cause respiratory irritation. Accidental ingestion can result in minor irritation of the digestive tract, nausea and diarrhea.

**Pre-Existing Medical Conditions:** Conditions which may be aggravated by exposure include eye disorders and skin disorders.

See Section 11 for additional Toxicity Information.

## SECTION 4 - FIRST AID MEASURES

**Eye Contact:** For direct contact, remove contact lenses if present and easy to do. Immediately hold eyelids apart and flush the eye(s) with clean water for at least 15 minutes. Seek immediate medical attention. affected

**Skin Contact:** Remove contaminated shoes and clothing and cleanse affected area(s) thoroughly by washing with mild soap and water or a waterless hand cleaner. If irritation or redness develops and persists, seek medical attention. 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. (see Note to Physician)

**Inhalation (Breathing):** If respiratory symptoms develop, move victim away from source of exposure and into fresh air in a position comfortable for breathing. If symptoms persist, seek medical attention.

**Ingestion (Swallowing):** First aid is not normally required; however, if swallowed and symptoms develop, seek medical attention.

**Notes to Physician:** High-pressure hydrocarbon injection injuries may produce substantial necrosis of underlying tissue despite an innocuous appearing external wound. These injuries often require extensive emergency surgical debridement and all injuries should be evaluated by a specialist in order to assess the extent of injury. Early surgical treatment within the first few hours may significantly reduce the ultimate extent of injury.

## SECTION 5 - FIRE FIGHTING MEASURES

**Unusual Fire & Explosion Hazards:** This material may burn, but will not ignite readily. If container is not properly cooled, it can rupture in the heat of a fire.

**Extinguishing Media:** Dry chemical, carbon dioxide, foam, or water spray is recommended. Water or foam may cause frothing of materials heated above 212°F / 100°C. Carbon dioxide can displace oxygen. Use caution when applying carbon dioxide in confined spaces. Simultaneous use of foam and water on the same surface is to be avoided as water destroys the foam.

**Fire Fighting Instructions:** For fires beyond the initial stage, emergency responders in the immediate hazard area should wear protective clothing. When the potential chemical hazard is unknown, in enclosed or confined spaces, a self contained breathing apparatus should be worn. In addition, wear other appropriate protective equipment as conditions warrant (see Section 8).

Isolate immediate hazard area and keep unauthorized personnel out. Stop spill/release if it can be done safely. Move undamaged containers from immediate hazard area if it can be done safely. Water spray may be useful in minimizing or dispersing vapors and to protect personnel. Cool equipment exposed to fire with water, if it can be done safely. Avoid spreading burning liquid with water used for cooling purposes.

**Hazardous Combustion Products:** Combustion may yield smoke, carbon monoxide, and other products of incomplete combustion. Oxides of sulfur, nitrogen or phosphorus may also be formed.

See Section 9 for Flammable Properties including Flash Point and Flammable (Explosive) Limits

## SECTION 6 - ACCIDENTAL RELEASE MEASURES

**Personal Precautions:** This material may burn, but will not ignite readily. Keep all sources of ignition away from spill/release. Stay upwind and away from spill/release. Avoid direct contact with material. For large spillages, notify persons down wind of the spill/release, isolate immediate hazard area and keep unauthorized personnel out. Wear appropriate protective equipment, including respiratory protection, as conditions warrant (see Section 8). See Sections 2 and 7 for additional information on hazards and precautionary measures.

**Environmental Precautions:** If spill/release in excess of EPA reportable quantity (see Section 15) is made into the environment, immediately notify the National Response Center (phone number 800-424-8802). Stop spill/release if it can be done safely. Prevent spilled material from entering sewers, storm drains, other unauthorized drainage systems, and natural waterways. Use water sparingly to minimize environmental contamination and reduce disposal requirements. If spill occurs on water notify appropriate authorities and advise shipping of any hazard. Spills into or upon navigable waters, the contiguous zone, or adjoining shorelines that cause a sheen or discoloration on the surface of the water, may require notification of the National Response Center (phone number 800-424-8802).

