



MATERIAL SAFETY DATA SHEET

Prepared to U.S. OSHA, CMA, ANSI, Canadian WHMIS Standards, Australian WorkSafe, Japanese Industrial Standard JIS Z 7250:2000, and European Directives

1. PRODUCT IDENTIFICATION

TRADE NAME (AS LABELED): NuKoat HPO
CHEMICAL NAME/CLASS: Blend
PRODUCT NUMBER: CKA 151
U.N. NUMBER: UN1993
U.N. DANGEROUS GOODS CLASS/SUBSIDIARY RISK: Flammable Liquid, n.o.s.
MANUFACTURER'S NAME: NuGeneration Technologies, LLC
ADDRESS: 100 Professional Center Drive, Rohnert Park, CA 94928 USA
EMERGENCY PHONE: (800) 424-9300 (CHEMTREC)
BUSINESS PHONE: (707) 820-4080 (Product Information)
DATE OF PREPARATION: May 23, 2010
DATE OF LAST REVISION: June 4, 2007

2. COMPOSITION and INFORMATION ON INGREDIENTS

Hazardous Ingredients:	CAS #	EC #	ICSC #	WT %	Hazard Symbol; Risk Phrases
Hydrotreated Heavy Napthenic Distillate	64742-52-5	265-155-0	NE	69%	HAZARD CLASSIFICATION: (CARC.) CAT2 (Xn) HARMFUL (Xi) IRRITANT RISK PHRASES: R20/21/22 R36/38 R45
Kerosene	8008-20-6	232-366-4	0663	20%	HAZARD CLASSIFICATION: (Xn) HARMFUL RISK PHRASES: R65
Barium Sulfonate	4719-04-4	225-208-0	NE	6.0%	HAZARD CLASSIFICATION: (Xn) HARMFUL RISK PHRASES: R43
Ethylene Glycol Monobutyl Ether	111-76-2	203-905-0	0059	5.0%	HAZARD CLASSIFICATION: (Xn) HARMFUL (Xi) IRRITANT RISK PHRASES: R20/21/22 R36/38
Balance Non-Hazardous Ingredients	None	None	None	Balance	Not applicable

NOTE: ALL WHMIS required information is included in appropriate sections based on the ANSI Z400.1-2004 format. This product has been classified in accordance with the hazard criteria of the CPR and the MSDS contains all the information required by the CPR, EU Directives and the Japanese Industrial Standard JIS Z 7250: 2000.

See Section 3 for full text of Risk Phrases and Safety Phrases

3. HAZARD IDENTIFICATION

EU LABELING AND CLASSIFICATION: This product meets the definition of the following hazard class as defined by the European Economic Community Guidelines.

EU CLASSIFICATION: (CARC) Cat.2 (Xn) HARMFUL, (Xi) IRRITANT

EU RISK PHRASES: R20/21/22: Harmful by inhalation, in contact with skin and if swallowed; R36/38: Irritating to eyes and skin; R43: May cause sensitization by skin contact; R45: May cause cancer; R65: Harmful: may cause lung damage if swallowed.

EU SAFETY PHRASES: S2: Keep out of the reach of children; S23: Do not breathe gas/fumes/vapor spray; S24: Avoid contact with skin; S36/37: Wear suitable protective clothing and gloves; S45: In case of accident or if you feel unwell, seek medical advice immediately; S46: If swallowed, seek medical advice immediately; S62: If swallowed do not induce vomiting, seek medical advice immediately.



EMERGENCY OVERVIEW: Product Description: This product is a light brown flammable liquid, with a hydrocarbon lube oil odor. **Health Hazards:** Harmful by inhalation and if swallowed. Irritating to eyes and skin. May cause cancer. **Flammability Hazards:** This liquid is a combustible liquid with a flash point of 77°C (170°F). **Environmental Hazards:** Testing of this products effects on the environment have not been completed. If accidentally released, precautions must be taken to protect the environment. **Emergency Considerations:** In the event of fire or spill, adequate precautions must be taken for surrounding materials. Emergency responders must wear personal protective equipment suitable for the situation to which they are responding.

