

MATERIAL SAFETY DATA SHEET

REVISION DATE: 08-16-2012

SUPERSEDES: 08-25-2009

SECTION 1: CHEMICAL PRODUCT AND COMPANY IDENTIFICATION**COMPANY INFORMATION**

H.B. Fuller Construction Products Inc.
1105 S. Frontenac Street
Aurora, IL 60504
Phone: 1-800-552-6225

Medical Emergency Phone Number (24 Hours): 1-888-853-1758
Transport Emergency Phone Number (CHEMTREC): 1-800-424-9300

PRODUCT INFORMATION

PRODUCT NUMBER: FOSTER 32-90
PRODUCT NAME: FOSTER 32-90
PRODUCT DESCRIPTION: Surfactant
PRODUCT IDENTIFIER: 802296PM

SECTION 2: HAZARDS IDENTIFICATION**EMERGENCY OVERVIEW**

PHYSICAL STATE: Liquid
COLOR: Amber
ODOR: Solvent

POTENTIAL HEALTH EFFECTS BY ROUTE OF ENTRY

EYE: No irritation hazard in normal industrial use.

SKIN: No irritation hazard in normal industrial use.

INHALATION: No irritation hazard in normal industrial use.

INGESTION: Ingestion is not an anticipated route of exposure. No hazard in normal industrial use.

LONG-TERM (CHRONIC) HEALTH EFFECTS

TARGET ORGAN(S): No organs known to be damaged from exposure to this product.

REGULATED CARCINOGEN STATUS:

Unless noted below, this product does not contain regulated levels of NTP, IARC, ACGIH, or OSHA listed carcinogens.

EXISTING HEALTH CONDITIONS AFFECTED BY EXPOSURE: No medical conditions affected by exposure.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS #	PERCENT
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Unlisted ingredients are not 'hazardous' per the Occupational Safety and Health Administration Hazard Communication Standard (29 CFR 1910.1200) and/or are not found on the Canadian Workplace Hazardous Materials Information System ingredient disclosure list. See Section 8 for exposure limit guidelines.

SECTION 4: FIRST AID MEASURES

IF IN EYES: None expected to be needed, however, use an eye wash to remove a chemical from your eye regardless of the level of hazard.

IF ON SKIN: Wash with soap and water.

IF VAPORS INHALED: Remove individual to fresh air after an airborne exposure if any symptoms develop, as a precautionary measure.

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IF SWALLOWED: Do not induce vomiting. Seek medical attention if symptoms develop. Provide medical care provider with this MSDS. Induced vomiting may lead to aspiration of the material into the lungs potentially causing chemical pneumonitis that may be fatal.

SECTION 5: FIRE FIGHTING MEASURES

FLASH POINT:	Non flammable
AUTOIGNITION TEMPERATURE:	Not established
LOWER EXPLOSIVE LIMIT (% in air):	Not established
UPPER EXPLOSIVE LIMIT (% in air):	Not established
EXTINGUISHING MEDIA:	Use water spray, foam, dry chemical or carbon dioxide.
UNUSUAL FIRE AND EXPLOSION HAZARDS:	There is a possibility of pressure buildup in closed containers when heated. Water spray may be used to cool the containers.
SPECIAL FIRE FIGHTING INSTRUCTIONS:	Persons exposed to products of combustion should wear self-contained breathing apparatus and full protective equipment.
HAZARDOUS COMBUSTION PRODUCTS:	Carbon dioxide, Carbon monoxide

SECTION 6: ACCIDENTAL RELEASE MEASURES

SPECIAL PROTECTION:	No adverse health effects expected from the clean-up of spilled material. Follow personal protective equipment recommendations found in Section 8 of this MSDS.
CLEAN-UP:	Dike if necessary, contain spill with inert absorbent and transfer to containers for disposal. Keep spilled product out of sewers, watersheds, or water systems.

Transport Emergency Phone Number (CHEMTREC): 1-800-424-9300

SECTION 7: HANDLING AND STORAGE

Handling: No special handling instructions due to toxicity.

Storage: Store in a cool, dry place.
Consult the Technical Data Sheet for specific storage instructions.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

EYE PROTECTION:	Wear safety glasses when handling this product.
SKIN PROTECTION:	Not normally considered a skin hazard. Where use can result in skin contact, practice good personal hygiene. Wash hands and other exposed areas with mild soap and water before eating, drinking, and when leaving work.
GLOVES:	Not normally required. Use nitrile gloves if conditions warrant.
RESPIRATORY PROTECTION:	No respiratory protection required under normal conditions of use. Respirators should be selected by and used following requirements found in OSHA's respirator standard (29 CFR 1910.134).
VENTILATION:	No exposure limits exist for the constituents of this product. No engineering controls are likely to be required to maintain operator comfort under normal conditions of use.