**Methods for Containment and Clean-Up:** Notify relevant authorities in accordance with all applicable regulations.

Immediate cleanup of any spill is recommended. Dike far ahead of spill for later recovery or disposal. Absorb spill with inert material such as sand or vermiculite, and place in suitable container for disposal. If spilled on water remove with appropriate methods (e.g. skimming, booms or absorbents). In case of soil contamination, remove contaminated soil for remediation or disposal, in accordance with local regulations.

## SECTION 7 - HANDLING AND STORAGE

**Precautions for safe handling:** Keep away from flames and hot surfaces. Wear eye/face protection. Wash thoroughly after handling. Use good personal hygiene practices and wear appropriate personal protective equipment.

High pressure injection of hydrocarbon fuels, hydraulic oils or greases under the skin may have serious consequences even though no symptoms or injury may be apparent. This can happen accidentally when using high pressure equipment such as high pressure grease guns, fuel injection apparatus or from pinhole leaks in tubing of high pressure hydraulic oil equipment.

Do not enter confined spaces such as tanks or pits without following proper entry procedures such as ASTM D-4276 and 29CFR 1910.146. Do not wear contaminated clothing or shoes.

**Conditions for safe storage:** Keep container(s) tightly closed and properly labeled. Use and store this material in cool, dry, wellventilated area away from heat and all sources of ignition. Store only in approved containers. Keep away from any incompatible material (see Section 10). Protect container(s) against physical damage.

Empty containers retain residue and may be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, or other sources of ignition. They may explode and cause injury or death. "Empty" drums should be completely drained, properly bunged, and promptly shipped to the supplier or a drum reconditioner. All containers should be disposed of in an environmentally safe manner and in accordance with governmental regulations. Before working on or in tanks which contain or have contained this material, refer to OSHA regulations, ANSI Z49.1, and other references pertaining to cleaning, repairing, welding, or other contemplated operations.

## SECTION 8 - EXPOSURE CONTROLS/PERSONAL PROTECTION

Component	US-ACGIH	OSHA	Other
Lubricant	TWA: 5mg/m <sup>3</sup>	TWA: 5 mg/m <sup>3</sup>	---
Base Oil (Petroleum)	STEL: 10 mg/m <sup>3</sup> as Oil Mist, if generated	as Oil Mist, if generated	

**Note:** State, local or other agencies or advisory groups may have established more stringent limits. Consult an industrial hygienist or similar professional, or your local agencies, for further information.

**Engineering controls:** If current ventilation practices are not adequate to maintain airborne concentrations below the established exposure limits, additional engineering controls may be required.

**Eye/Face Protection:** The use of eye protection that meets or exceeds ANSI Z.87.1 is recommended to protect against potential eye contact, irritation, or injury. Depending on conditions of use, a face shield may be necessary.

**Skin/Hand Protection:** The use of gloves impervious to the specific material handled is advised to prevent skin contact. Users should check with manufacturers to confirm the breakthrough performance of their products. Suggested protective materials: Nitrile

**Respiratory Protection:** Respiratory protection is not normally required under intended conditions of use. Emergencies or conditions that could result in significant airborne exposures may require the use of NIOSH approved respiratory protection. An industrial hygienist or other appropriate health and safety professional should be consulted for specific guidance under these situations.

**Other Protective Equipment:** Eye wash and quick-drench shower facilities should be available in the work area. Thoroughly clean shoes and wash contaminated clothing before reuse.

