

Environmental Licence Application for Herd North America

18 Dec 2015

To whom it may concern,

As requested from the office of Manitoba Conservation & Water Stewardship, following is the application for an Environmental Licence for the company known as Herd North America.

Introduction and background

Herd North America was incorporated in September 2003. Herd is located at the South East corner of the intersection of Springfield Rd and Day St, 2168 Springfield Rd in the Rural Municipality of Springfield, Manitoba. Herd North America manufactures aluminum bumpers and grill guards for trucks to provide protection against damage from collisions. Herd operates in 53,500 square feet (4970 square metres) of Production and office space and has 22,000 square feet (2043 square metres) of covered storage for raw materials and finished goods at the 2168 Springfield Road location. Herd North America produces approximately 5000 units annually and purchases approximately 1.2 million pounds (545,454Kg) of aluminum extrusion annually in order to produce the product. Mild steel components are purchased from a local metal processor to manufacture a Steel Bracket assembly that is affixed to the chassis of the vehicle and used as a mounting location for the aluminum bumper.

Description of Existing Development

Herd North America has operated from the 2168 Springfield Rd location since June 2005 and is situated in an Industrial General zoning district within the RM of Springfield. Title of Ownership document is attached. On the North side of Springfield Rd directly across from Herd is a private residence within Rural Residential zoning district of the RM of Springfield. Directly to the East of Herd is an automotive repair shop. Directly to the South of Herd is a manufacturing company called Canada Culvert. On the West side of Day Street directly across from Herd is an automotive recycler and repair shop. On the East, South and West side of Herd property is Industrial General zoning districts. See attached Zoning By-Law No. 08-01 drawing of the RM of Springfield

Since Herd North America is established on the existing site at 2168 Springfield Rd and is not in the process of planning future developments, there are no requests for funding thru any government

agency or program. There are no federal, provincial or municipal approvals, licences, permits, authorizations, etc. known to be required to continue operation of Herd North America on the current site other than the Environmental Licence that this document addresses.

Description of Existing Environment in the Project Area

The existing site of Herd North America at 2168 Springfield Rd is within the area that that is created by the Perimeter Highway that surrounds the City of Winnipeg. There are no adjacent or nearby lakes, rivers, streams, hills, valleys, shorelines, etc. The Red River Floodway passes to the East of Herd North America and is over 1 mile (1.6Km) away.

Herd North America has 2 wells on site that provide water for use in the manufacturing process. Water from these 2 wells has been tested and is not potable.

Natural vegetation on site is limited to grasses and noxious weeds that are native to the surrounding area and grow in the ditches on the North and West property boundaries of Herd North America.

Wildlife is limited to what would normally be seen in an urban environment such as Winnipeg. Geese have been witnessed on site during the fall migration. There is no indication of any rare, threatened, or endangered species or any important or sensitive habits that are affected by the operation of Herd North America at 2168 Springfield Rd.

There is no known existing public safety or human health risks, protected areas, archaeological or historic sites or First Nation communities in the vicinity of Herd North America at 2168 Springfield Rd.

Description of Environmental and Human Health Effects of the Proposed Development

Following is a list of solid/ liquid wastes that are produced as a result of the manufacturing process and how each is handled.

2 types of chemical cleaners are used to wash the aluminum; Weld Clean and Citra Solv.

Weld Clean is used to wash welding soot off the aluminum product prior to final polish. It is diluted with water at 5:1 prior to application on the product. A continuous spray of rinse water is used during this process to prevent unwanted staining of the aluminum and the used solution is collected in a holding tank. Herd uses 385 gallons (1457 litres) of Weld Clean annually. MSDS of Weld Clean is attached.

Citra Solv is a citrus based de-greaser used to wash polish residue off the aluminum after final polish. Citra Solv is not diluted prior to application on the product. Once applied, Citra Solv is rinsed of the product with water. The used solution is collected in a holding tank. Herd uses 630 gallons (2384 litres) of Citra Solv annually. MSDS of Citra Solv is attached.

There will be approx. 2000 gallons (7570 litres) of waste wash water produced weekly that will contain 56 litres of Weld Clean and 92 litres of Citra Solv. This waste water is transported to the RM of Springfield sewage lagoon by a local contractor.

Cutting of aluminum extrusions is performed using various types of saws and plasma cutting equipment. All cut offs, blanks and shavings are collected and sent for recycling with a local vendor.

Welding of the components into sub-assemblies is performed in areas where the smoke generated during the welding process is collected and filtered from the air. The clean air is then put back into the general air space within the building. The smoke residue is collected and disposed of as a dust with a local waste disposal company and hauled to area landfills.

Sanding of all aluminum components is performed using various grits of sand paper. Consumed sandpaper is disposed of with a local waste disposal company and hauled to area landfills. Soluble cutting fluid and WD 40 are used as lubricants in the sanding process and along with the aluminum removed through sanding becomes part of the residue that is collected by a local waste disposal company and hauled to area landfills. Herd uses 100 gallons (378 litres) of soluble cutting fluid and 636 gallons (2407 litres) of WD 40 annually. MSDS of soluble cutting fluid and WD 40 are attached.

Polishing of all aluminum components is performed using treated cotton mops and loose cotton mops. A polishing compound (Tripoli Buffing Compound) and a coloring compound (Kocour) are used in the polishing process. Any residue from this operation is collected by a local company and hauled to area landfills. Herd uses 6,912 lbs (3141Kg) of Tripoli Buffing Compound and 1,200 lbs (454Kg) of Kocour annually. MSDS's of Tripoli Buffing Compound and Kocour Compound are attached.

Painting of the steel bracket is performed on site using a water based black primer. MSDS of product is attached.

Small amounts of gasoline are stored on site for small engine use such as snow blower, lawn mower, trimmer and leaf blower.

Mitigation Measures and Residual Environmental Effects

Herd utilizes technology to capture and filter smoke produced during the welding processes to prevent it from being released into the environment as smoke. Smoke residue is collected and is transported to local area landfills in a "dust" form.

Liquid waste is contained in holding tanks and is transported to the RM of Springfield sewage lagoon.

All other wastes are sent to area landfills by a local waste contractor.

Follow-up Plans, including Monitoring and Reporting

Since Herd North America is well beyond the development stage, there are no proposed follow-up activities planned.

Follow up information for Herd North America's Environmental Licence Application

Hours of Operation

Herd operates a day and night shift.

- Day shift runs 7am – 3:30pm Monday to Friday (5 shifts)
- Night shift runs 8:30pm – 7am Monday to Thursday (4 shifts)

Volume of Water used in the process

- Herd uses approx. 7422 litres of water weekly in the manufacturing process or 371,100 litres annually.

Aluminum Particulate Emission

- Herd controls particulate emission by performing the sanding and polishing operations in self-contained, individual rooms. Particulate is then swept from the floor and a local waste disposal company hauls the residue to area landfills. There is no mechanical equipment in place to collect airborne aluminum particulate.

Acid Fumes

- Weld Clean is strictly used in a wash bay where the continuous stream of water being sprayed on the product dilutes the Weld Clean to no more than a nuisance odor. Employees performing this operation wear the appropriate personnel protective equipment. There is no mechanical equipment in place to filter Weld Clean fumes from the air.