EXPOSURE LIMITS:

Chemical Name	ACGIH EXPOSURE LIMITS	OSHA PEL
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MATERIAL SAFETY DATA SHEET**SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**

PHYSICAL STATE:	Liquid
COLOR:	Amber
ODOR:	Solvent
ODOR THRESHOLD:	Not established
WEIGHT PER GALLON (lbs.):	8.27
SPECIFIC GRAVITY:	0.990
SOLIDS (% by weight):	3.3
pH:	Not established
FLASH POINT:	Non flammable
BOILING POINT (deg. C):	Not established
FREEZING/MELTING POINT (deg. C):	Not established
VAPOR PRESSURE (mm Hg):	Not established
VAPOR DENSITY:	Not established
EVAPORATION RATE:	Not established
OCTANOL/WATER COEFFICIENT:	Not established
VOC, weight percent	1.40
VOC, EPA Method 24 (theoretically determined)	13g/liter of material
VOC, EPA Method 24, less water and exempt solvents (theoretically determined)	420g/liter of material

SECTION 10: STABILITY AND REACTIVITY

STABILITY:	Stable under normal conditions.
CHEMICAL INCOMPATIBILITY:	Not established
HAZARDOUS POLYMERIZATION:	Will not occur.
HAZARDOUS DECOMPOSITION PRODUCTS:	Carbon monoxide, carbon dioxide

SECTION 11: TOXICOLOGICAL INFORMATION

COMPONENT	LD50/LC50
TOXICOLOGY SUMMARY:	No additional health information available.

SECTION 12: ECOLOGICAL INFORMATION

OVERVIEW: No ecological information available

SECTION 13: DISPOSAL CONSIDERATIONS

To the best of our knowledge, this product does not meet the definition of hazardous waste under the U.S. EPA Hazardous Waste Regulations 40 CFR 261. Solidify and dispose of in an approved landfill. Consult state, local or provincial authorities for more restrictive requirements.

SECTION 14: TRANSPORTATION INFORMATION

Consult Bill of Lading for transportation information.

DOT: NOT REGULATED
IATA: NOT REGULATED

SECTION 15: REGULATORY INFORMATION**INVENTORY STATUS**

U.S. EPA TSCA: This product is in compliance with the Toxic Substances Control Act's Inventory requirements.

CANADIAN CEPA DSL: The components of this product are included on the DSL or are exempt from DSL requirements.

EUROPEAN EINECS: As a result of the introduction of REACH into Europe, this product cannot be

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JAPAN ENCS: imported into Europe unless the REACH requirements are met.
This product is in compliance with the Japanese Existing and New Chemical Substances requirements.

If you need more information about the inventory status of this product call 651-236-5858.

This product may contain chemical substances that are regulated for export by various government agencies (such as the Environmental Protection Agency, the Bureau of Industry and Security, or the Drug Enforcement Administration, among others). Before exporting this product from the USA or Canada, we recommend you contact us at 651-236-5858 (USA) or 450-655-1306 x227 (Canada) to request an export review.

FEDERAL REPORTING

EPA SARA Title III Section 313

Unless listed below, this product does not contain toxic chemical(s) subject to the reporting requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA) and 40 CFR part 372. EPA has advised that when a percentage range is listed the midpoint may be used to fulfill reporting obligations.

Chemical Name	CAS#	%
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WHMIS STATUS: Unless listed below, this product is not controlled under the Canadian Workplace Hazardous Materials Information System.

STATE REPORTING

Proposition 65, The Safe Drinking Water and Toxic Enforcement Act of 1986:

Unless listed below, this product does not contain known levels of any chemical known to the State of California to cause cancer or reproductive harm.

Chemical Name/List	CAS	Percent
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SECTION 16: ADDITIONAL INFORMATION

This Material Safety Data Sheet is prepared to comply with the United States Occupational Safety and Health Administration (OSHA) Hazard Communication Standard (29 CFR 1910.1200) and the Canadian Workplace Hazardous Materials Information System (WHMIS).

HMIS RATING: HEALTH -- 0 FLAMMABILITY -- 0 REACTIVITY -- 0

See SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for personal protective equipment recommendations.

Prepared by: The Global Regulatory Department

Phone: 651-236-5842

The information and recommendations set forth herein are believed to be accurate. Because some of the information is derived from information provided to H.B.Fuller Construction Products, Inc. from its suppliers, and because H.B.Fuller Construction Products, Inc. has no control over the conditions of handling and use, H.B.Fuller Construction Products, Inc. makes no warranty, expressed or implied, regarding the accuracy of the data or the results to be obtained from the use thereof. The information is supplied solely for your information and consideration, and H.B.Fuller Construction Products, Inc. assumes no responsibility for use or reliance thereon. It is the responsibility of the user of H.B.Fuller Construction Products, Inc. products to comply with all applicable federal, state and local laws and regulations.

HENRY COMPANY CANADA INC.

10 St-Pierre, Lachine, Quebec H8R 1N7
Tel.:(514) 364-5224 Fax:(514)364-7270

EMERGENCY TEL. NO.: (514) 364-5224

MATERIAL SAFETY DATA SHEET

WHMIS: D-2B

I - PRODUCT INFORMATION	
PRODUCT NAME	Bakor 120-19
PRODUCT TYPE	Polyvinyl Acetate Emulsion
PRODUCT USE	Fire resistive coating for thermal insulation

II - HAZARDOUS INGREDIENTS				
INGREDIENTS	%	CAS #	EXPOSURE LIMITS	LD50/LC50(SPECIES & ROUTE)
Ethylene Glycol	1-5	107-21-1	50 ppm TLV (vapour, ACGIH)	LD50 (oral-rat) > 4700 mg/kg LD50 (dermal-rabbit) > 9530 mg/kg

