



I. Chemical Product and Company Identification

Product Name: KR-153SL
Identification #: 35-440-0153
Product Use/Class: Biocide
Supplier: Nabors Completion and Production Services
515 W. Greens Road, Suite 1100, Houston, TX 77067
Supplier Tracking Code: 780
Emergency Contact: CHEMTREC 1 (800) 424-9300
Prepared By: LZ
Date Prepared: 09/27/2012

II. Composition/Information on Ingredients

Chemical Name: 2,2-Dibromo-3-nitrilo-propionamide (DBNPA)
CAS Number: 10222-01-2
Percent by Mass Less Than: 20%

Exposure Limits

Threshold Limit Value - Time Weighted Average: NI
Threshold Limit Value - Short Term Exposure Limit: NI
Permissible Exposure Limit - Time Weighted Average: NI
Permissible Exposure Limit - Ceiling: NI
Company Threshold Limit - Time Weighted Average: NI
Skin: NI

Chemical Name: Polyethylene Glycol (PEG)
CAS Number: 25322-68-3
Percent by Mass Less Than: 50%

Exposure Limits

Threshold Limit Value - Time Weighted Average: NI
Threshold Limit Value - Short Term Exposure Limit: NI
Permissible Exposure Limit - Time Weighted Average: NI
Permissible Exposure Limit - Ceiling: NI
Company Threshold Limit - Time Weighted Average: NI
Skin: NI

III. Hazardous Identification

Emergency Overview: CORROSIVE; Clear, yellow liquid; Causes irreversible eye damage; May be fatal if swallowed; Harmful if inhaled or absorbed through skin; Causes skin burns; Prolonged or frequently repeated skin contact may cause allergic reactions

Eye Contact: This product causes severe eye irritation or burns.
Skin Contact: This product causes skin irritation or burns. Symptoms may include redness and burning of the skin. Skin sensitization may occur.
Inhalation: Inhalation of product mist may causes respiratory tract irritation and may be harmful.
Ingestion: May be fatal if swallowed. The component, polyethylene glycol, can cause gastric disturbances, but would not be considered toxic.
Chronic Harards: Skin sensitization may occur with chronic exposure to this product.

Primary Route(s) of Entry:	<input checked="" type="checkbox"/> Skin Contact	<input checked="" type="checkbox"/> Eye Contact	<input type="checkbox"/> Ingestion
	<input type="checkbox"/> Skin Absorbtion	<input checked="" type="checkbox"/> Inhalation	

IV. First Aid Measures

Eye Contact: Immediately flush eyes with plenty of water for at least 20 minutes. Lift upper & lower eyelids to ensure complete rinsing. Remove contact lenses after 5 minutes of rinsing, then continue rinsing. Seek medical aid immediately.

Skin Contact: Remove contaminated clothing, shoes. Wash skin with soap & water for at least 15 minutes. Seek medical aid immediately. Wash clothing, shoes before reuse.

Inhalation: For mist inhalation or breathing fumes released from heated material, move victim to fresh air. Keep victim quiet and warm. If not breathing, give artificial respiration. If breathing difficult, have trained medical person give oxygen. Seek medical attention.

Ingestion: If this product is swallowed, call a poison control center or doctor immediately for treatment advice. If the victim is conscious and alert, have him sip a glass of water, if he is able to swallow. Never give anything by mouth to an unconscious person. Do not induce vomiting unless told to do so by the poison control center or doctor.

V. Fire Fighting Measures

Flash Point: > 318 F

Auto Ignition Temperature: Not Available

Lower Explosive Temp.: Not Applicable

Upper Explosive Temp.: Not Applicable

Extinguishing Media: Use dry powder, carbon dioxide or water spray.

Unusual Fire and Explosive Harards: Heated decomposition may release poisonous or corrosive fumes. Thermal decomposition or combustion may produce carbon dioxide, carbon monoxide, bromine gas, hydrogen bromide, cyanogen bromide, & oxides of nitrogen.

Special Fire Fighting Procedures: Cool containers with water spray. Fire fighters should wear protective clothing and SCBA in positive pressure mode.

VI. Accidental Release Measures

Steps to be Taken in Case
Material is Released or
Spilled:

STEPS TO BE TAKEN IF THIS MATERIAL IS RELEASED OR SPILLED:

1. Wear a self-contained breathing apparatus in the positive pressure mode and protective clothing.
2. Avoid releasing the spilled material to streams, lakes, or ponds.
3. Absorb the liquid on sand or vermiculite and place the used absorbent in a closed container for disposal.
4. Decontaminate the spill area with a 10% sodium bicarbonate solution.
5. Absorb the used bicarbonate solution with sand or vermiculite.
6. Sweep up the used absorbent, place it in a suitable container, and hold for waste disposal.
7. Ventilate the area and wash the spill site after material pickup is complete.

DISPOSAL: Dispose of material in compliance with regulations indicated in Section 13 (Disposal Considerations).

VII. Handling and Storage

Handling:

Do not get in eyes, on skin, or clothing.
Avoid breathing vapor.
Use with adequate ventilation.
Wash thoroughly with soap and water after handling.
Remove contaminated clothing and wash clothing before reuse.
Discard contaminated leather articles such as shoes and belt.
Do not eat, drink, or smoke when handling this product.
Keep containers closed when not in use.
In case of contact immediately rinse skin with plenty of water.

Storage:

Store in a cool, dry, well-ventilated and shaded area, away from heat sources and incompatible materials. To maintain product quality, store product at temperatures below 104 oF (40 oC).