SYMPTOMS OF OVEREXPOSURE BY ROUTE OF EXPOSURE: The most significant routes of overexposure for this product are by contact with skin or eyes, inhalation of vapors or mists, or if swallowed. The symptoms of overexposure are described in the following paragraphs.

INHALATION: Inhalation of vapors or mist may cause lung damage.

CONTACT WITH SKIN or EYES: Prolonged or repeated skin contact may cause irritation. Contact with eyes may cause inflammation and redness.



INGESTION: May be harmful if swallowed.

HEALTH EFFECTS OR RISKS FROM EXPOSURE:

ACUTE: Contact with skin and eyes may cause burning and irritation. Ingestion may cause gastric distress.

CHRONIC: Repeated or prolonged exposure to this product can produce target organs damage. Repeated exposure of the eyes to a low level mist can produce eye irritation. Repeated skin exposure can produce local skin irritation, or dermatitis. Repeated inhalation can produce varying degrees of respiratory irritation and possible lung damage. An ingredient in this product may cause cancer.

TARGET ORGANS: Acute: Skin, Eyes, Lungs **Chronic:** Skin, Lungs

HAZARDOUS MATERIAL IDENTIFICATION SYSTEM			
HEALTH HAZARD		(BLUE)	2
FLAMMABILITY HAZARD		(RED)	2
PHYSICAL HAZARD		(YELLOW)	0
PROTECTIVE EQUIPMENT			
EYES	RESPIRATORY	HANDS	BODY
	SEE SECTION 8		SEE SECTION 8
For Routine Industrial Use and Handling Applications			

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate
3 = Serious 4 = Severe * = Chronic hazard

4. FIRST-AID MEASURES

Contaminated individuals of chemical exposure must be taken for medical attention if any adverse effect occurs. Rescuers should be taken for medical attention, if necessary. Take copy of label and MSDS to health professional with contaminated individual.

SKIN EXPOSURE: If this product contaminates the skin, begin decontamination with running water. Minimum flushing is for 5 minutes. Remove exposed or contaminated clothing, taking care not to contaminate eyes. The contaminated individual must seek medical attention if any adverse effect occurs.



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EYE EXPOSURE: If vapors, mists, or sprays generated by this product enter the eyes, open contaminated individual's eyes while under gently running water. Use sufficient force to open eyelids. Have contaminated individual "roll" eyes. Minimum flushing is for 15 minutes. Contaminated individual seek medical attention if irritation or blurred vision occurs.

INHALATION: If vapors, mists, or sprays generated by this product are inhaled, remove contaminated individual to fresh air. Provide artificial respiration if required. Seek medical attention immediately.

INGESTION: Routine use of this product is not expected to cause any situation which could lead to ingestion. If this product is swallowed, CALL PHYSICIAN OR POISON CONTROL CENTER FOR MOST CURRENT INFORMATION. If professional advice is not available, do not induce vomiting. Never induce vomiting or give diluents (milk or water) to someone who is unconscious, having convulsions, or unable to swallow.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Skin and respiratory disorders, as well as conditions involving the "Target Organs" (see Section 3, Hazard Identification) may be aggravated by prolonged overexposures to this product.

RECOMMENDATIONS TO PHYSICIANS: Treat symptoms and eliminate overexposure.

5. FIRE-FIGHTING MEASURES

FLASH POINT: 77°C (170°F) OSHA/NFPA Class IIIB Combustible Liquid

NFPA RATING

AUTOIGNITION TEMPERATURE: Not Determined

FLAMMABLE LIMITS (in air by volume, %): Not Determined

FIRE EXTINGUISHING MATERIALS: Use fire extinguishing materials appropriate for surrounding fire.