III - PHYSICAL DATA			
PHYSICAL <input type="checkbox"/> GAS STATE <input checked="" type="checkbox"/> LIQUID <input type="checkbox"/> SOLID	ODOUR & APPEARANCE White, medium viscosity liquid. Acetic acid odour.		ODOUR THRESHOLD (ppm) Not available
VOLATILE (VOL.) VOC 53% <100 g/L	VAPOUR PRESSURE (mm Hg) As for water	VAPOUR DENSITY (AIR = 1) As for water	EVAPORATION RATE (BuAc=1) As for water
BOILING POINT (°C) Approx. 100°C	FREEZING POINT (°C) Approx. 0°C	SPEC. GRAVITY (WATER - 1) 1.28	DENSITY (g / ml) 1.28
SOLUBILITY (IN WATER)	Miscible in water as supplied Insoluble when dry.	COEF. OF WATER/OIL DIST. Not available	pH 6-8

IV - FIRE & EXPLOSION HAZARD		
FLAMMABILITY <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	CONDITIONS OF FLAMMABILITY Not applicable.	
FLASH POINT (°C): None METHOD: --	FLAMMABLE LIMITS (% VOLUME) LOWER: None UPPER: None	AUTO-IGNITION TEMP. (°C) None
TDG FLAMMABILITY CLASS Not regulated	SENSITIVITY TO MECHANICAL IMPACT None	SENSITIVITY TO STATIC DISCHARGE None
HAZARDOUS COMBUSTION PRODUCTS	On burning (dry film), some CO, HCl and chlorine.. Main combustion products are H2O, CO2 and C (as heavy smoke).	
MEANS OF EXTINCTION	Not applicable	
SPEC. FIRE FIGHTING PROCEDURES	Not applicable	

V - PREPARATION OF M.S.D.S.		
PREPARED BY: WHMIS Group	PHONE NUMBER (514) 364-5224	DATE May 2006

VI - REACTIVITY DATA		Bakor 120-19
CHEMICAL [X] YES STABILITY [] NO	CONDITIONS TO AVOID: Not applicable.	
INCOMPATIBILITY (SUBSTANCE TO AVOID)	Materials that react with water.	
CONDITIONS OF REACTIVITY	Not applicable.	
HAZARDOUS DECOMPOS- ITION PRODUCTS	Will not decompose under normal conditions of handling or warehousing.	

VII - TOXICOLOGICAL PROPERTIES			
THRESHOLD LIMIT VALUE 50 ppm	LC50/LD50 (estimated)	LD50 (oral-rat) > 4700 mg/kg LD50 (dermal-rabbit) > 9530 mg/kg	
ROUTE OF ENTRY	[] SKIN CONTACT [] SKIN ABS. [x] EYES [x] INGESTION [] INHALATION		
EFFECTS OF ACUTE EXPOSURE	Not known but product could probably cause eye irritation if not washed immediately. Could also cause gastro-intestinal problems if ingested in large quantity.		
EFFECTS OF CHRONIC EXPOSURE	Not known		
IRRITANCY Not known	SENSITIZATION Not known	SYNERGISTIC MATERIALS Not known.	
[] CARCINOGENICITY	[] REPRODUCTIVE EFFECTS	[] TERATOGENICITY	[] MUTAGENICITY
Product not believed to cause any of these effects.			

VIII - FIRST AID MEASURES	
SKIN	Thoroughly wash with soap and water.
EYES	Flush eyes thoroughly with plenty of lukewarm water. Get medical attention if needed..
INHALATION	Should not cause problems.
INGESTION	If victim is conscious, give two glasses of water to drink and induce vomiting. Obtain medical attention.

IX - PREVENTIVE MEASURES	
PERSONAL PROTECTIVE EQUIPMENT	EYES: Safety goggles if applied by spray..
	GLOVES: Suggested.
	CLOTHING: Regular.
	RESPIRATORY: No special equipment required.
ENGINEERING CONTROLS (VENTILATION, ETC.)	Not required.
LEAK AND SPILL PROCEDURE	Wet material: Scrape up to disposal containers. Wash with water. Dry material: Scrape off heavy deposit. Wash off with paint strippers.
WASTE DISPOSAL	Approved incineration or sanitary landfill as per local, provincial, state and federal regulations.
HANDLING PROCEDURES	Normal.
STORAGE REQUIREMENTS	Protect from freezing.
SHIPPING INFORMATION	Protect from freezing.

While Henry Company Canada Inc. believes that the data contained herein are factual & opinion expressed are those of qualified experts regarding the results of the tests conducted, the data is not to be taken as warranty or representation for which Henry Company Canada Inc. assumes legal responsibility. These are offered solely for your consideration, investigation and verification. Any use of this data and information must be determined by the user to be in accordance with federal, provincial or municipal laws and regulations.

irritation to the eyes, nose and throat.

SKIN AND EYE CONTACT HEALTH RISKS AND SYMPTOMS OF EXPOSURE

Eye Contact: May cause minor irritation, tearing, redness and blurred vision. Skin Contact: May cause minor irritation.

SKIN ABSORPTION HEALTH RISKS AND SYMPTOMS OF EXPOSURE

May dry and defat skin causing cracks, irritation and dermatitis.

INGESTION HEALTH RISKS AND SYMPTOMS OF EXPOSURE

May cause gastrointestinal irritation, vomiting, nausea and diarrhea.

HEALTH HAZARDS (ACUTE AND CHRONIC)

Acute health hazards are as listed above. Chronic: Prolonged exposure to crystalline silica dust by inhalation may cause delayed injury/disease (Silicosis).

