

BHP Billiton EKATI Diamond Mine #1102 4920-52<sup>nd</sup> Street Yellowknife NT Canada X1A 3T1 Tel 867 669 9292 Fax 867 669 9293 bhpbilliton.com

May 30, 2012

Mr. Jason Brennan Resource Management Officer III Aboriginal Affairs and Northern Development Canada #16 Yellowknife Airport Yellowknife, NT, X1A 2T2 (867) 669-2875

Dear MR Brennan

## **RE: Application of Environkleen Dust Suppressant**

BHP Billiton Canada Inc. (BBCI) is providing this notification to the Aboriginal Affairs and Northern Development Canada (AANDC) inspector of our intention to apply Envirokleen dust suppressant in front of the accommodations complex in lieu of DL-10 dust suppressant used in previous years at the EKATI Diamond Mine (EKATI). Due to the proximity to Kodiak Lake and the EKATI accommodations, BBCI has determined that a safer and more environmentally friendly product should be used to control dust in the area around the main accomodations building where there is high vehicle and pedestrian traffic and risk of dust to workers.

BBCI will maintain the approved dust suppressant application procedures and continue to maintain a 30m buffer zone from any waterway.

Attached is a current MSDS for Envirokleen. If there are any questions or concerns regarding the notification of application of Envirokleen, feel free to contact the undersigned.

Yours sincerely,

Claudinio La

**Claudine Lee, M.Sc. P.Geol.** Superintendent – Environment Operations

Attached: Envirokleen MSDS Sheet

**Emergency Phone Numbers: 330-456-3121** 



Synthetic Organic Dust Control<sup>®</sup> advanced environmental performance solution

## MATERIAL SAFETY DATA SHEET

## SECTION I -- IDENTIFICATION OF SUBSTANCE/PREPARATION AND COMPANY/UNDERTAKING

TRADE NAME:

CHEMICAL NAME: SYNONYMS: CHEMICAL FAMILY: CAS REGISTRY NO.: ENVIROKLEEN® Synthetic Organic Dust Control® advanced environmental performance solution ISOALKANE AND BINDER SYSTEM DUST RETANDANT AND STABILIZATION AGENT FORMULATED ISOALKANE AND BINDER (Patents #7,081,270 and # 7,074,266) PRODUCT A BLEND - NO NUMBER ASSIGNED

### SECTION II -- COMPOSITION/INFORMATION ON INGREDIENTS

<u><b>NAME</b></u>	<u>%</u>	<u>CAS REG. NO.</u>
Severely hydrotreated, high viscosity synthetic iso-alkane	75−95 %	Non-hazardous
Polvolefin	5 – 25 %	Non-hazardous

## SECTION III -- HAZARDS IDENTIFICATION

Synthetic Isoalkane May be irritating to breathing passages upon excessive heating, otherwise this product is essentially non-hazardous. Mist 8 hour TLV-TWA = 5mg/m<sup>3</sup> (ACGIH)

## SECTION IV -- FIRST AID MEASURES

EYES:	Flush eyes with flowing water at least 15 minutes, get medical attention.		
	Do not use any eye ointment. Remove contact lenses.		
INHALATION:	Move subject to fresh air. If victim is not breathing perform artificial respiration. Administer oxygen if available. Keep victim warn and at rest. Seek medical attention as soon as possible.		
SKIN:	Flush with large amount of water or wash with soap and water. Seek medical attention if irritation persists.		
INGESTION:	DO NOT induce vomiting because of aspiration into the lungs. EnviroKleen has a laxative effect and will be eliminated quickly. Seek medical attention.		
	NEVER GIVE FLUIDS OR INDUCE VOMITING IF PATIENT IS UNCONSCIOUS OR HAVING CONVULSIONS.		
NOTE TO PHYSICIAN:	Monitor respiratory distress. If cough or difficulty breathing develops,		

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## SECTION V -- FIRE FIGHTING MEASURES

FLAMMABILITY:	Nonflammable, but will burn on prolonged exposure to flame or high temperature.
FLASH POINT (TEST METHOD): AUTOIGNITION TEMPERATURE:	>338 <sup>0</sup> F (>170 <sup>0</sup> C), open cup, ASTM D92, Cleveland 664 <sup>0</sup> F (351 <sup>0</sup> C)
UNUSUAL FIRE AND EXPLOSION HAZARDS: MATERIALS TO AVOID:	Do not cut, weld, heat of drill or pressurize empty container. Low fire hazard. Must be moderately heated before ignition will occur. Avoid contact with strong oxidizing agents, including peroxides, chlorine and strong acids.
PRODUCTS OF COMBUSTION:	Carbon dioxide, carbon monoxide, smoke and irritating fumes as products of incomplete combustion.