Water Spray: Yes

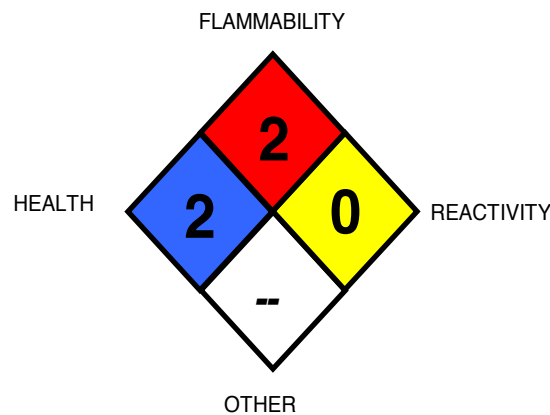
Foam: Yes

Halon: Yes

Carbon Dioxide: Yes

Dry Chemical: Yes

Other: Any "C" Class



UNUSUAL FIRE AND EXPLOSION HAZARDS: Combustible Liquid.

Special Remarks on Explosion Hazards: Can release vapors that can form explosive mixtures at temperatures at or above the flashpoint.

SPECIAL FIRE-FIGHTING PROCEDURES: Incipient fire responders should wear eye protection. Structural firefighters must wear Self-Contained Breathing Apparatus and full protective equipment. Isolate materials not yet involved in the fire and protect personnel. Move containers from fire area if this can be done without risk; otherwise, cool with carefully applied water spray. If possible, prevent runoff water from entering storm drains, bodies of water, or other environmentally sensitive areas.

6. ACCIDENTAL RELEASE MEASURES

SPILL AND LEAK RESPONSE: Uncontrolled releases should be responded to by appropriately trained personnel using pre-planned procedures. Proper protective equipment should be used.

Small Spill: Dilute with water and mop up, or absorb with an inert dry material and place in an appropriate waste disposal container. Treat and dispose of waste material in accordance with all local, state/provincial, and national requirements

Large Spill: Stop leak if without risk. Forms smooth, slippery surfaces on floors, posing an accident risk. Absorb with DRY earth sand or other non-combustible material. Prevent entry into sewers, basements or confined areas, dike if needed. Decontaminate the area thoroughly. Decontaminate all response equipment with soapy water before returning



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to service. Place all spill residues in a suitable waste container. Dispose of in accordance with U.S. Federal, State, and local hazardous waste disposal regulations; those of Canada and its Provinces, those of Australia, Japan and EU Member States (see Section 13, Disposal Considerations).

7. HANDLING and STORAGE

WORK PRACTICES AND HYGIENE PRACTICES: As with all chemicals, avoid getting this product ON YOU or IN YOU. Wash thoroughly after handling this product. Do not eat, drink, smoke, or apply cosmetics while handling this product. Avoid breathing vapors or mists generated by this product. Use in a well-ventilated location. Remove contaminated clothing immediately.

STORAGE AND HANDLING PRACTICES: All employees who handle this material should be trained to handle it safely. Avoid contact with eyes, skin, and clothing. Empty drums should be completely drained (triple rinsed), properly bunged, and promptly returned to a drum reconditioner, or disposed of properly. Open containers slowly on a stable surface. Containers of this product must be properly labeled. Storage areas of this product should be clearly identified, well-illuminated, clear of obstruction and accessible only to trained and authorized personnel. Store containers in a cool, dry location away from direct sunlight at temperatures between 39°F - 120°F. Keep container tightly closed when not in use.

8. EXPOSURE CONTROLS - PERSONAL PROTECTION

VENTILATION AND ENGINEERING CONTROLS: Use with adequate ventilation to ensure exposure levels are maintained below the limits provided below. Use a chemical fume hood or local exhaust ventilation, and process enclosure if necessary, to control airborne dust. Ensure eyewash/safety shower stations are available near areas where this product is used.