SENSITIZING CAPABILITY: NONE KNOWN

CARCINOGENICITY: NTP CARCINOGEN:Yes IARC MONOGRAPHS:Yes OSHA REGULATED:No

IARC has determined that crystalline silica inhaled in the form of quartz or cristobalite from occupational sources is carcinogenic to humans (Group 1 - carcinogenic to humans). In a lifetime inhalation study, exposure to 250 mg/m³ titanium dioxide dust resulted in the development of lung tumors in rats. These tumors occurred only at dust levels that overwhelmed the animals' lung clearance mechanisms and were different from common human lung tumors in both type and location. The relevance of these findings to humans is unknown. The International Agency for Research on Cancer (IARC) has classified Titanium Dioxide as possibly carcinogenic to humans (Group 2B) based on inadequate evidence of carcinogenicity in humans and sufficient evidence of carcinogenicity in experimental animals.

TERATOGENICITY AND EMBRYOTOXICITY

Not available.

REPRODUCTIVE TOXICITY

Not available.

MUTAGENICITY

Not available.

TOXICOLOGICALLY SYNERGISTIC PRODUCTS

None known.

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE

Anesthesia, respiratory tract irritation, dermatitis, nausea, vomiting.

ADDITIONAL HEALTH INFORMATION

Not available.

===== SECTION VII - PREVENTIVE MEASURES

=====

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

Clean up with water before allowing to dry. Sodium Chloride can be sprinkled on the spill, which may coagulate the latex and facilitate cleaning with water. Place coagulated waste in a closed container. Flush area with water.

WASTE DISPOSAL METHOD

Reclaim or dispose of through a licensed waste disposal company according to Federal, Provincial and local regulations.

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING

Storage: Keep from freezing. Store in a well ventilated area out of direct sunlight and away from any source of heat. Handling: Avoid prolonged or repeated inhalation of heated vapours or spray mist. Avoid prolonged or repeated skin contact. Wear adequate personal protective equipment.

OTHER PRECAUTIONS: None known.

RESPIRATORY PROTECTION

Not normally required when applying by brush or roller. When spraying, wear a mist/dust particulate respirator. In cases of poor or no ventilation, wear a respirator NIOSH approved for organic vapours and particulates.

VENTILATION

General (dilution) ventilation is required during use. Local exhaust ventilation is required during operations where this material is heated.

PROTECTIVE GLOVES

Rubber.

EYE PROTECTION

Chemical safety glasses, goggles or face shield.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT

Use impermeable aprons and protective clothing whenever possible to prevent skin contact.

WORK/HYGIENIC PRACTICES

Eye washes and safety showers in the workplace are recommended.

===== SECTION VIII - FIRST AID MEASURES =====

INHALATION OVEREXPOSURE: Move person to fresh air. If breathing stops, apply artificial respiration and seek immediate medical attention.

EYE CONTACT: Flush with water for at least 15 minutes. Seek medical attention.

SKIN CONTACT: Wash thoroughly with mild soap and water.

INGESTION: Drink 1 or 2 glasses of water to dilute. Contact a

physician immediately.

===== SECTION IX - PREPARATION
=====

PREPARED BY: TECHNICAL DEPARTMENT

===== SECTION X - DISCLAIMER
=====

To the best of our knowledge, the information contained herein is accurate, obtained from sources believed by Cloverdale Paint Inc. to be accurate. No warranty concerning the accuracy of these sources is made and Cloverdale Paint Inc. will not be held liable for claims relating to use of this information or recommendations.

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SECTION 1 - PRODUCT IDENTIFICATION AND USE

PRODUCT IDENTIFIER: MERCON™ -X
PRODUCT ID: 20-M-X
PRODUCT USE: MERCURY Decontaminant
Liquid

PRODUCT MANUFACTURER: ROSS
HEALTHCARE
STREET: 145 TYEE DRIVE, # 161
CITY: PT ROBERTS
STATE: WA

ZIP: 98281
EMERGENCY TELEPHONE NO.: 1-800-663-8303
NFPA RATINGS (0-4):
HEALTH: 1 FIRE: 0 REACTIVITY: 0

SECTION 2 - COMPOSITION

COMPONENT:	PROPYLENE GLYCOL CAS#57-55-6	PERCENT: 60.0 (BY WEIGHT)	20-34 G/KG (ORAL/RAT)
COMPONENT:	COPPER SULFATE CAS#7758-98-7	PERCENT: 1.0-2.0 (BY WEIGHT)	
COMPONENT:	POTASSIUM IODIDE CAS#7681-11-0	PERCENT: 0.5-1.5 (BY WEIGHT)	
COMPONENT:	SODIUM THIOSULFATE CAS#7772-98-7	PERCENT: 0.5-1.5 (BY WEIGHT)	
COMPONENT:	PROPRIETARY INGREDIENTS	PERCENT: 37.0 (BY WEIGHT)	

SECTION 3 - PHYSICAL DATA

PHYSICAL STATE: CREAMY PINK LIQUID	BOILING POINT: >100°C	SOLUBILITY: SLIGHTLY IN WATER
SPECIFIC GRAVITY: NOT AVAILABLE	VAPOR PRESSURE: NOT AVAILABLE	EVAPORATION RATE: NOT
ODOR THRESHOLD: NOT AVAILABLE	pH: NOT AVAILABLE	
AVAILABLE FREEZING POINT: NOT AVAILABLE	COEFF. WATER/OIL DIST: NOT AVAILABLE	
VAPOUR DENSITY: NOT AVAILABLE		