Spill Containment

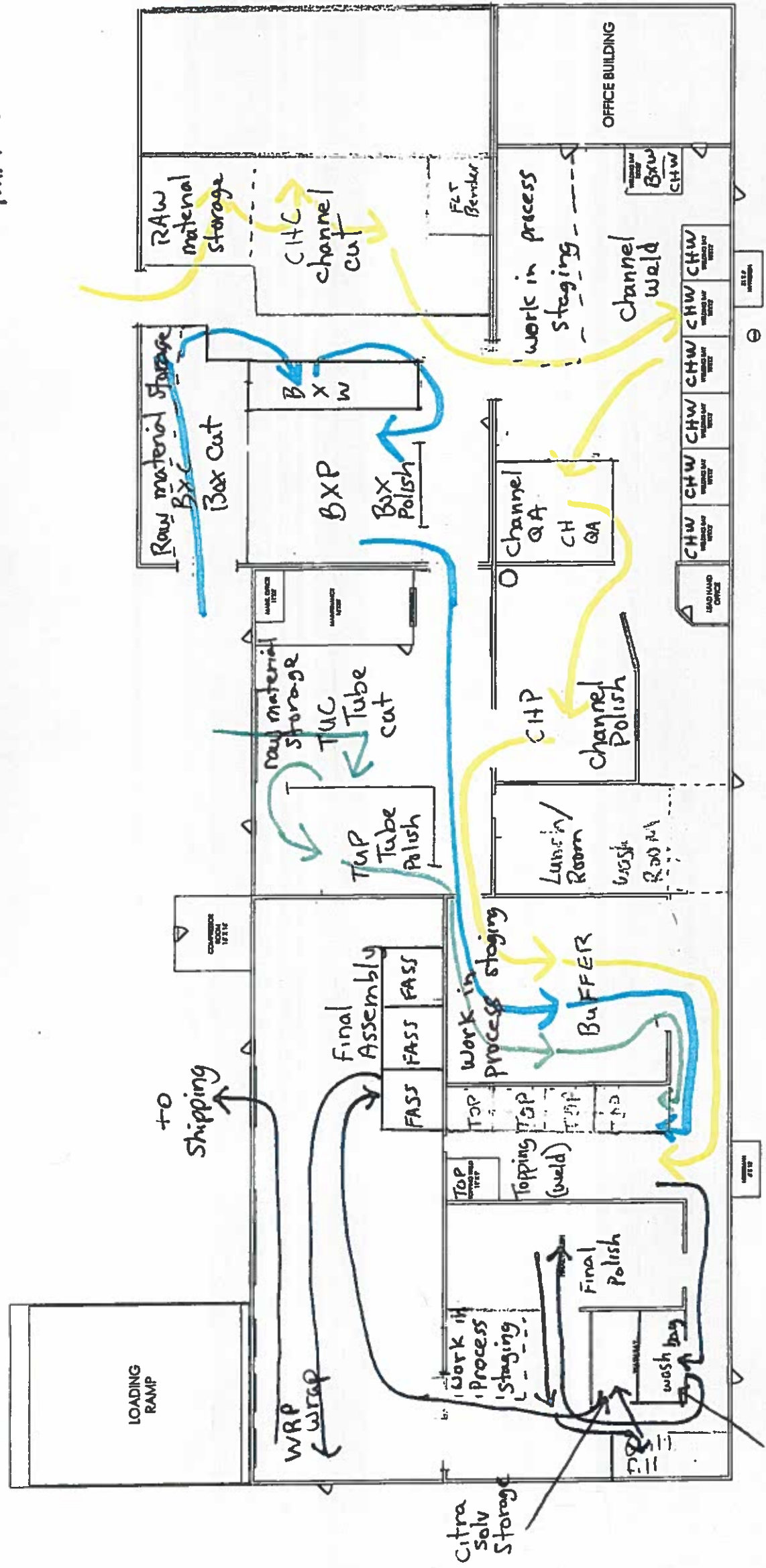
- Chemicals are stored and handled in the wash bay and any spill would be collected by the floor drainage system and directed into the holding tank.
- Herd stores a maximum of 90 litres of Weld Clean and 204 litres of Citra Solv on site.

Fire and Explosion risk

- Herd has had an air analysis study performed by a local vendor to measure airborne aluminum particulate. The samples were analysed and reported to Herd as being 10,000 times below the threshold for explosion. There is no automated mechanical equipment in place to prevent explosions or suppress fires.

HERD NORTH AMERICA B1 Current State
(June 2015)

Scale
1mm = 1.065'



weld clean
Storage location



MATERIAL SAFETY DATA SHEET

SECTION 1 - MATERIAL IDENTIFICATION AND USE				Flammability	0
Material Name/Identifier WELD CLEAN				Reactivity	4
Manufactures Name Prairie West Industrial Ltd.		Suppliers Name Prairie West Industrial Ltd.		Health	4
Street Address 1801 Sargent Ave		Street Address 1801 Sargent Ave		Personal Protection	4
City WINNIPEG	Province MANITOBA	City WINNIPEG	Province MANITOBA		
Postal Code R3H 0E2	Emergency Telephone No. 1-613-996-6666	Postal Code R3H 0E2	Emergency Telephone No. 1-613-996-6666		
Chemical Name ACID MIXTURE	Chemical Family MINERAL ACIDS		Chemical Formula N/A		
Molecular Weight N/A (MIXTURE)	Trade Names & Synonyms N/A		Material use HARD SURFACE CLEANING, DEGREASING, ETCHING		

SECTION 2 - HAZARDOUS INGREDIENTS OF MATERIAL				
Hazardous Ingredients	Approximate Concentration	C.A.S.N.A or U.N. Numbers	"Exposure Limits"	LD50 / LC50 Specify Species & Route
FLUORHYDRIC ACID	5.0% TO 10.0%	7664-39-3	1276 P.P.M. (ORAL RAT)	N/A
SULFURIC ACID	5.0% TO 15.0%	7664-93-9	18.0 P.P.M. (ORAL RAT)	2140 MG/KILO RAT
NONOXYNOL 9	5.0% TO 10.0%	9016-45-9	2590 Mg/Kg (ORAL RAT)	

SECTION 3 - PHYSICAL DATA FOR MATERIAL				
Physical State LIQUID	Odor and Appearance IRRITATING ACID SMELL, LIQUID		Odor Threshold (p.p.m.) 100	Specific Gravity 1.1 TO 1.2
Vapor Pressure 18.0 MM Hg	Vapor Density (Air = 1) 2 TO 3	Evaporation Rate N/A	Boiling Point 85.0 C	Freezing Point SUB - 10.0 C
Solubility in water COMPLETE	% Volatile (by volume) -90.0	pH 0.0 TO 2.0	Density (g/ml) 1.1 TO 1.2	Coefficient of Water / Oil Distribution N/A

SECTION 4 - FIRE AND EXPLOSION HAZARD OF MATERIAL				
Flammability NO	If Yes, under what conditions			
Means Of Extinction N/A				
Special Procedures NONE				
Flashpoint and Method DOES NOT FLASH	Upper Explosion Limit (% by volume) N/A	Lower Explosion Limit (% by volume) N/A		
Auto Ignition Temperature DOES NOT IGNITE	TDG Flammability Classification 5(A)	Hazardous Combustion Products OXIDES OF SULFUR AND FLUORINE		
Sensitivity to Physical Impact NIL	Rate of Burning DOES NOT BURN	Explosive Power NIL	Sensitivity to Static discharge NIL	

SECTION 5 - REACTIVITY DATA	
Chemical Stability YES	If No under which conditions?
Incompatibility to other substances YES	If so which ones? METALS, BASES, HYDROXIDES, HYDROCARBONS, SOME PLASTICS
Reactivity and under what conditions YES, PHYSICAL CONTACT	
Hazardous Decomposition Products DOES NOT DECOMPOSE, BUT THE ACIDS WILL EVAPORATE, GIVING OFF FUMES OF SULFURIC, AND FLUORIC ACIDS	

Material Name/Identifier	WELD CLEAN	Reactivity	4
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SECTION 6 - TOXICOLOGICAL PROPERTIES OF PRODUCT

Route of Entry	<input checked="" type="checkbox"/> Skin Contact	<input checked="" type="checkbox"/> Skin Absorption	<input checked="" type="checkbox"/> Eye Contact	<input checked="" type="checkbox"/> Ingestion Acute	<input type="checkbox"/> Ingestion Chronic	<input type="checkbox"/> Inhalation
Effects of Acute Exposure to Product	SEVERE CHEMICAL BURNS, MATERIAL WILL DEHYDRATE ORGANIC MATERIALS					
Effects of Chronic Exposure to Product	DERMATITIS, DENTAL EROSION,					
LD50 of Product (Specify Species and Route)	NOT EST.	Irritancy of Product	EXTREME	Exposure Limits of Product	1.0%WW AIR CONTACT, ANY LIQUID CONTACT	
LC50 of Product (Specify Species)	2.0 P.P.M. (RAT SKIN)	Sensitization to Product	N/A	Synergistic Materials	PHOSPATES, CHLORATE, HYPOCHLORITES	
<input type="checkbox"/> Carcinogenicity <input type="checkbox"/> Reproductive Effects <input type="checkbox"/> Mutagenicity <input type="checkbox"/> Subacute						

SECTION 7 - PREVENTIVE MEASURES

Personal Protective Equipment			
Gloves (Specify)	ACID RESISTANT	Respiratory (Specify)	ACID CARTRIDGE
Eye (Specify)	SPLASH LENSES		Footwear (Specify)
			ACID RESISTANT
Clothing (Specify)	ACID RESISTANT	Other (Specify)	
GOOD VENTILATION, WORK IN PAIRS ALSO HAVE AN EYEWASH BOTTLE, OR STATION HANDY, REMOVE CONTACT LENSES,			
Engineering Controls (e.g. ventilation, enclose process, specify)			
EYE WASH STATION, OR EYEWASH BOTTLE REQUIRED,			
Leak and Spill Procedure			
DAM SPILL AND NEUTRALIZE WITH SODA ASH			
Waste Disposal			
OBEY ALL PERTINENT LOCAL LAWS.			
Handling Procedures and Equipment			
PLASTIC (POLYPROPYLENE), AND FULL PROTECTIVE GEAR			
Storage Equipment			
PLASTIC (POLYPROPYLENE)			
Special Shipping Information			
CORROSIVE LIQUID, CLASS B (6.1), 1, PIN 2922			

SECTION 8 - FIRST AID MEASURES

Skin	WASH IMMEDIATELY WITH COLD WATER FOR TEN MINUTES
Eye	USE EYEWASH BOTTLE, STATION FOR TEN MINUTES, GET TO DOCTOR.
Inhalation	REMOVE TO CLEAR AIR, IF COUGHING, OR CHOKING PERSISTS GET MEDICAL ATTENTION.
Ingestion	EMERGENCY WARD OF NEAREST HOSPITAL (BURNED MOUTH, CORRODED TEETH, BURNS TO THROAT, AND STOMACH)
General Advice	THIS A CORROSIVE LIQUID TAKE ALL STANDARD INDUSTRIAL PRECAUTIONS FOR SUCH AND YOU WILL HAVE NO PROBLEMS

SECTION 9 - PREPARATION DATE OF M.S.D.S.