VIII. Exposure Controls/Personal Protection

Engineering Controls:

A system of local exhaust is recommended to keep employee exposures below the Airborne Exposure Limits. Local exhaust ventilation is preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Please refer to the latest edition of the ACGIH document Industrial Ventilation, A Manual of Recommended Practices for details.

Respiratory Protection:

If airborne concentrations exceed published exposure limits, use a NIOSH approved respirator in accordance with OSHA respiratory protection requirements (29 CFR 1910.134).

Skin Protection:

Chemical resistant rubber gloves and body covering clothes and boots to prevent skin contact

Eye Protection:

Chemical splash goggles or a face shield with safety glasses

Other Protective
Equipment:

An eye wash station and safety shower should be accessible in the immediate area of use. Protective equipment should be cleaned thoroughly after each use.

Hygienic Practices:

Eye wash station and safety shower should be accessible in the immediate area of use. Wash hands before eating. Use only with adequate ventilation. Remove contaminated clothing and wash before reuse. Avoid contact with eyes, skin, and clothing.

IX. Physical and Chemical Properties

Boiling Point:	>158 oF (>70 oC) decomposes	Vapor Density:	<1
Odor:	sharp	Odor Threshold:	No Information
Appearance:	Clear, yellow liquid	Evaporation Rate:	Not Available
Solubility in H2O:	Completely Soluble	Specific Gravity:	1.2 - 1.3
Freeze Point:	< -13 oF (< -25 oC)	pH at 50.0%:	2.0 - 6.5 @ 25 oC
Vapor Pressure:	4X10 ⁻⁵ mmHg	Viscosity:	Not Available
Physical State:	Liquid		
Coefficient of Water Oil Distribution:	No Information		

X. Stability and Reactivity

Conditions to Avoid:	Heating above 158 oF (70 oC), the decomposition temperature and exposure to light
Incompatibility:	Oxidizing agents, reducing agents, and bases. Deactivated by sulfur-containing nucleophiles
Hazardous Decomposition Products:	Thermal decomposition or combustion may produce carbon dioxide, carbon monoxide, bromine gas, hydrogen bromide, cyanogen bromide, and oxides of nitrogen.
Hazardous Polymization:	Will not occur under normal conditions.
Stability:	Stable under normal conditions

XI. Toxicological Properties

Toxicological Properties:	Eye irritation (rabbit): Severe Irritant
	Dermal irritation (rabbit): Moderate irritant
	Dermal sensitizer: Sensitizer. Produces 100% sensitization rate (Magnusson & Kligman maximization study)
	Chronic toxicity: Not available
	Mutagenicity: Not mutagenic by the Ames Test.
	Carcinogenicity: Not classified by IARC. Not included in the NTP 11th Report on Carcinogens.
Oral:	(Rat): DBNPA: 308 mg/Kg; Diethylene Glycol: 12,565 mg/Kg; Ethylene Glycol: 4,700 mg/Kg.
Dermal:	(Rabbit): Diethylene Glycol: 11,890 mg/Kg; Ethylene Glycol: 9,530 mg/Kg.
Inhalation:	(Rat): DBNPA.32 mg/L/4hr; Ethylene Glycol: 12,111 mg/L

XII. Ecological Information

Ecological Properties: No product information is available.
Ecotoxicity: 2,2-Dibromo-3-nitrilo-
propionamide (DBNPA): 48 hr. EC50 (Daphnia magna): 0.86 mg/L
96 hr. LC50 (Sheepshead minnow): 3.4 mg/L
96 hr. LC50 (Bluegill sunfish): 2.3 mg/L
96 hr. LC50 (Rainbow trout): 2.3 mg/L
96 hr. LC50 (Mysid shrimp): 0.72 mg/L
96 hr. LC50 (Easter oyster): 0.37 mg/L
Acute Oral LD50 (Bobwhite quail): 354 mg/Kg
Dietary LC50 (Mallard duck): >5,620 ppm
Dietary LC50 (Bobwhite quail): >5,620 ppm

Chemical Fate Information: No product information is available.

XIII. Disposal Consideration

Disposal Method: Dispose of in accordance with local, state and federal regulations. Prevent entry into sewers or waterways.
RCRA Status: Not Determined.

XIV. Transportation Information

DOT Proper Shipping Name: Environmentally hazardous substances, liquid, n.o.s.
DOT Technical Name: (contains 2,2-Dibromo-3-nitrilopropionamide)
DOT Hazard Class: 9
DOT Hazard Subclass:
DOT UN/NA Number: UN3082
Packing Group: III
Resp. Guide Page:

XV. Regulatory Information

OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200).
TSCA Status: All components of this product are listed on the Toxic Substance Control Act Inventory.
CERCLA SARA: None
SARA Section 313
Required Reporting:

XVI. Other Information

Other Information: NA = Not applicable ND = Not Determined NI = No Information NE = Not Established
MSDS Updated: 11/12/2014
MSDS Printed: 3/13/2015

This product material safety data sheet provides health and safety information. The product is to be used in applications consistent with our product literature. Individuals handling this product should be informed of the recommended safety precautions and should have access to this information. For any other uses, or when used in conjunction with other products, exposures must be evaluated by the user so that appropriate handling practices and training programs can be established to ensure safe workplace operations. This information is confidential to Nabors Completion & Production Services Company (Nabors) and intended solely for the use of the individual or entity to whom they are directly distributed. Distribution or use beyond the individual or entity is strictly prohibited without the consent of Nabors.