SECTION 4 - FIRE AND EXPLOSION DATA

FIRE AND EXPLOSION: NOT FLAMMABLE	FLASH POINT: NOT AVAILABLE
MEANS OF EXTINCTION: DRY CHEMICAL, CARBON DIOXIDE, WATER SPRAY OR REGULAR FOAM	LOWER FLAMMABILITY LIMIT (%BY VOLUME): NOT AVAILABLE
UPPER FLAMMABILITY LIMIT (%BY VOLUME): NOT AVAILABLE	FLAMMABLE
AUTOIGNITION TEMPERATURE: NOT AVAILABLE	
HAZARDOUS COMBUSTION PRODUCTS: SULPHUR DIOXIDE, HYDROGEN SULFIDE	
SENSITIVITY TO IMPACT: NONE	SENSITIVITY TO STATIC DISCHARGE: NONE

SECTION 5 - REACTIVITY DATA

CHEMICAL STABILITY: STABLE
INCOMPATIBILITIES: OXIDATION MAY OCCUR WITH SOME PLATED MATERIALS
REACTIVITY: NONE
HAZARDOUS DECOMPOSITION PRODUCTS: NONE

SECTION 6 - TOXICOLOGICAL PROPERTIES

ROUTES OF ENTRY:	SKIN ABSORPTION: NO	EYE CONTACT: YES	INHALATION: NO	INGESTION: YES
EFFECTS OF ACUTE EXPOSURE: TEMPORARY IRRITATION OF STOMACH				
EFFECT OF CHRONIC EXPOSURE: NOT AVAILABLE				
EXPOSURE LIMITS: NOT AVAILABLE			IRRITANCY OF PRODUCT: MILD IRRITANT	
SENSITIZATION TO PRODUCT: YES, IODINE			CARCINOGENICITY: NOT KNOWN	
TERATOGENICITY: NOT KNOWN			REPRODUCTIVE TOXICITY: NOT KNOWN	
MUTAGENICITY: NOT KNOWN			SYNERGISTIC PRODUCTS: NOT KNOWN	

SECTION 7 - PREVENTATIVE MEASURES

GLOVES: RUBBER	RESPIRATORY: NONE	EYE: NONE	FOOTWEAR: NONE	CLOTHING: NONE
ENGINEERING CONTROLS: NONE			LEAK AND SPILL PROCEDURE: MOP UP AND FLUSH WITH WATER	
WASTE DISPOSAL: WHEN CONTAMINATED AS HAZARDOUS WASTE				
HANDLING PROCEDURE: WASH THOROUGHLY AFTER HANDLING			STORAGE REQUIREMENTS: STORE AT ROOM TEMPERATURE OUT OF DIRECT SUNLIGHT	
SPECIFIC SHIPPING INFORMATION: NONE				

SECTION 8 - FIRST AID MEASURES

INHALATION: PROVIDE FRESH AIR IMMEDIATELY, IF BREATHING HAS STOPPED GIVE CPR. GET MEDICAL ATTENTION.
SKIN CONTACT: WASH AFFECTED AREA WITH SOAP AND WATER. IF RASH PERSISTS GET MEDICAL ATTENTION
EYE CONTACT: FLUSH WITH WATER. GET MEDICAL ATTENTION
INGESTION: DRINK MILK. DO NOT INDUCE VOMITING. GET IMMEDIATE MEDICAL ATTENTION

SECTION 9 - SHIPPING

GROUND: NOT REGULATED AIR: NON-HAZARDOUS, NOT REGULATED BY IATA

SECTION 10 - PREPARATION OF MSDS

PREPARATION: TECHNICAL SERVICES
PHONE: 1-800-663-8303
DATE: 1/1/2009



Material Safety Data Sheet

Section 1. Chemical Product and Company Identification

Product name Industrial Purple Cleaner and Degreaser Concentrate
Product code ZU0856
Date of issue 03/12/10 **Supersedes** 10/04/07

Emergency Telephone Numbers

For MSDS Information:
 Compliance Services 404-352-1680

For Medical Emergency
 (877) 541-2016 Toll Free - All Calls Recorded

For Transportation Emergency
 CHEMTREC: (800) 424-9300 - All Calls Recorded
 In the District of Columbia (202) 483-7616

Prepared By

Compliance Services
 1420 Seaboard Industrial Blvd.
 Atlanta, GA 30318

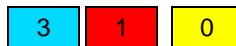
Section 2. Hazards Identification

Emergency overview

DANGER !

CAUSES EYE AND SKIN BURNS. HARMFUL IF INHALED OR ABSORBED THROUGH SKIN. HARMFUL OR FATAL IF SWALLOWED.

*Hazard Determination System (HDS): Health, Flammability, Reactivity



NOTE: MSDS data pertains to the product as delivered in the original shipping container(s). Risk of adverse effects are lessened by following all prescribed safety precautions, including the use of proper personal protective equipment.

Acute Effects

Routes of Entry

Dermal contact. Eye contact. Inhalation.

- Eyes** Causes eye burns. Eye exposure may cause severe and permanent eye injury (blindness).
- Skin** Causes skin burns. Harmful if absorbed through the skin. Skin inflammation is characterized by itching, scaling, reddening or, occasionally, blistering.
- Inhalation** Avoid breathing vapors, spray or mists. Inhalation of the spray or mist may produce severe irritation of respiratory tract, characterized by coughing, choking or shortness of breath. Over-exposure by inhalation may cause respiratory irritation. Can cause central nervous system (CNS) depression.
- Ingestion** Harmful if swallowed. May cause burns to mouth, throat and stomach.

