

MATERIAL SAFETY DATA SHEET

This Material Safety Data Sheet complies with the Canadian Controlled Products Act

****NOTE: THE FOLLOWING INFORMATION PROVIDED IS FOR THE PRODUCT CONCENTRATE ONLY, NOT FOR USE-DILUTIONS****

SECTION 1 – PRODUCT IDENTIFICATION

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|---------------------|--|--|
| PRODUCT IDENTIFIER: | BUNKER BREAKER IV | |
| PRODUCT USE: | DEMULSIFIER FOR BUNKER/LUBE OIL WASTE TREATMENT | |
| SUPPLIER: | Velocity Chemicals Ltd. Unit #1, 9515- 190 th St., Surrey, B.C. V4N-3S1 Emergency Telephone: (604) 881-4700 Facsimile: (604) 881-4701 | In case of transportation emergency or product spill, contact: In Canada- CANUTEC @ 613-996-6666 (24 hrs.) |

SECTION 2 – HAZARDOUS INGREDIENTS

| HAZARDOUS INGREDIENTS | % (W/W) | CAS NUMBER | LD50 | LC50 | EXPOSURE LIMITS |
|---------------------------------------|---------|------------|---|--|---|
| Diesel Fuel (Petroleum distillates)** | 40-70 | 68476-34-6 | 3 g/kg (oral, rat) > 3g/kg (skin, rabbit) | Not available | ACGIH=100mg/m3 (TWA, skin A3, total hydrocarbon) |
| Alkyl Benzenesulfonic Acid | 15-40 | 68584-22-5 | Not available | Not available | Not established |
| Benzene, C10-C16-alkyl derivs. | 0.1-1.0 | 68648-87-3 | 5 g/kg (oral, rat) > 10.2g/kg (skin, rabbit) | Not available | Not established |
| Sulfuric Acid | 0.1-1.0 | 7664-93-9 | 2140 mg/kg (oral, rat) | 510 mg/m3 (inhal., 2hrs, rat) 160 mg/m3 (inhal., 4hrs, mouse) | OSHA(PEL)= 1mg/m3(TWA) ACGIH = 0.2mg/m3(TWA), 3mg/m3 (STEL) |

**contains

Naphthalene 0.02-0.10%(wt) (CAS#91-20-3)- ACGIH = 10ppm(skin)-TWA & 15ppm(skin)- STEL; OSHA= 10ppm-TWA & 15ppm-STEL
Total Sulfur @ 0-0.25%(wt.) (CAS#= mixture)

SECTION 3 – PHYSICAL DATA

| | |
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| <p>Physical state: liquid</p> <p>Solubility: dispersible in water</p> <p>Odour and Appearance: clear, dark amber brown with petroleum odor</p> <p>pH (100%) @ 20°C: Not applicable</p> <p>Specific Gravity @ 20°C: 0.90-0.95</p> <p>Odour Threshold (ppm): not established</p> | <p>Vapour Density: not determined</p> <p>Vapour Pressure: not determined</p> <p>Evaporation Rate: not determined</p> <p>Boiling Point (°C): not determined</p> <p>Freezing Point (°C): not determined</p> <p>Coefficient of water/oil distribution: not determined</p> |
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SECTION 4 – FIRE AND EXPLOSION DATA

Flammability: Yes, combustible under WHMIS B3

If yes, under what condition: heat, open flames, sparks and other ignition sources

Means of Extinction: Dry chemical, alcohol foam, CO₂, water spray. Use extinguishing media suitable for surrounding fires.

Special Fire Fighting Procedures: Wear NIOSH/OSHA approved, self contained breathing apparatus for fire fighting situations. Use water spray to cool all nearby fire exposed surfaces.

Explosion Data-

Sensitivity to impact: None

Sensitivity to static discharge: None

Flash Point (°C) and method: > 61°C (PMCC)

Upper Flammable limit (% volume): not applicable

Lower Flammable limit (% volume): not applicable

Autoignition temperature (°C): not applicable

Hazardous combustion products: carbon oxides, sulfur oxides, toxic sulfuric acid vapors and other toxic organic vapours.