EXPOSURE LIMITS/GUIDELINES:

CHEMICAL NAME	CAS #	EXPOSURE LIMITS IN AIR									
		ACGIH-TLVs		OSHA-PELs		NIOSH-RELS		NIOSH	AIHA WEELS		OTHER
		TWA ppm	STEL ppm	TWA ppm	STEL ppm	TWA ppm	STEL ppm	IDLH ppm	TWA ppm	STEL ppm	ppm
Hydrotreated Heavy Napthenic Distillate	64742-52-5	NE	NE	NE	NE	NE	NE	NE	NE	NE	DFG MAKs:
Kerosene	8008-20-6	100 mg/m ³	NE	5 mg/m ³ Mist	NE	NE	NE	NE	NE	NE	None
Barium Sulfonate	4719-04-4	NE	NE	NE	NE	NE	NE	NE	NE	NE	None
Ethylene Glycol Monobutyl Ether	111-76-2	25 PPM	NE	25 PPM	NE	5 PPM	NE	700 PPM	NE	NE	NE

NE = Not Established.

NIC = Notice of Intended Change

See Section 16 for Definitions of Terms Used.

The following information on appropriate Personal Protective Equipment is provided to assist employers in complying with OSHA regulations found in 29 CFR Subpart I (beginning at 1910.132) or equivalent standard of Canada, or standards of EU member states (including EN 149 for respiratory PPE, and EN 166 for face/eye protection), and those of Japan. Please reference applicable regulations and standards for relevant details.



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RESPIRATORY PROTECTION: Maintain airborne contaminant concentrations below guidelines listed above, if applicable. If necessary, use only respiratory protection authorized in the U.S. Federal OSHA Respiratory Protection Standard (29 CFR 1910.134), equivalent U.S. State standards, Canadian CSA Standard Z94.4-93, the European Standard EN149, or EU member states. Oxygen levels below 19.5% are considered IDLH by OSHA. In such atmospheres, use of a full-facepiece pressure/demand SCBA or a full facepiece, supplied air respirator with auxiliary self-contained air supply is required under U.S. Federal OSHA's Respiratory Protection Standard (1910.134-1998) or the regulations of various U.S. States, Canada, EU Member States, or those of Japan. Air-purifying respirators with dust/mist/fume filters are recommended if operations may produce mists or sprays from this product.

EYE PROTECTION: Safety glasses. If necessary, refer to U.S. OSHA 29 CFR 1910.133, Canadian Standards, and the European Standard EN166, Australian Standards, or relevant Japanese Standards.

HAND PROTECTION: Use chemically-resistant gloves when handling this product. If necessary, refer to U.S. OSHA 29 CFR 1910.138, the European Standard DIN EN 374, the appropriate Standards of Canada, Australian Standards, or relevant Japanese Standards.

BODY PROTECTION: Use body protection appropriate for task (e.g. lab coat, overalls). If necessary, refer to appropriate Standards of Canada, or appropriate Standards of the EU, Australian Standards, or relevant Japanese Standards. If a hazard of injury to the feet exists due to falling objects, rolling objects, where objects may pierce the soles of the feet or where employee's feet may be exposed to electrical hazards, use foot protection, as described in U.S. OSHA 29 CFR 1910.136.

9. PHYSICAL and CHEMICAL PROPERTIES

BULK DENSITY: 7.4 (Air=10)

SPECIFIC GRAVITY @ 20°C: 0.89 (water=1)

SOLUBILITY IN WATER: Nil

pH: ~ NA

APPEARANCE and COLOR: This product is a light brown liquid with a hydrocarbon lube oil odor..

EVAPORATION RATE (n-BuAc=1): <1

FREEZING POINT: 32°F

BOILING POINT: >212°F

ODOR: Mild

10. STABILITY and REACTIVITY

STABILITY: Stable under normal conditions.

DECOMPOSITION PRODUCTS: Decomposition will not occur if handled and stored properly.

MATERIALS WITH WHICH SUBSTANCE IS INCOMPATIBLE: Avoid contact with strong oxidizing agents.

HAZARDOUS POLYMERIZATION: Will not occur.

CONDITIONS TO AVOID: This material is safe under normal storage and handling conditions.

11. TOXICOLOGICAL INFORMATION

TOXICITY DATA: The specific toxicology data available for components greater than 1% in concentration are as follows.