Additional Comments	WHILE THE COMPANY BELIEVES THE DATA SET FORTH HEREIN ARE ACCURATE AS OF THE DATE HEREOF, THE COMPANY MAKES NO WARRANTY WITH RESPECT THERE TO AND EXPRESSLY DISCLAIMS ALL LIABILITY THEREON SUCH DATA ARE OFFERED SOLELY FOR YOUR CONSIDERATION, AND INVESTIGATION.		
Sources Used	COMPONENY MSDS, MERCK INDEX, Handbook of reactive chemical hazards		
Prepared By	Phone Number	Fax Number	Date
T.SCHWARTZ	204-224-1890	204-224-1891	April 13, 2015



Citra Solv

Material Safety Data Sheet

SECTION 1: PRODUCT INFORMATION

Manufacturer:

Prairie West Industrial Ltd.
 1801 Sargent Ave
 Winnipeg, Manitoba
 R3H 0E2

Telephone Number: (204) 224 - 1890

EMERGENCY TELEPHONE NUMBER: CANUTEC: (613) 996 - 6666

WHIMIS (Classification);	CLASS 3 Flammable Liquid		
TDG (Classification) :	N/A		
Product Name:	Citra Solv		
Synonym:	N/A	Material Uses:	N/A
Chemical Name:	N/A	CAS #:	N/A
Chemical Family:	N/A	DSL:	N/A
Chemical Formula:	N/A	CI #:	N/A

SECTION 2: HAZARDOUS INGREDIENTS

Chemical Identity	Percent	Cas Number	LC50 / LD50
1: Nonoxynol 9	%1: 15-25	#1: 9016-45-9	ORAL (LD50): Acute: 2590 Mg/Kg (Rat)
2: D'Limonene	%2: 25-50	#2: 005989-27-5	ORAL (LD50): Acute 4400 Mg/Kg (Rat) DERMAL (LD50): Acute >5000 Mg/Kg (Rabbit)
3: Ethyleneglycol Monobutyl Ether	%3: 15-25	#3: 000111762	ORAL (LD50): Acute: 470 Mg/Kg (Rat) DERMAL (LD50): Acute: 220 Mg/Kg (Rabbit) VAPOUR (LC50): Acute: 450 ppm (4 Hrs.) (Rat) 700 ppm (7 Hrs.) (Rat)

SECTION 3: HAZARDS IDENTIFICATION

Potential Acute Health Effects:	
	Very hazardous in case of eye contact (irritant), inflammation of the eye is characterized by redness watering and itching.
	Very hazardous in case of skin contact, inflammation is characterized by itching, scaling, reddening or occasionally blistering.
	Very hazardous in case of ingestion.
	Very hazardous in case of inhalation.

Potential Chronic Health Effects:		
	CARCINOGENIC EFFECTS:	N/A
	MUTAGENIC EFFECTS:	N/A
	TERATOGENIC EFFECTS:	N/A
	DEVELOPMENTAL TOXICITY:	N/A
	There is no known effect from chronic exposure to this product. Repeated or prolonged exposure is not known to aggravate medical condition.	

SECTION 4: FIRST AID MEASURES

Eye Contact:	Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Do NOT use an eye ointment. Seek medical attention.
Skin Contact:	After contact with skin, wash immediately with plenty of water. Gently and thoroughly wash the contaminated skin with running water and non-abrasive soap. Be particularly careful to clean folds, crevices, creases and groin. Cover the irritated skin with an emollient. If irritation persists, seek medical attention. Wash contaminated clothing before reusing.
Hazardous Skin Contact:	Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek medical attention.
Inhalation:	Allow the victim to rest in a well, ventilated area. Seek medical immediate attention.
Hazardous Inhalation:	Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. Seek immediate medical attention.
Ingestion:	Do NOT induce vomiting. Examine the lips and mouth to ascertain whether the tissues are damaged, a possible indication that the toxic material was ingested; the absence of such signs, however is not conclusive. Loosen tight clothing such as a collar, tie, belt or waistband. If the victim is not breathing, perform mouth-to-mouth resuscitation. Seek immediate medical attention.
Hazardous Ingestion:	No additional information.

SECTION 5: FIRE AND EXPLOSION DATA

The Product is:	Flammable
Auto-Ignition Temperature:	N/A
Flash Points: (Closed Cup)	52° C
Flammable Limits:	N/A
Products of Combustion:	These products are carbon oxides (CO, CO2) Nitrogen Oxides.
Fire Hazards in Presence of Various Substances:	No specific information is available in our database regarding the flammability of this product in presence of various materials.

Explosion Hazards in Presence of Various Substances:		
	Risks of explosion of the product in presence of mechanical impact:	N/A
	Risks of explosion of the product in presence of static discharge:	N/A
Fire Fighting Media and Instructions:		
	SMALL FIRE:	Use DRY chemicals, CO2, alcohol foam or water spray.
	LARGE FIRE:	Use alcohol foam, water spray or fog. Cool containing vessels with water jet in order to prevent pressure build-up, auto-ignition or explosion.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Small Spill:	Absorb with an inert material and put the spilled material in an appropriate waste disposal.
Large Spill:	Flammable liquid. Keep away from heat. Keep away from sources of ignition. Stop leak if without risk. Absorb with dry earth, sand or other non-combustible material. Do NOT touch the spilled material. Prevent entry into sewers, basements or confined areas, dike if needed. Eliminate all sources of ignition.

SECTION 7: HANDLING AND STORAGE

Precautions:	Keep away from heat. Keep away from sources of ignition. Ground all equipment containing material. Do NOT ingest. Do NOT breathe gas, fumes, vapour or spray. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes.
Storage:	Flammable materials should be stored in a separate safety storage cabinet or room. Keep away from heat. Keep away from sources of ignition. Keep container tightly closed. Keep in a cool, well-ventilated place. Ground all equipment containing material. Keep container dry. Keep in a cool place.

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Controls:	Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapours below their respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to the work station location.
Personal Protection:	Splash goggles. Lab coat. Vapour respirator. Be sure to use a MSHA/NIOSH approved respirator or equivalent. Wear appropriate respirator when ventilation is inadequate.
Personal Protection in Case of a Large spill:	Splash goggles. Full suit. Vapour respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.
Exposure Limits:	N/A

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Physical State and Appearance:	Liquid	Vapour Pressure:	N/A
Molecular Weight:	N/A	Vapour Density:	N/A
PH (1% soln/water) :	5	Volatility:	N/A
Boiling Point:	99° C	Odour Threshold:	N/A
Odour:	Citrus Scent	Evaporation Rate:	.10
Taste:	N/A	Viscosity:	N/A
Colour:	Clear	Water / Oil Dist. Coeff.:	N/A
Melting Point:	N/A	Ionicity (in water):	N/A
Critical Temperature:	N/A	Dispersion Properties:	N/A
Specific Gravity: (Water = 1)	0.955		

SECTION 10: STABILITY AND REACTIVITY DATA

Stability:	The product is stable.
Instability Temperature:	N/A
Conditions of Instability:	No additional remark.
Incompatibility with various substances:	Strong Acids.
Corrosivity:	No specific information is available in our database regarding the corrosivity of this product in presence of various materials.
Special Remarks on Reactivity:	N/A.
Special Remarks on Corrosively:	N/A
Hazardous Polymerization:	N/A.

SECTION 11: ECOLOGICAL INFORMATION

Ecotoxicity:	N/A
BOD5 and COD:	N/A
Products of Biodegradation:	Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.
Toxicity of the Products of Biodegradation:	The products of degradation are less toxic than the product itself.