**Suggestions provided in this section for exposure control and specific types of protective equipment are based on readily available information. Users should consult with the specific manufacturer to confirm the performance of their protective equipment. Specific situations may require consultation with industrial hygiene, safety, or engineering professionals.**

## SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

<b>Appearance</b>	Tan
<b>Physical Form</b>	Semi-Solid
<b>Odor</b>	Petroleum
<b>Odor Threshold</b>	No data
<b>pH</b>	Not applicable
<b>Vapor Pressure</b>	<0.1 mm Hg
<b>Vapor Density (air=1)</b>	> 5
<b>Initial Boiling Point/Range</b>	No data
<b>Melting/Freezing Point</b>	No data
<b>Solubility in Water</b>	Insoluble
<b>Solubility in Other Solvents</b>	Soluble
<b>Partition Coefficient (n-octanol/water) (Kow)</b>	No data
<b>Specific Gravity (water=1)</b>	0.9943 @ 60°F (15.6°C)
<b>Bulk Density</b>	8.29 lbs/gal
<b>Evaporation Rate (nBuAc=1)</b>	<1
<b>Flash Point</b>	464°F / 240°C
<b>Test Method</b>	Cleveland Open Cup (COC), ASTM D92
<b>Lower Explosive Limits (vol % in air)</b>	No data
<b>Upper Explosive Limits (vol % in air)</b>	No data
<b>Auto-ignition Temperature</b>	No data

## SECTION 10 - STABILITY AND REACTIVITY

**Stability:** Stable under normal ambient and anticipated conditions of use.

**Conditions to Avoid:** Extended exposure to high temperatures can cause decomposition. Avoid all possible sources of ignition.

**Materials to Avoid (Incompatible Materials):** Avoid contact with strong oxidizing agents and strong reducing agents.

**Hazardous Decomposition Products:** Not anticipated under normal conditions of use.

**Hazardous Polymerization:** Not known to occur.

## SECTION 11 - TOXICOLOGICAL INFORMATION

### Chronic Toxicity:

#### Lubricant Base Oil (Petroleum)

Carcinogenicity: The petroleum base oils contained in this product have been highly refined by a variety of processes including severe hydrocracking/hydroprocessing to reduce aromatics and improve performance characteristics. All of the oils meet the IP-346 criteria of less than 3 percent PAH's and are not considered carcinogens by NTP, IARC, or OSHA.

### Acute Toxicity:

<u>Component</u>	<u>Oral LD50</u>	<u>Dermal LD50</u>	<u>Inhalation LD50</u>
Lubricant Base Oil (Petroleum)	> 5 g/kg	> 2 g/kg	> 5 mg/L
Calcium			
Dodecylbenzenesulfonate	1,300 mg/kg	No data	No data

## SECTION 12 - ECOLOGICAL INFORMATION

**Ecotoxicity:** Experimental studies show that acute aquatic toxicity values are greater than 1000 mg/l. These values are consistent with the predicted aquatic toxicity of these substances based on their hydrocarbon compositions. However, there is insufficient information available on the toxicity of the thickening agents used in greases. Should therefore be regarded as capable of causing long term adverse effects in the aquatic environment.

**Mobility:** Volatilization to air is not expected to be a significant fate process due to the low vapor pressure of this material. Components may behave differently in the aquatic environment with soaps dispersing and dissolving to some extent in water while the hydrocarbons will float on the surface due to their low water solubility. The hydrocarbon portion would be expected to show low mobility in soil and water. The major environmental fate would be expected to be biodegradation.

**Persistence and degradability:** The base oil constituents of greases are expected to be inherently, but not readily biodegradable. Some of the thickening agents may be readily biodegradable.

**Bioaccumulation Potential:** Log Kow values measured for the hydrocarbon components of this material range from 4 to over 6, and therefore regarded as having the potential to bioaccumulate. In practice, metabolic processes may reduce bioconcentration.

## SECTION 13 - DISPOSAL CONSIDERATIONS

The generator of a waste is always responsible for making proper hazardous waste determinations and needs to consider state and local requirements in addition to federal regulations.

This material, if discarded as produced, would not be a federally regulated RCRA "listed" hazardous waste and is not believed to exhibit characteristics of hazardous waste. See Sections 7 and 8 for information on handling, storage and personal protection and Section 9 for physical/chemical properties. It is possible that the material as produced contains constituents which are not required to be listed in the MSDS but could affect the hazardous waste determination. Additionally, use which results in chemical or physical change of this material could subject it to regulation as a hazardous waste.