#### **EXTINGUISHING MEDIA AND INSTRUCTIONS:**

If a tank, railcar of tank truck is involved in a fire isolate for 0.5 miles in all directions. Shut off fuel to fire if it is possible to do so without hazard. If this is impossible, withdraw from the area and let the fire burn itself out under controlled conditions. Withdraw immediately in case of rising sound from venting safety device or any discoloration of the tank due to fire. Cool containing vessels with water spray in order to prevent pressure build-up, autoignition or explosion.

SMALL FIRE: use dry chemicals, foam, CO<sub>2</sub>.

LARGE FIRE: use water spray, fog of foam. For small outdoor fires portable extinguishers may be used and SCBA (self contained breathing apparatus) may not be required. For all indoor fires and any significant outdoor fires SCBA if required. Respiratory and eye protection are required for fire fighting personnel.

## SECTION VI - ACCIDENTAL RELEASE MEASURES

#### SPILL AND LEAK PROCEDURES:

ELIMINATE ALL IGNITION SOURCES. Stop leak without risk and contain spill. Absorb with inert absorbent materials such as clay or sand. Place absorbent in closed metal containers for later disposal or burn in appropriate facility. Keep spills out of sewers and open bodies of water.

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## SECTION VII -- HANDLING AND STORAGE

**STORAGE:** 

Keep in a cool, dry, ventilated storage area and in closed containers. Keep away from sources of ignition and oxidizing materials.

## HANDLING:KEEP AWAY FROM SOURCES OF IGNITION. Do not reuse empty<br/>containers. Practice good hygiene. Wash hands before eating. Launder<br/>clothes before reuse. Discard saturated leather goods.

## SECTION VIII -- EXPOSURE CONTROL/PERSONAL PROTECTION

<b>RESPIRATORY PROTECTION:</b>	None required if good ventilation is maintained. If mist is generated by heating or spraying use a NIOSH approved organic respirator with a mist filter.
VENTILATION:	Under normal handling conditions special ventilation is not necessary. If operation generates mist or fumes use ventilation of keep exposure to airborne contaminants below exposure limits.
EYE PROTECTION:	Chemical splash, goggles recommended.
<b>PROTECTIVE CLOTHING:</b>	Clothing to minimize skin contact, long sleeves, boots or shoes. For casual contact PVC gloves are suitable, for prolonged contact use neoprene or nitrile gloves.

#### SECTION IX -- PHYSICAL AND CHEMICAL PROPERTIES

BOILING/MELTING POINT @ 760 mm Hg: VAPOR PRESSURE mm Hg @ 20°C: SPECIFIC GRAVITY OR BULK DENSITY: SOLUBILITY IN WATER: APPEARANCE: ODOR: POUR POINT: VISCOSITY (Brookfield) :

pH: ACIDITY: ALKILINITY: >600°F (>316<sup>0</sup>C) negligible at ambient temperature 0.83 insoluble in water viscous, clear liquid none  $-33^{0}F(-36^{0}C)$ 35 - 50cps @ 20<sup>0</sup>C 100 - 140cps @ 0<sup>0</sup>C 145 - 175cps @  $-5^{0}C$ N/A, not an aqueous solution or emulsion none none

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## **MATERIAL SAFETY DATA SHEET**

## SECTION X -- STABILITY AND REACTIVITY

## STABILITY:

CHEMICAL INCOMPATIBILITY: HAZARDOUS DECOMPOSITION PRODUCTS:

## HAZARDOUS POLYMERIZATION: CONDITIONS TO AVOID: CORROSIVE TO METAL:

Stable under normal handling conditions. Stable stored at temperatures between  $-40^{\circ}$  F and  $+ 180^{\circ}$  F. Can react with strong organic oxidizing materials. Thermal decomposition in the presence of air may yield carbon monoxide and/or carbon dioxide, smoke, hydrocarbons and irritating fumes. Does not occur under normal industrial conditions. Excessive heat and flame. No