Overexposure of this product by inhalation or absorption can produce central nervous system depression resulting in headache, nausea and/or dizziness. Repeated or prolonged contact with spray or mist may produce chronic eye irritation and severe skin irritation. Repeated or prolonged exposure to spray or mist may produce respiratory tract irritation leading to frequent attacks of bronchial infection. Contains material which may cause damage to the following organs: blood, kidneys, liver, upper respiratory tract, skin, eyes, central nervous system (CNS).

Carcinogenicity No known significant effects or critical hazards.

Additional Information: See Toxicological Information (Section 11)

Section 3. Composition/Information on Ingredients

Name of Hazardous Ingredients	CAS number	% by Weight
SODIUM HYDROXIDE; caustic soda; soda lye	1310-73-2	1 - 10
ETHYLENE GLYCOL MONOBUTYL ETHER; 2-butoxyethanol; butyl cellosolve	111-76-2	1 - 5
SODIUM XYLENE SULFONATE	1300-72-7	1 - 5
SODIUM DODECYLBENZENE SULFONATE; linear alkyl aryl sodium sulfonate; Sodium DDBSA	25155-30-0	1 - 5
DIETHYLENE GLYCOL MONOBUTYL ETHER; 2-(2-butoxyethoxy)-ethanol; butyl carbitol	112-34-5	<3
ALCOHOLS, C9-11, ETHOXYLATED; linear primary alcohol ethoxylate	68439-46-3	<3

Section 4. First Aid Measures

- Eye Contact** Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention immediately.
- Skin Contact** Flush affected skin with plenty of water. Remove contaminated clothing and shoes. Wash clothing before reuse. Get medical attention immediately.
- Inhalation** Move exposed person to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.
- Ingestion** Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. If affected person is conscious, give plenty of water to drink. Never give anything by mouth to an unconscious person. Get medical attention immediately.

Section 5. Fire Fighting Measures

National Fire Protection Association (U.S.A.)



- Flash Point** Closed cup: >93.3°C (>199.9°F)
- Flammable Limits** Not applicable
- Flammability** Non-combustible.
- Fire hazard** In a fire or if heated, a pressure increase will occur and the container may burst. May emit toxic fumes under fire conditions.
- Fire-Fighting Procedures** Use an extinguishing agent suitable for the surrounding fire. Do not release runoff from fire to drains or watercourses.

Section 6. Accidental Release Measures

- Spill Clean up** Put on appropriate personal protective equipment (see section 8). Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble or absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Section 7. Handling and Storage

- Handling** Put on appropriate personal protective equipment (see section 8). Avoid contact with eyes, skin and clothing. Do not breathe vapor or mist. Use with adequate ventilation. Do not ingest. Do not reuse container. Wash thoroughly after handling. Observe label precautions.
- Storage** Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10) and food and drink. Store between the following temperatures: 40°F - 120°F (4.4°C - 49°C). Keep out of the reach of children.

Section 8. Exposure Controls/Personal Protection**Product name**

SODIUM HYDROXIDE; caustic soda; soda lye

ETHYLENE GLYCOL MONOBUTYL ETHER; 2-butoxyethanol; butyl cellosolve

Exposure limits

ACGIH / OSHA (United States).

CEIL: 2 mg/m³

NIOSH REL (United States). Absorbed through skin.

TWA: 5 ppm 10 hour(s).

TWA: 24 mg/m³ 10 hour(s).

ACGIH TLV (United States, 1/2009).

TWA: 20 ppm 8 hour(s).

OSHA PEL (United States, 11/2006). Absorbed through skin.

TWA: 50 ppm 8 hour(s).

TWA: 240 mg/m³ 8 hour(s).**Personal Protective Equipment (PPE)**

- Eyes** Splash goggles. Face shield.
- Body** Wear appropriate protective clothing to prevent skin contact. Recommended: Neoprene gloves. Nitrile gloves. Rubber gloves. Synthetic apron. Chemical resistant boots.
- Respiratory** Use with adequate ventilation. Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective occupational exposure limits. Wear appropriate respirator when ventilation is inadequate.



Section 9. Physical and Chemical Properties

Physical State	Liquid.	Color	Clear. Purple.
pH	13.0 - 14.0	Odor	Mild. Ethereal.
Boiling Point	98.9°C (210°F)	Vapor Pressure	Not determined.
Specific Gravity	1.06	Vapor Density	>1 [Air = 1]
Solubility	Easily soluble in the following materials: cold water and hot water.	Evaporation Rate	1 (Water = 1)
		VOC (Consumer)	42 (g/l). 0.35 lbs/gal (3.98%)

Section 10. Stability and Reactivity

Stability and Reactivity	The product is stable.
Incompatibility	Reactive or incompatible with the following materials: oxidizing materials, metals and acids.
Hazardous Polymerization	Will not occur.
Hazardous Decomposition Products	carbon oxides (CO, CO ₂)