SECTION 5 – REACTIVITY DATA

Chemical Stability: yes, stable under normal storage conditions

If no, under what conditions:

Incompatibility with other substances: yes

If so, under what conditions: strong acids, alkalis and oxidizers

Reactivity, and under what conditions: none known

Hazardous Decomposition Products: carbon oxides, sulfur oxides and toxic sulfuric acid vapors upon thermal decomposition.

SECTION 6 – TOXICOLOGICAL PROPERTIES

Primary route of entry: skin and eye contact, skin absorption, inhalation

Effects of Acute Exposure to Product: Product exposure may cause severe irritation or burns to skin and eyes. Inhaling mist or vapors may cause immediate irritation or burns to mucous membrane, discomfort to respiratory system and central nervous system(CNS) effects. Symptoms may include headaches, loss of coordination, nausea, etc. Also, may be harmful if absorbed through skin.

Effects of Chronic Exposure to Product: Prolonged exposure may cause skin dermatitis. Repeated skin contact or absorption may cause damage to liver, blood forming organs, blood disorder, etc.

Exposure Limits: see Section 2 under Hazardous Ingredients

Irritancy of Product: may be corrosive to skin, eyes and respiratory system.

Sensitization: none known

Reproductive Toxicity: none known

Mutagenicity: none known

Carcinogenicity: This product contains 0.02-0.1% by wt. of naphthalene. IARC rates naphthalene under Group 2B-possible human carcinogen. ACGIH rates naphthalene under Group A4- not classifiable as a human carcinogen. NTP rates naphthalene as a suspect human carcinogen.

Sulfuric acid (acid mists only)-IARC (Group 1-human carcinogen), ACGIH(A2-suspect human carcinogen)

Teratogenicity: none known

Synergistic Products: none known

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SECTION 7 – PREVENTATIVE MEASURES

Respiratory Protection: Use a NIOSH/OSHA approved for acid mist/dust and organic vapor respirator.

Gloves: nitrile, neoprene or viton

Eye Protection: splash proof chemical goggles or face shield.

Footwear: boots

Clothing: long sleeve coveralls

Other: neoprene apron

Engineering Controls: General ventilation for normal operating conditions or local exhaust for confined areas.

Leak and Spill Procedures: Wear protective equipment. Extinguish all nearby ignition sources. Contain spill. Prevent runoff to drains or sewers. Recover material by vacuum or pump into a suitable flammable waste container. Soak up residue with suitable absorbent, and then dispose of into a flammable waste container. Reuse material if possible, or otherwise dispose in accordance with local regulations.

Waste Disposal: Dispose of in accordance with local environmental regulations.

Handling Procedures and Equipment: Use good hygiene practices. Avoid contact with eyes, skin and clothing. Avoid breathing vapors or mists. Use with adequate ventilation. Use proper grounding procedures when handling. Empty container may contain flammable residues/vapors. Do not cut, puncture, or weld near empty container. Safety Shower and Eye wash station should be available in the immediate work area.

Storage Requirements: Store in a cool, dry place away from all nearby ignition sources and incompatibles. Do not mix with any other chemicals. Keep container closed when not in use. Keep storage temperature between 4°C to 30°C.

Special Shipping Information:

WHMIS Classification: B3, D2A, E

TDG Classification: Corrosive Liquid, N.O.S. (AlkylBenzenesulfonic Acid Mixture), Class 8, UN 1760, P.G. III

SECTION 8 – FIRST AID MEASURES

Inhalation: Remove victim to fresh air, apply artificial respiration if necessary. Seek medical help.

Ingestion: Give large amounts of water if conscious. Do not induce vomiting. Get medical help immediately.

Skin Contact: Wash thoroughly with water for 15 minutes. If irritation persist, seek medical attention.

Eye Contact: Flush immediately with water for 15-20 minutes. Seek medical help.

SECTION 9 - OTHER INFORMATION

REVISIONS: Sept 16, 2012

SUPERCEDES: Not Applicable

PREPARED BY: Technical Department (Customer Service phone number: 604-881-4700)

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