This material under most intended uses would become "Used Oil" due to contamination by physical or chemical impurities. Whenever possible, Recycle Used Oil in accordance with applicable federal and state or local regulations. Container contents should be completely used and containers should be emptied prior to discard.

## SECTION 14 - TRANSPORT INFORMATION

### U.S. Department of Transportation (DOT)

Shipping Description: Not regulated

Note: If shipped by land in a packaging having a capacity of 3,500 gallons or more, the provisions of 49 CFR, Part 130 apply. (Contains oil)

### International Maritime Dangerous Goods (IMDG)

Shipping Description: Not regulated

Note: U.S. DOT compliance requirements may apply. See 49 CFR 171.22, 23 & 25.

### International Civil Aviation Org. / International Air Transport Assoc. (ICAO/IATA)

UN/ID #: Not regulated

Note: U.S. DOT compliance requirements may apply. See 49 CFR 171.22, 23 & 24.

## SECTION 15 - REGULATORY INFORMATION

**CERCLA/SARA - Section 302 Extremely Hazardous Substances and TPQs (in pounds):**

This material does not contain any chemicals subject to the reporting requirements of SARA 302 and 40 CFR 372.

**CERCLA/SARA - Section 311/312 (Title III Hazard Categories)**

Acute Health: Yes  
Chronic Health: No  
Fire Hazard: No  
Pressure Hazard: No  
Reactive Hazard: No

**CERCLA/SARA - Section 313 and 40 CFR 372**

This material does not contain any chemicals subject to the reporting requirements of SARA 313 and 40 CFR 372.

**EPA (CERCLA) Reportable Quantity (in pounds)**

This material contains the following chemicals subject to the reporting requirements of 40 CFR 302.4

<u>Component</u>	<u>RQ</u>
Calcium Dodecylbenzenesulfonate	1000 lb

**California Proposition 65**

**Warning:** This material may contain detectable quantities of the following chemicals, known to the State of California to cause cancer, birth defects or other reproductive harm, and which may be subject to the requirements of California Proposition 65 (CA Health & Safety Code Section 25249.5)

<u>Component</u>	<u>Type of Toxicity</u>
1-Naphthylamine	Cancer
2-Naphthylamine	Cancer

**Canadian Regulations**

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the Regulations

WHMIS Hazard Class  
D2B

**National Chemical Inventories**

All components are either listed on the US TSCA Inventory, or are not regulated under TSCA.  
All components are either on the DSL, or are exempt from DSL listing requirements.

U.S. Export Control Classification Number: EAR99

## SECTION 16 - OTHER INFORMATION

<b>Date of Issue:</b>	8/6/2010
<b>Status:</b>	FINAL
<b>Previous Issue Date:</b>	8/27/2007
<b>Revised Sections or Basis for Revision:</b>	Emergency Overview (Section 2) Health Hazard (Section 2) NFPA ratings (Sections 2&5) Composition (Section 3) Handling and Storage information (Section 7) Toxicological (Section 11) Environmental hazards (Section 12) Regulatory information (Section 15)
<b>MSDS Number:</b>	778589

**Guide to Abbreviations:**

ACGIH = American Conference of Governmental Industrial Hygienists; CASRN = Chemical Abstracts Service Registry Number; CEILING = Ceiling Limit (15 minutes); CERCLA = The Comprehensive Environmental Response, Compensation, and Liability Act; EPA = Environmental Protection Agency; IARC = International Agency for Research on Cancer; LEL = Lower Explosive Limit; NE = Not Established; NFPA = National Fire Protection Association; NTP = National Toxicology Program; OSHA = Occupational Safety and Health Administration; PEL = Permissible Exposure Limit (OSHA); SARA = Superfund Amendments and Reauthorization Act; STEL = Short Term Exposure Limit (15 minutes); TLV = Threshold Limit Value (ACGIH); TWA = TimeWeighted Average (8 hours); UEL = Upper Explosive Limit; WHMIS = Worker Hazardous Materials Information System (Canada)

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