SECTION 12: DISPOSAL CONSIDERATIONS

Waste Disposal:	Recycle if possible. Consult your local or regional authorities.
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SECTION 13: TRANSPORT INFORMATION

TDG Classification:	Not controlled under TDG (Canada). CLASS 3 : Flammable liquid.
Shipping Name:	N/A
PIN:	N/A
Packing Group:	N/A
Special Provisions for Transport:	Not regulated under the Transportation of Dangerous Goods Act when transported by road or rail in packages or containers of 454 litres or less (waste excluded).

SECTION 14: OTHER REGULATORY INFORMATION

Other Regulations:	N/A
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SECTION 15: TOXICOLOGICAL INFORMATION

Routes of Entry:	Eye contact, Inhalation, Ingestion.	
Toxicity to Animals:	Acute ORAL LD50 N/A.	Acute DERMAL LD50 N/A.
Chronic Effects on Humans:		
	CARCINOGENIC EFFECTS:	N/A
	MUTAGENIC EFFECTS:	N/A
	TERATOGENIC EFFECTS:	N/A
	DEVELOPMENTAL TOXICITY:	N /A
	There is no known effect from chronic exposure to this product. Repeated or prolonged exposure is not known to aggravate medical condition.	
Other Toxic Effects on Humans:	Very hazardous in case of skin contact (irritant), of eye contact (irritant), of ingestion, of inhalation. Inflammation of the eye; is characterized by redness, watering, and itching. Skin inflammation is characterized by itching, scaling, reddening or occasional blistering.	
Special Remarks on Toxicity to Animals:	N/A	
Special Remarks on Chronic Effects on Humans:	N/A	
Special Remarks on other Toxic Effects on Humans:	N/A	

SECTION 16: PREPARATION INFORMATION

Prepared By:	Prairie West Industrial
Telephone:	(204) 224 - 1890
Date:	April 13, 2015

SECTION 17: OTHER INFORMATION

FOR UPDATED COPIES OF AN MSDS, PLEASE CONTACT YOUR PRAIRIE WEST INDUSTRIAL, REPRESENTATIVE.

Notice to Reader;

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.

Material Safety Data Sheet



SECTION 1 PRODUCT AND COMPANY IDENTIFICATION

Chevron Soluble Oil B, T1, T2

Product Use: Metal Working Fluid
Product Number(s): 233703, 255752, 255754
Company Identification
Chevron Canada Limited
1050 West Pender
Vancouver, BC V6E 3T4
Canada
www.chevronlubricants.com

Transportation Emergency Response

CHEMTREC: (800) 424-9300 or (703) 527-3887

Health Emergency

Chevron Emergency Information Center: Located in the USA. International collect calls accepted. (800) 231-0623 or (510) 231-0623

Product Information

email : lubemsds@chevron.com
Product Information: (800) LUBE TEK

SECTION 2 HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

- OIL MIST MAY CAUSE RESPIRATORY IRRITATION
- CAUSES SKIN IRRITATION
- WATER EMULSIONS OF METALWORKING FLUIDS MAY BECOME CONTAMINATED WITH HARMFUL MICROORGANISMS
- HARMFUL TO AQUATIC ORGANISMS. MAY CAUSE LONG-TERM ADVERSE EFFECTS IN THE AQUATIC ENVIRONMENT

IMMEDIATE HEALTH EFFECTS

Eye: Not expected to cause prolonged or significant eye irritation.
Skin: Contact with the skin causes irritation. Skin contact may cause drying or defatting of the skin. Contact with the skin is not expected to cause an allergic skin response. Symptoms may include pain,

itching, discoloration, swelling, and blistering. Not expected to be harmful to internal organs if absorbed through the skin.

Ingestion: May be irritating to mouth, throat, and stomach. Symptoms may include pain, nausea, vomiting, and diarrhea.

Inhalation: Not expected to be harmful if inhaled. Contains a petroleum-based mineral oil. May cause respiratory irritation or other pulmonary effects following prolonged or repeated inhalation of oil mist at airborne levels above the recommended mineral oil mist exposure limit. Symptoms of respiratory irritation may include coughing and difficulty breathing.

SECTION 3 COMPOSITION/ INFORMATION ON INGREDIENTS

COMPONENTS	CAS NUMBER	AMOUNT
Highly refined mineral oil (C15 - C50)	Mixture	70 - 99 %wt/wt
Sodium sulfonate	68608-26-4	0.1 - 5 %wt/wt
Diethylene glycol	111-46-6	0.1 - 2.5 %wt/wt
Glycol ethers	Trade secret	0.1 - 1.5 %wt/wt

Information on ingredients that are considered Controlled Products and/or that appear on the WHMIS Ingredient Disclosure List (IDL) is provided as required by the Canadian Hazardous Products Act (HPA, Sections 13 and 14). Ingredients considered hazardous under the OSHA Hazard Communication Standard, 29 CFR 1910.1200, are also listed. See Section 15 for additional regulatory information.

SECTION 4 FIRST AID MEASURES

Eye: No specific first aid measures are required. As a precaution, remove contact lenses, if worn, and flush eyes with water.

Skin: Wash skin with water immediately and remove contaminated clothing and shoes. Get medical attention if any symptoms develop. To remove the material from skin, use soap and water. Discard contaminated clothing and shoes or thoroughly clean before reuse.

Ingestion: If swallowed, get medical attention. Do not induce vomiting. Never give anything by mouth to an unconscious person.

Inhalation: If exposed to excessive amounts of material in air, move the exposed person to fresh air. Get medical attention if coughing or respiratory discomfort occurs.

SECTION 5 FIRE FIGHTING MEASURES

FLAMMABLE PROPERTIES:

Flashpoint: (Cleveland Open Cup) 160 °C (320 °F) Minimum

Autoignition: No data available

Flammability (Explosive) Limits (% by volume in air): Lower: Not Applicable Upper: Not Applicable

EXTINGUISHING MEDIA: Use water fog, foam, dry chemical or carbon dioxide (CO₂) to extinguish flames.

PROTECTION OF FIRE FIGHTERS:

Fire Fighting Instructions: This material will burn although it is not easily ignited. See Section 7 for proper handling and storage. For fires involving this material, do not enter any enclosed or confined fire space without proper protective equipment, including self-contained breathing apparatus.

Combustion Products: Highly dependent on combustion conditions. A complex mixture of airborne solids, liquids, and gases including carbon monoxide, carbon dioxide, and unidentified organic compounds will be evolved when this material undergoes combustion.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Protective Measures: Eliminate all sources of ignition in vicinity of spilled material.

Spill Management: Stop the source of the release if you can do it without risk. Contain release to prevent further contamination of soil, surface water or groundwater. Clean up spill as soon as possible, observing precautions in Exposure Controls/Personal Protection. Use appropriate techniques such as applying non-combustible absorbent materials or pumping. Where feasible and appropriate, remove contaminated soil. Place contaminated materials in disposable containers and dispose of in a manner consistent with applicable regulations.

Reporting: Report spills to local authorities as appropriate or required.

SECTION 7 HANDLING AND STORAGE

Precautionary Measures: Do not get in eyes, on skin, or on clothing. Do not breathe oil mist at concentrations above the recommended mineral oil mist exposure limit. Do not taste or swallow. Wash thoroughly after handling.

General Handling Information: Avoid contaminating soil or releasing this material into sewage and drainage systems and bodies of water.

Static Hazard: Electrostatic charge may accumulate and create a hazardous condition when handling this material. To minimize this hazard, bonding and grounding may be necessary but may not, by themselves, be sufficient. Review all operations which have the potential of generating and accumulating an electrostatic charge and/or a flammable atmosphere (including tank and container filling, splash filling, tank cleaning, sampling, gauging, switch loading, filtering, mixing, agitation, and vacuum truck operations) and use appropriate mitigating procedures. For more information, refer to OSHA Standard 29 CFR 1910.106, 'Flammable and Combustible Liquids', National Fire Protection Association (NFPA 77, 'Recommended Practice on Static Electricity', and/or the American Petroleum Institute (API) Recommended Practice 2003, 'Protection Against Ignitions Arising Out of Static, Lightning, and Stray Currents'.

Container Warnings: Container is not designed to contain pressure. Do not use pressure to empty container or it may rupture with explosive force. Empty containers retain product residue (solid, liquid, and/or vapor) and can be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, static electricity, or other sources of ignition. They may explode and cause injury or death. Empty containers should be completely drained, properly closed, and promptly returned to a drum reconditioner or disposed of properly.

SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

GENERAL CONSIDERATIONS:

Consider the potential hazards of this material (see Section 2), applicable exposure limits, job activities, and other substances in the work place when designing engineering controls and selecting personal protective equipment. If engineering controls or work practices are not adequate to prevent exposure to harmful levels of this material, the personal protective equipment listed below is recommended. The user should read and understand all instructions and limitations supplied with the equipment since protection is usually

provided for a limited time or under certain circumstances.

ENGINEERING CONTROLS:

Use in a well-ventilated area.

PERSONAL PROTECTIVE EQUIPMENT

Eye/Face Protection: No special eye protection is normally required. Where splashing is possible, wear safety glasses with side shields as a good safety practice.

Skin Protection: Wear protective clothing to prevent skin contact. Selection of protective clothing may include gloves, apron, boots, and complete facial protection depending on operations conducted.

Suggested materials for protective gloves include: Chlorinated Polyethylene (or Chlorosulfonated Polyethylene), Nitrile Rubber, Silver Shield, Viton.

Respiratory Protection: No respiratory protection is normally required.

If user operations generate an oil mist, determine if airborne concentrations are below the occupational exposure limit for mineral oil mist. If not, wear an approved respirator that provides adequate protection from the measured concentrations of this material. For air-purifying respirators use a particulate cartridge. Use a positive pressure air-supplying respirator in circumstances where air-purifying respirators may not provide adequate protection.

Occupational Exposure Limits:

Component	Country/ Agency	TWA	STEL	Ceiling	Notation
Glycol ethers	ACGIH	20 ppm (weight)	--	--	A3
Highly refined mineral oil (C15 - C50)	ACGIH	5 mg/m3	10 mg/m3	--	--

NOTE ON OCCUPATIONAL EXPOSURE LIMITS: Consult local authorities for acceptable provincial values in Canada. Consult the Canadian Standards Association Standard 94.4-2002 Selection, Use and Care of Respirators.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Attention: the data below are typical values and do not constitute a specification.

Color: Brown

Physical State: Liquid

Odor: Hydrocarbon or sulfurous

pH: Not Applicable

Vapor Pressure: <0.01 mmHg @ 37.8 °C (100 °F)

Vapor Density (Air = 1): >1 Minimum

Boiling Point: 100°C (212°F) Minimum

Solubility: Forms emulsion with water

Freezing Point: Not Applicable

Density: 0.93 kg/l @ 15°C (59°F) (Typical)

Volatile Organic

Compounds (VOC): 10.5 %weight (Approximate)

Viscosity: 28 mm²/s @ 40°C (104°F) Minimum

Evaporation Rate: No data available

Odor Threshold: No data available

Coefficient of Water/Oil Distribution: No data available

SECTION 10 STABILITY AND REACTIVITY

Reactivity: May react with strong acids or strong oxidizing agents, such as chlorates, nitrates, peroxides, etc.

Chemical Stability: This material is considered stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

Incompatibility With Other Materials: Not applicable

Hazardous Decomposition Products: None known (None expected)

Hazardous Polymerization: Hazardous polymerization will not occur.

Sensitivity to Mechanical Impact: No.

SECTION 11 TOXICOLOGICAL INFORMATION

IMMEDIATE HEALTH EFFECTS

Eye Irritation: The eye irritation hazard is based on evaluation of data for similar materials or product components.

Skin Irritation: The skin irritation hazard is based on evaluation of data for similar materials or product components.

Skin Sensitization: The skin sensitization hazard is based on evaluation of data for similar materials or product components.

Acute Dermal Toxicity: LD50: >5g/kg (rabbit). The acute dermal toxicity hazard is based on evaluation of data for similar materials or product components.

Acute Oral Toxicity: LD50: >5000 mg/kg (rat) The acute oral toxicity hazard is based on evaluation of data for similar materials or product components.

Acute Inhalation Toxicity: The acute inhalation toxicity hazard is based on evaluation of data for similar materials or product components. For additional information on the acute toxicity of the components, call the technical information center.

ADDITIONAL TOXICOLOGY INFORMATION:

This product contains diethylene glycol (DEG). The estimated oral lethal dose is about 50 cc (1.6 oz) for an adult human. DEG has caused the following effects in laboratory animals: liver abnormalities, kidney damage and blood abnormalities. It has been suggested as a cause of the following effects in humans: liver abnormalities, kidney damage, lung damage and central nervous system damage.

This product contains 2-butoxyethanol (2-BE, CAS# 111-76-2). 2-BE is not considered a significant acute or chronic toxicity hazard in humans. A validated physiologically based pharmacokinetic model indicates that humans receiving extensive dermal or inhalation exposure to 2-BE would not receive a toxic dose of 2-butoxyacetic acid (Appl. Occup. Environ. Hyg. 8:580-586, 1993), the metabolite principally responsible for the observed toxicity of 2-BE in laboratory animals. This product contains petroleum base oils which may be refined by various processes including severe solvent extraction, severe hydrocracking, or severe hydrotreating. None of the oils requires a cancer warning under the OSHA Hazard Communication Standard (29 CFR 1910.1200). These oils have not been listed in the National Toxicology Program (NTP) Annual Report nor have they been classified by the International Agency for Research on Cancer (IARC) as: carcinogenic to humans (Group 1), probably carcinogenic to humans (Group 2A), or possibly carcinogenic to humans (Group 2B).

These oils have not been classified by the American Conference of Governmental Industrial Hygienists (ACGIH) as: confirmed human carcinogen (A1), suspected human carcinogen (A2), or confirmed animal carcinogen with unknown relevance to humans (A3).

SECTION 12 ECOLOGICAL INFORMATION

ECOTOXICITY

This material is expected to be harmful to aquatic organisms and may cause long-term adverse effects in the aquatic environment. The ecotoxicity hazard is based on an evaluation of data for the components or a similar material.

ENVIRONMENTAL FATE

Ready Biodegradability: This material is not expected to be readily biodegradable. The biodegradability of this material is based on an evaluation of data for the components or a similar material.

SECTION 13 DISPOSAL CONSIDERATIONS

Use material for its intended purpose or recycle if possible. Oil collection services are available for used oil recycling or disposal. Place contaminated materials in containers and dispose of in a manner consistent with applicable regulations. Contact your sales representative or local environmental or health authorities for approved disposal or recycling methods. (See B.C. Reg. GY/92 Waste Management Act; R.R.O. 1990, Reg. 347 General-Waste Management; C.C.S.M.c. W40 The Waste Reduction and Prevention Act; N.S. Reg. 51/95 and N.S. Reg. 179/96 for examples of Provincial legislation.)

SECTION 14 TRANSPORT INFORMATION

The description shown may not apply to all shipping situations. Consult 49CFR, or appropriate Dangerous Goods Regulations, for additional description requirements (e.g., technical name) and mode-specific or quantity-specific shipping requirements.

TC Shipping Description: NOT REGULATED AS DANGEROUS GOODS FOR TRANSPORTATION UNDER TDG REGULATIONS

IMO/IMDG Shipping Description: PETROLEUM LUBRICATING OIL; NOT REGULATED AS DANGEROUS GOODS FOR TRANSPORT UNDER THE IMDG CODE

ICAO/IATA Shipping Description: PETROLEUM LUBRICATING OIL; NOT REGULATED AS DANGEROUS GOODS FOR TRANSPORT UNDER ICAO T1 OR IATA DGR

DOT Shipping Description: PETROLEUM LUBRICATING OIL, NOT REGULATED AS A HAZARDOUS MATERIAL FOR TRANSPORTATION UNDER 49 CFR

SECTION 15 REGULATORY INFORMATION**REGULATORY LISTS SEARCHED:**

01-1=IARC Group 1
01-2A=IARC Group 2A
01-2B=IARC Group 2B
35=WHMIS IDL

The following components of this material are found on the regulatory lists indicated.
Glycol ethers 35

CHEMICAL INVENTORIES:

All components comply with the following chemical inventory requirements: AICS (Australia), DSL

(Canada), EINECS (European Union), ENCS (Japan), IECSC (China), KECI (Korea), PICCS (Philippines), TSCA (United States).

Additional notifications in Canada may be required 90 days prior to use other than as a lubricating oil additive.

WHMIS CLASSIFICATION:

Class D, Division 2, Subdivision B: Toxic Material - Skin or Eye Irritation

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations. (See Hazardous Products Act (HPA), R.S.C. 1985, c.H-3,s.2).

MSDS PREPARATION:

This Material Safety Data Sheet has been prepared by the Toxicology and Health Risk Assessment Unit, ERTC, P.O. Box 1627, Richmond, CA 94804, (888)676-6183.