## SECTION XI -- TOX ICOLOGICAL INFORMATION

## **EFFECTS OF OVEREXPOSURE**

INHALATION:	Inhalation is highly unlikely. However prolonged or repeated inhalation of fum		
	mists may cause irritation to the respiratory tract. Product deposits in lungs may lead		
	to fibrosis and reduced pulmonary function.		
SKIN:	It is not a skin irritant However prolonged or repeated contact may cause skin		
	irritation, dermatitis or oil acne.		
EYES:	Prolonged or repeated contact may be irritating to eyes. Will not cause permanent		
	damage.		
<b>INGESTION:</b>	Relatively non toxic to digestive tract.		
<b>MUTAGENIC:</b>	Mutagenic activity test are negative toward: Salmonella Typhimurium, Salmonella-		
	Eschrichia coli and Chinese Hamster ovary.		
<b>REPRODUCTIVE TOXICIT</b>	Y: Based on data to date it does not pose a reproductive risk.		
CARCINOGENICITY:			
Based on studies to o	late EnviroKleen® is not known to be carcinogenic to humans		
	ACGIH (mists) - Based on available human studies, exposure to product mist		
	alone has not demonstrated to cause human effects at levels below 5 $mg/m^3$ .		

IARC - IARC group 3; cannot be classified as to carcinogenicity to humans.

NTP - No studies were found.

IRIS - No studies were found.

OSHA - OSHA PEL (8 hour TWA) =  $5 \text{ mg/m}^3$  for synthetic product mists.

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## SECTION XII -- ECOLOGICAL INFORMATION

## **EnviroKleen Aquatic Toxicity Test Results**

\*Methods for Measuring the Acute Toxicity of Effluents and Receiving Water to Freshwater and Marine Organisms, EPA/600/4-90/027F.

\*Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms, EPA/600/4-91/002.

\*Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Water to Marine and Estuarine Organisms, EPA/600/4-91/003.

	Ceriodaphnia dubia	Fathead minnow	Americamysis bahia	<b>Rainbow Trout</b>			
ACUTE/SURVIVAL (mg/L)							
LC50	>1000	>1000	>1000	>1000			
NOEC	1000	1000	1000	1000			
LOEC	>1000	>1000	>1000	>1000			
CHRONIC/SURVIVAL (mg/L)							
LC50	>1000	>1000	>1000	>1000			
NOEC	1000	1000	1000	1000			
LOEC	>1000	>1000	>1000	>1000			
CHRONIC/GROWTH/ REPRODUCTION (mg/L)							
LC50	>1000	>1000	>1000	>1000			
NOEC	1000	1000	1000	1000			
LOEC	>1000	>1000	>1000	>1000			

See attached test results:

1. ABC Laboratories, Inc. Americamysis bahia, Fathead minnow, Ceriodaphnia dubia.

2. ABC Laboratories, Inc. Rainbow trout

LC50 -Lethal Concentration, 50% NOEC - No Observable Effects Concentration LOEC - Lowest Observable Effects Concentration

The  $LC_{50}$  level is the lethal concentration of the chemical under test that kills 50% of the test organisms in the specified amount of time. According to the EPA-540-9-85-006, suggested toxicity criteria for materials are listed in the table below.

Comparison of the EPA guidelines to the  $LC_{50}$  levels of all species show that EnviroKleen® is practically non-toxic to all species. When used and applied properly EnviroKleen® is not known to pose any ecological problems.

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## SECTION XIII -- DISPOSAL CONSIDERATIONS

#### WASTE DISPOSAL METHOD:

Consult your local authorities for regulations. Preferred waste management: recycle or reuse, incinerate with energy recovery, disposal in a licensed facility. Disposal facility should be compliant with state, local and federal government regulations.

## SECTION XIV -- TRANSPORTATION INFORMATION

D.O.T. PROPER SHIPPING NAME (49CFR172.101): HAZARDOUS SUBSTANCE (40CFR116): REPORTABLE QUANTITY (RQ): D.O.T. HAZARD CLASSIFICATION (49CFR172.101): D.O.T. PLACARDS REQUIRED: POISON CONSTITUENT (49CFR173.343): BILL OF LADING DESCRIPTION: C NO.: UN/NA CODE: None N/A N/A Non-regulated N/A Dust control agent N/A N/A

## SECTION XV-- REGULATORY INFORMATION

EPA SARA Title III hazard class: OSHA HCS hazard class: EPA SARA Title III Section 313 (40CFR372) Toxic Chemicals present in quantities greater than the "de minimus" level are: TSCA: Canadian WHIMIS: None Non-OSHA hazardous (29CFR1910.1200)

#### None

Components of this product are listed on TSCA inventory This product is not a "controlled product" under the Canadian Workplace Hazardous Material Information System. All components of this product are listed on Domestic Substance List. Does not contain any Prop 65 chemicals.

**Canadian DSL:** 

**California Proposition 65:** 

## SECTION XVI -- OTHER INFORMATION

#### **ABBREVIATIONS AND SYMBOLS:**

N.D. - Not Determined < - LESS THAN N.A. - Not Applicable > - MORE THAN N.T. - Not Tested