EYE EFFECTS: Contact may cause eye irritation

SKIN EFFECTS: Contact may cause slight skin irritation

ACUTE ORAL EFFECTS: No known hazards in normal industrial use.

ACUTE INHALATION EFFECTS: No known hazards in normal industrial use.

SUSPECTED CANCER AGENT: A component of this product is found on the following lists: FEDERAL OSHA Z LIST, NTP, IARC, or CAL/OSHA and therefore is considered to be, or suspected to be, cancer-causing agents by these agencies.



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IRRITANCY OF PRODUCT: This product is slightly irritating to skin and eyes.

REPRODUCTIVE TOXICITY INFORMATION: Listed below is information concerning the effects of this product and its components on the human reproductive system.

Mutagenicity: The components of this product are not reported to produce mutagenic effects in humans.

Embryotoxicity: The components of this product are not reported to produce embryotoxic effects in humans.

Teratogenicity: The components of this product are not reported to cause teratogenic effects in humans.

Reproductive Toxicity: The components of this product are not reported to cause reproductive effects in humans.

A *mutagen* is a chemical which causes permanent changes to genetic material (DNA) such that the changes will propagate through generational lines. An *embryotoxin* is a chemical which causes damage to a developing embryo (i.e. within the first eight weeks of pregnancy in humans), but the damage does not propagate across generational lines. A *teratogen* is a chemical which causes damage to a developing fetus, but the damage does not propagate across generational lines. A *reproductive toxin* is any substance which interferes in any way with the reproductive process.

BIOLOGICAL EXPOSURE INDICES: Currently, Biological Exposure Indices (BEIs) have not been determined for the components of this product.

12. ECOLOGICAL INFORMATION

ALL WORK PRACTICES MUST BE AIMED AT ELIMINATING ENVIRONMENTAL CONTAMINATION.

ENVIRONMENTAL STABILITY: The components of this product are stable under ambient environmental conditions. The following information is available for the main component of this product.

No information available

ECOLOGICAL DATA:

Fish: No data available

Algae: No data available

Daphnia: No data available

BOD5 and COD: Material does not bioaccumulate.

Products of Biodegradation: This material has not been tested at this time

13. DISPOSAL CONSIDERATIONS

PREPARING WASTES FOR DISPOSAL: Waste disposal must be in accordance with appropriate U.S. Federal, State, and local regulations, those of Canada, Australia, EU Member States and Japan.

14. TRANSPORTATION INFORMATION

US DOT, IATA, IMO, ADR:

PROPER SHIPPING NAME: Flammable Liquid n.o.s.

TECHNICAL SHIPPING NAME: NuKoat HPO

HAZARD CLASS NUMBER: Class 3

UN IDENTIFICATION NUMBER: UN1993

PACKING GROUP: III

DOT LABEL(S) REQUIRED: Flammable



NORTH AMERICAN EMERGENCY RESPONSE GUIDEBOOK NUMBER, 2004: 128

MARINE POLLUTANT: No component of this product is designated as a marine pollutant by the Department of Transportation (49 CFR 172.101, Appendix B).

INTERNATIONAL AIR TRANSPORT ASSOCIATION SHIPPING INFORMATION (IATA): This product is not considered as dangerous goods.

INTERNATIONAL MARITIME ORGANIZATION SHIPPING INFORMATION (IMO): This product is not considered as dangerous goods.

EUROPEAN AGREEMENT CONCERNING THE INTERNATIONAL CARRIAGE OF DANGEROUS GOODS BY ROAD (ADR): This product is not considered by the United Nations Economic Commission for Europe to be dangerous goods.