Revision Date: DECEMBER 18, 2014

SECTION 16 OTHER INFORMATION

HMIS RATINGS: Health: 2 Flammability: 1 Reactivity: 0

LABEL RECOMMENDATION:

Label Category : SOLUBLE OIL 1 - SOL1

REVISION STATEMENT: This revision updates the following sections of this Material Safety Data Sheet: 1,16

ABBREVIATIONS THAT MAY HAVE BEEN USED IN THIS DOCUMENT:

TLV - Threshold Limit Value	TWA - Time Weighted Average
STEL - Short-term Exposure Limit	PEL - Permissible Exposure Limit
	CAS - Chemical Abstract Service Number
ACGIH - American Conference of Governmental Industrial Hygienists	IMO/IMDG - International Maritime Dangerous Goods Code
API - American Petroleum Institute	MSDS - Material Safety Data Sheet
CVX - Chevron	NFPA - National Fire Protection Association (USA)
DOT - Department of Transportation (USA)	NTP - National Toxicology Program (USA)
IARC - International Agency for Research on Cancer	OSHA - Occupational Safety and Health Administration

The above information is based on the data of which we are aware and is believed to be correct as of the date hereof. Since this information may be applied under conditions beyond our control and with which we may be unfamiliar and since data made available subsequent to the date hereof may suggest modifications of the information, we do not assume any responsibility for the results of its use. This information is furnished upon condition that the person receiving it shall make his

own determination of the suitability of the material for his particular purpose.



MATERIAL SAFETY DATA SHEET

SECTION 1 PRODUCT AND COMPANY IDENTIFICATION

MANUFACTURER/SUPPLIER: WD-40 Products [Canada] Ltd. P.O. Box 220 Toronto, Ontario M9C 4V3 <u>Information Phone #:</u> (416) 622-9881 <u>Emergency Phone # 24 hr:</u> Canutec: (613) 996-6666 Designated for use only in the event of chemical emergencies involving a spill, leak, fire exposure or accident involving chemicals	US Office: WD-40 Company 1061 Cudahy Place San Diego, CA 92110 <u>Information Phone #:</u> (619) 275-1400 <u>Emergency Phone # 24 hr:</u> Chemtrec: (800) 424-9300 Designated for use only in the event of chemical emergencies involving a spill, leak, fire exposure or accident involving chemicals.
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PRODUCT NAME: WD-40 Bulk Liquid
 PRODUCT USE: Cleaner, lubricant.
 MSDS DATE OF PREPARATION: March 27, 2014

SECTION 2 HAZARDS IDENTIFICATION

DANGER! Harmful or fatal if swallowed. Combustible Liquid. Avoid eye contact. Use with adequate ventilation. Keep away from heat, sparks and all other sources of ignition.

POTENTIAL HEALTH EFFECTS:
PRIMARY ROUTES OF ENTRY: Inhalation, skin and eye contact.

ACUTE EFFECTS:
INGESTION: This product has low oral toxicity. Swallowing may cause irritation, nausea, vomiting and diarrhea. This product is an aspiration hazard. If swallowed, can enter the lungs and may cause chemical pneumonitis.
EYES: Contact may be mildly irritating to eyes. May cause redness and tearing.
SKIN: Prolonged and/or repeated contact may produce mild irritation and defatting with possible dermatitis.
INHALATION: High concentrations may cause nasal and respiratory irritation and central nervous system effects such as headache, dizziness and nausea. May aggravate existing respiratory conditions such as asthma. Intentional abuse may be harmful or fatal.
CHRONIC EFFECTS: None expected.

SECTION 3 COMPOSITION INFORMATION ON INGREDIENTS

Ingredient	CAS Number	Percent
Aliphatic Petroleum Distillates	64742-47-8	50-70%
	64742-88-7	
Petroleum Base Oil	64742-58-1	30-35%
	64742-53-6	
	64742-56-9	
	64742-65-0	
Non-Hazardous Ingredients	Proprietary	<10%

SECTION 4 FIRST AID MEASURES

For Medical Emergencies Call 1-888-324-7596 (24 hours/day)

INGESTION: Aspiration Hazard. DO NOT induce vomiting. Call physician, poison control center or the WD-40 Safety Hotline at 1-888-324-7596 immediately.

EYE CONTACT: Flush thoroughly with water. Get medical attention if irritation persists.

SKIN CONTACT: Wash with soap and water. If irritation develops and persists, get medical attention.

INHALATION: If irritation is experienced, move to fresh air. Get medical attention if irritation or other symptoms develop and persist.

SECTION 5 FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA: Use water fog, dry chemical, carbon dioxide or foam. Do not use water jet or flooding amounts of water. Buming product will float on the surface and spread fire.

SPECIAL FIRE FIGHTING PROCEDURES: Firefighters should always wear positive pressure self-contained breathing apparatus and full protective clothing. Cool fire-exposed containers with water.

UNUSUAL FIRE/EXPLOSION HAZARDS: Combustible liquid and vapor. Vapors are heavier than air and may travel along surfaces to remote ignition sources and flash back.

SECTION 6 ACCIDENTAL RELEASE MEASURES

SPILL RESPONSE: Wear appropriate protective clothing (see Section 8). Eliminate all sources of ignition and ventilate area. Contain and collect liquid with an inert absorbent and place in a container for disposal. Clean spill area thoroughly. Report spills to authorities as required.

SECTION 7 HANDLING AND STORAGE

HANDLING: Avoid contact with eyes. Avoid prolonged contact with skin. Avoid breathing vapors or aerosols. Use with adequate ventilation. Keep away from heat, sparks and open flames. Wash thoroughly with soap and water after handling. Keep containers closed when not in use. Keep out of the reach of children.

STORAGE: Store away from heat, flames and incompatible materials.

SECTION 8 EXPOSURE CONTROLE/PERSONAL PROTECTION

OCCUPATIONAL EXPOSURE LIMITS:

Aliphatic Petroleum Distillates	1200 mg/m ³ TWA Manufacturer Recommended
Petroleum Base Oil	5 mg/m ³ TWA ACGIH TLV 10 mg/m ³ STEL ACGIH TLV
Non-Hazardous Ingredients	None Established

The Following Controls are Recommended for Normal Consumer Use of this Product

Engineering Controls: Use in a well-ventilated area.

Personal Protection:

Eye Protection: Avoid eye contact. Safety glasses or goggles recommended.

Skin Protection: Avoid prolonged skin contact. Chemical resistant gloves recommended for operations where skin contact is likely.

Respiratory Protection: None needed for normal use with adequate ventilation.

For Bulk Processing or Workplace Use the Following Controls are Recommended

Engineering Controls: Use adequate general and local exhaust ventilation to maintain exposure levels below that occupational exposure limits.

Personal Protection:

Eye Protection: Safety goggles recommended where eye contact is possible.

Skin Protection: Wear chemical resistant gloves.

Respiratory Protection: None required if ventilation is adequate. If the occupational exposure limits are exceeded, wear a NIOSH approved respirator. Respirator selection and use should be based on contaminant type, form and concentration. Follow applicable regulations and good Industrial Hygiene practice.

Work/Hygiene Practices: Wash with soap and water after handling.

SECTION 9 PHYSICAL DATA

APPEARANCE AND ODOR: Light amber liquid with a mild odor.

Freezing Point:	Not Applicable	Odor Threshold:	Not Determined
Boiling Point:	361 - 369°F (183 - 187°C)	Specific Gravity:	0.78 – 0.82 @ 60°F
Solubility in Water:	Insoluble	pH:	Not Applicable
Vapor Pressure:	1 psi @38°C (100°F) ASTM D323	Vapor Density:	Greater than 1
Percent Volatile:	70-75%	VOC:	533 grams/liter (65%)
Coefficient of Water/Oil Distribution:	Not Determined	Kinematic Viscosity:	2.79-2.96cSt @ 100°F
Flash Point:	122°F (49°C) Tag Open Cup	Flammable Limits: (Solvent Portion)	LEL: 0.6% UEL: 8.0%
Pour Point:	-63°C (-81.4°F) ASTM D-97	Explosion Impact:	None

SECTION 10 STABILITY AND REACTIVITY

STABILITY: Stable

INCOMPATIBILITY: Strong oxidizing agents. Avoid heat and open flames.

HAZARDOUS DECOMPOSITION PRODUCTS: Carbon monoxide, carbon dioxide.

SECTION 11 TOXICOLOGICAL INFORMATION

The oral toxicity of this product is estimated to be greater than 5,000 mg/kg based on an assessment of the ingredients. This product is not classified as toxic by established criteria. It is an aspiration hazard.

None of the components of this product is listed as a carcinogen or suspected carcinogen or is considered a reproductive hazard.

SECTION 12 ECOLOGICAL INFORMATION

No data is currently available.

SECTION 13 DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD: If this product becomes a waste, it would be expected to meet the criteria of a hazardous waste based on flammability. However, it is the responsibility of the generator to determine at the time of disposal the proper classification and method of disposal. Dispose in accordance with federal, state, and local regulations.