Section 11. Toxicological Information**Acute Toxicity**

Product/ingredient name	Result	Species	Dose	Exposure
Sodium Hydroxide	LD50 Dermal	Rabbit	>2000 mg/kg	-
	LD50 Oral	Rat	500 mg/kg	-
Ethylene Glycol Monobutyl Ether	LD50 Dermal	Guinea pig	>2000 mg/kg	-
	LD50 Dermal	Rabbit	220 mg/kg	-
	LD50 Intraperitoneal	Rat	220 mg/kg	-
	LD50 Intravenous	Rat	307 mg/kg	-
	LD50 Oral	Guinea pig	1200 mg/kg	-
	LD50 Oral	Rat	917 mg/kg	-
	LD50 Oral	Rat	250 mg/kg	-
	LD50 Unreported	Rat	917 mg/kg	-
	LDLo Oral	Rat	1500 mg/kg	-
	TDL _o Oral	Rat	500 mg/kg	-
	TDL _o Unreported	Rat	250 mg/kg	-
Sodium Dodecylbenzene Sulfonate	LC50 Inhalation Vapor	Rat	2900 mg/m ³	7 hours
	LC50 Inhalation Vapor	Guinea pig	>633 ppm	1 hours
	LC50 Inhalation Gas.	Rat	450 ppm	4 hours
Diethylene Glycol Monobutyl Ether	LD50 Oral	Mouse	2000 mg/kg	-
	LD50 Oral	Rat	1260 mg/kg	-
Diethylene Glycol Monobutyl Ether	LD50 Dermal	Rabbit	2700 mg/kg	-
	LD50 Oral	Rat	6050 mg/kg	-
	LD50 Oral	Rat	5660 mg/kg	-
	LD50 Oral	Rat	4500 mg/kg	-
	LD50 Oral	Mouse	2400 mg/kg	-
	LD50 Unreported	Rat	4500 mg/kg	-
Ethoxylated Alcohols	LD50 Dermal	Rabbit	>2000 mg/kg	-
	LD50 Oral	Rat	1400 mg/kg	-

Section 12. Ecological Information

Environmental Effects No known significant effects or critical hazards.

Aquatic Ecotoxicity

Product/ingredient name	Test	Result	Species	Exposure	
Sodium Hydroxide	-	Acute LC50 25 ppm	Fish - Trout	24 hours	
Ethylene Glycol Monobutyl Ether	-	Acute EC50 >1000 mg/L Fresh water	Daphnia - Water flea - Daphnia magna - <24 hours	48 hours	
	-	Acute LC50 >1000 mg/L Marine water	Crustaceans - Amphipod - Chaetogammarus marinus - Young - 5 mm	48 hours	
	-	Acute LC50 1490000 ug/L Fresh water	Fish - Bluegill - Lepomis macrochirus - 33 to 75 mm	96 hours	
	-	Acute LC50 1250000 ug/L Marine water	Fish - Inland silverside - Menidia beryllina - 40 to 100 mm	96 hours	
	-	Acute LC50 800000 ug/L Marine water	Crustaceans - Common shrimp, sand shrimp - Crangon crangon	48 hours	
	-	Chronic NOEC 1000 mg/L Fresh water	Daphnia - Water flea - Daphnia magna - <24 hours	48 hours	
	Diethylene Glycol Monobutyl Ether	-	Acute LC50 2000000 ug/L Marine water	Fish - Inland silverside - Menidia beryllina - 40 to 100 mm	96 hours
		-	Acute LC50 1300000	Fish - Bluegill - Lepomis	96 hours


ug/L Fresh water

macrochirus - 33 to 75
mm**Section 13. Disposal Considerations****Waste Information**

Waste must be disposed of in accordance with federal, state and local environmental control regulations. Consult your local or regional authorities for additional information.

Waste Stream Code: D002
Classification: - [Hazardous waste]
Origin: - [RCRA waste.]

Section 14. Transport Information

Regulatory information	UN number	Proper shipping name	Classes	PG*	Label
DOT Classification	3266	Corrosive liquid, Basic, Inorganic, NOS (Sodium Hydroxide)	8	II	
TDG Classification	Not determined.				
IMDG Class	Not determined.				

NOTE: DOT classification applies to most package sizes. For specific container size classifications or for size exceptions, refer to the Bill of Lading with your shipment.

PG* : Packing group

Section 15. Regulatory Information**U.S. Federal Regulations**

SARA 313 toxic chemical notification and release reporting:

Product name

Ethylene Glycol Monobutyl Ether
Diethylene Glycol Monobutyl Ether

Clean Water Act (CWA) 307: No products were found.

Clean Water Act (CWA) 311: Sodium Hydroxide; Sodium Dodecylbenzene Sulfonate

Clean Air Act (CAA) 112 regulated toxic substances: Diethylene Glycol Monobutyl Ether

All Components of this product are listed or exempt from listing on TSCA Inventory.

United States inventory (TSCA 8b): Not determined.

State Regulations

California Prop 65 No products were found.

Canada

WHMIS (Canada) Class D-2B: Material causing other toxic effects (Toxic).

Section 16. Other Information

To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

*NOTE: Hazard Determination System (HDS) ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although these ratings are not required on MSDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HDS ratings are to be used with a fully implemented program to relay the meanings of this scale.

From: [Tyree Mullaney](#)
To: permits@mlwlb.com
Subject: FW: Response to the MVLWB May 24, 2013 Follow-up Questions
Date: Thursday, May 30, 2013 8:15:29 AM
Attachments: [Compiled MSDS.pdf](#)

MV2012L8-0010 – initial review – consultation and reviews.