15. REGULATORY INFORMATION

UNITED STATES REGULATIONS:

U.S. SARA REPORTING REQUIREMENTS: The components of this product are subject to the reporting requirements of Sections 302, 304, and 313 of Title III of the Superfund Amendments and Reauthorization Act, and are listed as follows:

CHEMICAL NAME	SARA 302 (40 CFR 355, Appendix A)	SARA 304 (40 CFR Table 302.4)	SARA 313 (40 CFR 372.65)
Ethylene Glycol Monobutyl Ether	NO	NO	NO

U.S. SARA THRESHOLD PLANNING QUANTITY: There are no specific Threshold Planning Quantities for the components of this product. The default Federal MSDS submission and inventory requirement filing threshold of 10,000 lbs (4,540 kg) therefore applies, per 40 CFR 370.20.

U.S. CERCLA REPORTABLE QUANTITY (RQ): None

U.S. TSCA INVENTORY STATUS: The components of this product are listed on the TSCA Inventory.

OTHER U.S. FEDERAL REGULATIONS: Not applicable.

CALIFORNIA SAFE DRINKING WATER AND TOXIC ENFORCEMENT ACT (PROPOSITION 65): No component of this product is on the Proposition 65 Lists.

ADDITIONAL CANADIAN REGULATIONS:

CANADIAN DSL/NDSL INVENTORY STATUS: The components of this product are on the DSL or NDSL Inventories

CANADIAN WHMIS CLASSIFICATION and SYMBOLS: B-3 Flammable or Combustible Material; Class D-1 Materials causing immediate and serious effects; Class D-2 Materials having other toxic effects.



EUROPEAN ECONOMIC COMMUNITY INFORMATION:

EU CLASSIFICATION: (CARC) Cat.2 (Xn) HARMFUL, (Xi) IRRITANT

EU RISK PHRASES: R20/21/22: Harmful by inhalation, in contact with skin and if swallowed; R36/38: Irritating to eyes and skin; R43: May cause sensitization by skin contact; R45: May cause cancer; R65: Harmful: may cause lung damage if swallowed.

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advice immediately; S46: If swallowed, seek medical advice immediately; S62: If swallowed do not induce vomiting, seek medical advice immediately.



AUSTRALIAN INFORMATION FOR PRODUCT:

AUSTRALIAN INVENTORY OF CHEMICAL SUBSTANCES (AICS) STATUS: The components of this product are listed on the AICS.

HAZARDOUS SUBSTANCES INFORMATION SYSTEM: Potassium Hydroxide is listed by the Hazardous Substances Information System as a Hazardous Substance.

STANDARD FOR THE UNIFORM SCHEDULING OF DRUGS AND POISONS: Not applicable.

JAPANESE INFORMATION FOR PRODUCT:

JAPANESE MINISTER OF INTERNATIONAL TRADE AND INDUSTRY (MITI) STATUS: The components of this product are not listed as Class I Specified Chemical Substances, Class II Specified Chemical Substances, or Designated Chemical Substances by the Japanese MITI.

JAPANESE ENCS INVENTORY: The components of this product are on the ENCS Inventory as indicated in the section on International Chemical Inventories, below.

POISONOUS AND DELETERIOUS SUBSTANCES CONTROL LAW: No component of this product is a listed Specified Poisonous Substance under the Poisonous and Deleterious Substances Control Law.

INTERNATIONAL CHEMICAL INVENTORIES:

Listing of the components on individual country Chemical Inventories is as follows:

Dipropylene glycol methyl ether is listed on the following inventories:

Asia-Pac: Listed

Australian Inventory of Chemical Substances (AICS): Listed

Korean Existing Chemicals List (ECL): Listed

Japanese Existing National Inventory of Chemical Substances (ENCS): Listed

Philippines Inventory of Chemicals and Chemical Substances (PICCS): Listed

Swiss Giftlist List of Toxic Substances: Listed

U.S. TSCA: Listed

16. OTHER INFORMATION

PREPARED BY: Paul Eigbrett

MSDS Authoring Services

DATE: May 23, 2010

This information is furnished without warranty, expressed or implied, except that it is accurate to the best knowledge of NuGeneration Technologies, LLC. The data on this sheet are related only to the specific material designated herein. NuGeneration Technologies, LLC assumes no legal responsibility for use or reliance upon this data.

End of MSDS