SECTION 14 TRANSPORT INFORMATION

U.S. DOT Hazard Classification: Excepted from Hazmat (49CFR 173.150 (F)) in non-bulk packagings. Bulk Packagings: Combustible Liquid, n.o.s. (contains Petroleum Distillates), NA1993, PG III

Canadian TDG Classification: Not regulated as a dangerous good when packages in a small means of containment (See 1.33 Class 3, Flammable Liquids: General Exemption).

IMDG Code Hazard Classification: UN1268, Petroleum Distillates, n.o.s. 3, PG III.

SECTION 15 REGULATORY INFORMATION

U.S. FEDERAL REGULATIONS:

CERCLA 103 Reportable Quantity: This product is not subject to CERCLA reporting requirements, however, oil spills are reportable to the National Response Center under the Clean Water Act and many states have more stringent release reporting requirements. Report spills as required under federal, state and local regulations.

SARA TITLE III:

Hazard Category For Section 311/312: Acute Health, Fire Hazard

Section 313 Toxic Chemicals: This product contains the following chemicals subject to SARA Title III Section 313 Reporting requirements: None

Section 302 Extremely Hazardous Substances (TPQ): None

EPA Toxic Substances Control Act (TSCA) Status: All of the components of this product are listed on the TSCA inventory.

CANADIAN REGULATIONS:

Canadian Environmental Protection Act: All of the ingredients are listed on the Canadian Domestic Substances List or exempt from notification

Canadian WHMIS Classification: Class B-3 (Combustible Liquid).

This MSDS has been prepared according to the criteria of the Controlled Products Regulation (CPR) and the MSDS contains all of the information required by the CPR.

SECTION 16 OTHER INFORMATION

HMIS Hazard Rating: Health – 1 (slight hazard), Fire Hazard – 2 (moderate hazard), Physical Hazard – 0 (minimal hazard)

Revision Date: 03/27/14

Supersedes: 03/10/13

Prepared By: Industrial Health & Safety Consultants, Inc. 1-203-929-3473

This MSDS complies with OSHA guidelines set by 29 CFR 1910.1200 and the Canadian WHMIS regulations. The foregoing information has been compiled from sources believed to be accurate but is not warranted to be. Recipients are advised to confirm in advance of need that data is correct. Standards change without notice. It is the responsibility of the recipient to insure that their personnel have been notified of any changes which may affect them. The data provided on this MSDS are not meant to be used as specifications, only as guideline information as to the safe use of this product. User should refer to applicable laws before use.

N/D = Not Determined N/E = Not Established N/A = Not Applicable

1071200/ No.0084302



MATERIAL SAFETY DATA SHEET

May be used to comply with OSHA Hazard Communication standard
29CFR 1910.1200 Standard must be consulted for specific requirements

MSDS NO. SD-13/T-6 T-12

Category: POLISHING COMPOUND

Date 1/1/14

Section 1

Product Name or Number (as it appears on label)
515-6103 T-6 TRIPOLI BUFFING COMPOUND
515-6105 T-12 TRIPOLI BUFFING COMPOUND

Emergency Telephone No. 888-457-4463

Health Rating: 1
Flammability Rating: 0
Reactivity Rating: 0
Hazard Rating: 0

Manufacturer's Name:
Formax Manufacturing Corporation
168 Wealthy S.W Grand Rapids, MI 49503

Manufacturer's D.U.N.S. No. : 00-535-4238

Proper Shipping Name: NMFC-48580 Scouring Compound (Cake, Paste or Liquid form N.O.I.) / Polishing Wheels 14924009/cic-70

Additional Hazard Classes (As Applicable): None Listed — Shipping Not Regulated by D.O.T.

Chemical Family: Organic / Inorganic Mixture Reportable Quantities: None Formula: Proprietary Formula:

Section II Composition

Chemical Name	Common Name	CAS No.	OSHA Permissible Exposure limit 15 mg/M ³ (Total Dust)	ACGIH TLV 10 mg/M ³ (Total Dust)
SILICON DIOXIDE	TRIPOLI ABRASIVE	131795-9		
HYDROGENATED TALLOW / GLYCERIDE	FATTY ACIDS (HARDENED FATS)	68953-18-4		
MINERAL GREASES	PETROLEUM GREASE	64742-52-5		
SURFACTANT AMINES	WETTING AGENT	102-71-6		

Formax polishing & buffing compounds are formulated with abrasives surrounded in a matrix of grease binders, waxes and / or soap / water emulsions. Ingredient ratio proportions can be and are varied to meet individual buffing needs and surface conditioning. Respirable dust and debris hazards may be created during buffing operations. Exposure limits for dust particles should not be exceeded beyond ACGIH, TLV-TWA recommend ceilings for Respirable silica and/or Tripoli dust at 0.1 mg/M³.

Section III Physical and Chemical Characteristics

Boiling Point: over 300 °F Melting Point: 125/145°F Specific Gravity: Not Established
Vapor Pressure: N/A Percent volatile by Vol.: 0 Vapor density: NAIF
Evaporation Rate: N/L Solubility in Water: Emulsifiable Solubility in Alcohol: Moderate
Solubility in other solvents: Alkaline Cleaners or Chlorinated Solvents Appearance and odor: BROWN COLOR

Section IV Fire and Explosion Hazard Data

Flash Point: >350 °F (Method Used) C.O.C. Flammable Limits: Not Established
Extinguishing Media: C.O.2., Dry Chemical, Foam, Water Fog.
Special Fire Fighting Procedures: Dried Polishing Compound and Buffing Wheel Lint and Debris May Make the Mix Combustible. Treat as an Oil Fire.
Explosion Potential: None for new and unused stored material.

Section V Reactivity Data

Stability: Unstable: ___ Stable: X Condition to Avoid: Using under conditions of insufficient dust collecting systems, or Ventilation
Incompatibility (Materials to Avoid): Strong Oxidizers or Reducing Agents
Hazardous Decomposition Products: On combustion Hydrocarbons may form to produce smoke, carbon monoxide, carbon dioxide.
Hazardous Polymerization: Will not Occur: X May Occur: ___

Section VI Health, First Aid and Medical Data

MSDS: SD-13/T-6 T-12

Primary Route(s) of Entry	Acute and Chronic Health Effects and Effects of Overexposure.	First aid and Medical Information
Inhalation (during use)	Acute - May cause coughing, shortness of breath (Dust) Chronic - May affect breathing capacity (Dust)	Remove to fresh air apply artificial respiration as needed. Obtain First Aid or Medical assistance.
Ingestion	May cause gastrointestinal disturbances, constipation or diarrhea.	Obtain First Aid or Medical assistance if needed.
Skin Contact & Absorption	Irritation of the skin may occur due to mechanical/chemical action or dermatitis reaction.	Wash skin with soap and water. Obtain First Aid and/or Medical assistance if symptoms persist.
Eye	Dust or buffing debris may irritate or damage the eyes without protection. Always wear safety glasses and/or face shield helmets when performing buffing operations. See OSHA 29cfr1910.122 (Safety Glasses)	Wash with large amounts of water- obtain First Aid or Medical assistance if needed.
Other potential health risks (Prolonged inhalation of dust particles may result in disabling pulmonary fibrosis.)	Symptoms might include deposits of materials in eyes, ears, nasal passages, irritation of mucus membranes. Warning: Do not breath dust of compounds containing abrasive materials without following OSHA safety and health standards for dust accumulation collection	Regular constant vigilance in Safety and Maintenance check-up programs are advised to reduce risks associated with buffing and polishing operations.

Section VII

Carcinogenicity	NTP Not Reported	IARC Not Reported	OSHA Not Reported
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Section VIII Spill or Leak Procedures

Steps to be taken in case material is released or spilled: sweep into containers, storage of buffing wheel and compound debris may contain combustible lint.
Waste disposal method: Sweep up and incinerate or dispose in accordance with Local, State and Federal regulations.
CERCLA (Superfund) reportable quantity (in LBS) None
RCRA Hazardous waste No. (40 CFR 261.33) None
Volatile Organic Compound (VOC) (as packaged, minus water) N/A

Section IX Special Protection Information

Respiratory protection (specify type): OSHA 24 CFR/134 NIOSH/MSHA Approved respirators for particulates from buffing debris.
Ventilation: Local Exhaust: General Room Ventilation
Mechanical (General): Recommend venting to dust collectors
Protective Gloves: Wear heavy duty work type gloves for hand protection.
Eye Protection: Wear Safety Glasses and/or Face shield helmets. See OSHA 29 CFR 1910.122 (Safety Glasses)
Other Protective Equipment: Protective work clothing, body apron or belly pads, safety shoes, as needed.
Hearing Protection: Avoid prolonged excessive noise levels created by buffing and polishing operations. See: OSHA 29 CFR 1910.215 (Hearing Protection)

Section X Special Precautions

Precautions to be taken in handling and storing: Handle with adequate ventilation for nuisance dust when using. See OSHA 29 CFR 1910.24 (Ventilation) and 29 CFR 1910.1000 (Air Contaminants). Other precautions: Keep liquids from freezing. Store away from excessive heat.
The information and recommendations set forth herein are taken from sources believed to be accurate as of the date hereof; however, Formax Mfg. makes no warranty with respect to the accuracy of the information or the suitability of the recommendation, and assumes no liability to any user thereof.