From: Adrian Paradis [mailto:Adrian.Paradis@aandc-aadnc.gc.ca]
Sent: May 28, 2013 4:47 PM
To: tyree@mlwlb.com
Cc: Katherine Silcock; mark.palmer@pwgsc.gc.ca; sbaines@senes.ca
Subject: Response to the MVLWB May 24, 2013 Follow-up Questions

Tyree,

Please find below the Giant Mine Remediation Project Team's responses to the Board's May 24 follow-up questions on the roaster deconstruction plans.

1) 1) Can you please provide further information on the use of Foster 32-90 i.e. MSDS (See AN comment 23).

Foster 32-90 is a wetting agent that will be mixed with treated mine water and misted onto the dust. The wetting agent helps the dust absorb the water better so that it doesn't become airborne and so that the dust is washed off more easily. The most up to date MSDS for Foster 32-90 was included in the April 2013 Waste Management Plan (Appendix B) and is again provided here for reference purposes.

No environmental impacts associated with the use of Foster 32-90 for the following reasons:

a. the volume of wetting agent that will be used is very small, only 375 m³ in total over the two year project. Foster 32-90 will be mixed with treated minewater at a ratio of 1 part Foster 32-90 to 25 parts water, which is only 4% concentration.

b. The treated minewater and Foster 32-90 mixture will be pumped to the Northwest Tailings Pond, not to a surface waterbody. Approximately 500,000 m³ of water moves through the Northwest Tailings Pond each year which means that the volume of wetting agent used represents less than 0.001% of the total volume of water moved each year through the Northwest Tailings Pond and treated in the existing on-site water treatment plant.

2) When packaging the materials to be stored, are you going to be using the plastic

sheeting? If so, will it be able to handle the winter temperatures? (see AN comment 30).

All non-arsenic containing hazardous wastes will be packaged in Transportation of Dangerous Goods containers as listed in Appendix C of the April 2013 Waste Management Plan until they are transported off site for final disposal.

Two materials will be stored on site at the temporary waste storage area (to await final disposal during the greater remediation project): arsenic-containing waste and non-hazardous waste.

As was described in Appendix C and Section 2.4 of the April 2013 Waste Management Plan, arsenic containing waste will be wrapped in two layers of 6-mil polyethylene plastic, and then placed in appropriately sized cubic metre bags (see attached photo for an example). Bag fabric, webbing and stitching are all polypropylene which has a cold crack temperature resistance to -45 degrees C. UV inhibitors have been added to the bag fabric to allow for extended sunlight protection. To further ensure that the stored arsenic-containing waste remains secure in all weather conditions, the packaged waste is going to be placed in fully-enclosed, prefabricated structures.

Non-hazardous wastes will be stored separately from hazardous wastes and will be stacked neatly into piles of similar materials. Non-hazardous waste will likely be bulk handled unless they require packaging for ease of handling.

3) Are or will you be performing arsenic speciation monitoring and reporting on it publically? (see AN comment 41)

The Project Team will not be performing arsenic speciation monitoring as it is more conservative to monitor for total arsenic. On page 2 of a technical memo submitted to the Board in April 2013 (Appendix B to the Dust Management Plan), ARCADIS, an independent environmental firm, states that "...total arsenic measurements will monitor both the more toxic and the less toxic valence states of arsenic and the more bioavailable and less bioavailable physical species of arsenic. Thus, the use of analytical methods that measure total arsenic are health-protective and will only overestimate human health risk."

Total arsenic measurements will be reported on publicly in the weekly data reports.

4) Risk based action levels for PM10 using a 70 year exposure: Can you please elaborate as to why this can't be done? Would there be implications to the project? Are there benefits of using such RBA? Etc. (see AN comment 45)

The calculation for the RBAL is based on the Health Canada published value for arsenic for a 70 year exposure. In accordance with independent advice from AECOM, this value has been adjusted for the 10 year remediation timeline for the Giant Mine Remediation Project. The relevant excerpt from AECOM's April 17 memo, which was included in the April 2013 Dust

Management Plan (Appendix B) submitted to the MVLWB, is provided below:

“Using the Health Canada Unit Risk factor for arsenic of $0.0064 \text{ } (\mu\text{g}/\text{m}^3)^{-1}$ (Health Canada 2004), which corresponds to 70 years of exposure, the [Acceptable Air Concentration] for arsenic concentration corresponding to the Giant Mine site remediation, were it to last as long as ten years, is $0.011 \text{ } \mu\text{g}/\text{m}^3$ [$(1 \times 10^{-5} / 0.0064 \text{ } (\mu\text{g}/\text{m}^3)^{-1}) \times (10 \text{ yr} / 70 \text{ yr})$]. This risk-based arsenic concentration is highly conservative considering that the planned excavation period is only two to three years and it assumes that exposures occur 24 hours/day, 365 days/year.” (AECOM, Real-time Fenceline Monitoring Risk-Based Action Level (RBAL) for PM10, April 17, 2013)

As stated by AECOM, the approach is conservative.

In terms of calculating exposure from before the remediation project and its cumulative impact with the site remediation project, that is an undertaking beyond the scope of the project. Such a health study would be better placed under the guise of Health Canada or the local health authority.

If you have any questions regarding the follow up questions please contact me at 867.445.0920.

Sincerely,

Adrian Paradis
Regulatory Manager
Giant Mine Remediation Project
wk. 867.669.2425