** NAIF = no applicable information found

*** N/A = not applicable

Material Safety Data Sheet

May be used to comply with
OSHA's Hazard Communication Standard
29 CFR 1910.1200. Standard must be
consulted for specific requirements.

U.S. Department of Labor

Occupational Safety and Health Administration
(Non-Mandatory Form)
Form Approved
OMB No. 1218-0072



Forms Published by WindowChem (707)864-0846

IDENTITY**COLORING COMPOUND KC11**

Note: Blank spaces are not permitted. If any item is not applicable, or no
information is available, the space must be marked to indicate that.

Section I

Manufacturer's Name KOCOUR CO	Emergency Telephone Number 1-800-424-9300
Address (Number, Street, City, State, and ZIP Code) 4800 S. ST. LOUIS AVE.	Telephone Number for Information 1-773-847-1111
CHICAGO, IL 60632	Date Prepared 3/27/2014
585L05	Signature of Preparer (optional)

Section II - Hazardous Ingredients/Identity Information

Hazardous Components (Specific Chemical Identity, Common Name(s))	OSHA PEL	ACGIH TLV	Other Limits Recommended	% (optional)
ALUMINUM OXIDE-CAS#1344-28-1	10.5 MG/M3	10.0 MG/M3		45-65%
	RESPIRABLE	TOTAL		
STEARIC ACID - CAS# 57-11-4				20-40%
MINERAL SEAL OIL- CAS# 64741-44-2				20-40%

HMIS RATING: HEALTH=1, FLAMMABILITY=0, REACTIVITY=0, PERSONAL PROTECTION= SEE SECTION VII.

Section III - Physical/Chemical Characteristics

Boiling Point	N/A	Specific Gravity (H2O = 1)	0.84 g/ml
Vapor Pressure (mm Hg)	< 1mbar	Melting Point	41.7 DEG. C
Vapor Density (AIR = 1)	N/A	Evaporation rate (Butyl Acetate = 1)	N/A

Solubility in Water

INSOLUBLE

Appearance and Odor

WHITE COLORED COMPOUND WITH A SLIGHT SOLVENT ODOR.

Section IV - Fire and Explosion Hazard Data

Flash Point (Method Used) 520 DEG. F, COC	Flammable Limits	LEL N/A	UEL N/A
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Extinguishing Media

FOAM, CARBON DIOXIDE, DRY POWDER OR WATER FOG

Special Firefighting Procedures

WEAR PROPER PROTECTIVE CLOTHING AND SELF CONTAINED BREATHING APPARATUS. TOXIC VAPORS

MAY BE RELEASED UNDER FIRE CONDITION.

Unusual Fire and Explosion Hazards

NO APPLICABLE INFORMATION FOUND.

Section V - Reactivity Data

Stability	Unstable		Conditions to Avoid KEEP AWAY FROM HEAT AND SOURCES OF IGNITION.
	Stable	XXX	

Incompatibility (Materials to Avoid)

NO APPLICABLE INFORMATION FOUND

Hazardous Decomposition or Byproducts

NO APPLICABLE INFORMATION FOUND.

Hazardous Polymerization	May Occur		Conditions to Avoid
	Will Not Occur	XXX	

Section VI - Health Hazard Data

Route(s) of Entry:	Inhalation? YES	Skin? YES	Ingestion? YES
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Health Hazards (Acute and Chronic)

(ACUTE) COUGHING AND/OR SNEEZING

Carcinogenicity:	NTP? NON- CARCINOGENIC	IARC Monographs? NO	OSHA Regulated? NO
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Signs and Symptoms of Exposure

COUGHING AND/OR SNEEZING IF DUST IS GENERATED DURING USE. POSSIBLE EYE OR SKIN IRRITANT.

Medical Conditions

Generally Aggravated by Exposure UPPER RESPIRATORY TRACT

Emergency and First Aid Procedure

(INHALATION) REMOVE TO FRESH AIR. (SKIN & EYES) FLUSH WITH WATER 15MINS; INCLUDING UNDER EYE

(INGESTION) INDUCE VOMITING AND SEEK IMMEDIATE MEDICAL ATTENTION.

Section VII - Precautions for Safe Handling and Use

Steps to be Taken in Case Material is Released or Spilled

USE SUITABLE MEANS TO MINIMIZE DUST, (ie: VACUUM). DRY SWEEPING IS NOT

RECOMMENDED.

Waste Disposal Method

ACCORDING TO FEDERAL, STATE AND LOCAL REGULATIONS.

Precautions to be Taken in Handling and Storage

STORE AWAY FROM SOURCES OF IGNITION. DO NOT STORE NEAR HEAT SOURCES ABOVE 100 DEG. F.

Other Precautions

NO APPLICABLE INFORMATION FOUND.

Section VIII - Control Measures

Respiratory Protection (Specify Type)

NIOSH APPROVED DUST RESPIRATOR.

Ventilation	Local Exhaust	Special
	ADEQUATE TO REDUCE EXPOSURE TO BELOW LIMITS LISTED IN SECTION II.	
	Mechanical (General)	Other
	DUST COLLECTOR.	
		NO APPLICABLE INFORMATION FOUND.

Protective Gloves

ADEQUATE TO PROTECT THE SKIN.

Other Protective Clothing or Equipment

SAFETY GOGGLES TO PROTECT THE EYES AND A SHOP COAT OR APRON TO PROTECT THE CLOTHING.

Work/Hygenic Practices

WASH THOROUGHLY WITH SOAP & WATER AFTER USE. FOLLOW ESTABLISHED SAFETY POLICIES.

Material Safety Data Sheet

Quest Inks & Coatings

Section I: Product Identification

Code: WX-2359
Product name: **Water-Based Black Primer**

Manufactured by: Quest Inks & Coatings
2401 Anson Drive
Mississauga, ON
L5S 1G1
Tel: (905) 405-0041

TDG Hazard Classification: not regulated
UN #: n/ap Packaging group: n/av

Canutec 24 hour Emergency tel:
(613) 996-6666
Use in case of a Dangerous Goods
Emergency
Date of issue: January 10, 2015

WHMIS Classification: B3, D1A, D2B

Section II: Hazardous Ingredients

<u>Ingredient</u>	<u>w/w</u> <u>%</u>	<u>TLV (ppm)</u>	<u>CAS No.</u>	<u>LD₅₀ (mg/kg)</u>
Glycol Ether DB	1-5	100	112-34-5	300 (oral, rat)
Aqua Ammonia	0.1-1	n/av	7664-41-7	1200 (oral, rat)

Section III: Physical Data

Initial boil point : n/av Deg C. at 760 mm Hg
Vapour Pressure: n/av mm Hg at 20 Deg C.
Vapour Density (air =1): n/av
Evaporation rate (butyl acetate =1): n/av
Physical state: Liquid
Odour Threshold: n/av
Freezing point: n/av
pH: 9-10
Specific gravity: >1.0 at 25 Deg. C

Section IV: Fire and Explosion Data

Flashpoint: n/a Deg. C () Open Cup (X) Closed Cup
Flammable Limits LFL: n/av UFL: n/av
Extinguishing Media: (X) Foam (X) Water Fog (X) Dry Chemical
(X) Carbon Dioxide

Hazardous Combustion Products: Oxides of carbon and nitrogen. May form toxic materials including carbon dioxide, carbon monoxide.

Firefighting Procedures: Wear self-contained breathing apparatus and fight fires from a safe distance. A water stream may be used to cool surrounding containers.

Special Fire and Explosion Hazards: Vapour may heavier than air and may travel a considerable distance to a source of ignition. Never use a welding torch on or near a drum (even empty) because solvent vapours can ignite explosively. All containers larger than five gallons must be grounded when material is transferred.

Section V: Health Hazard Data

Exposure Limits: Exposure limits for this product have not been established. We suggest exposures be kept well below the lowest TLV reported in Section II.

Effects of Acute Exposure:

Eyes: Irritation
Inhalation: Large concentrations may cause respiratory tract irritation and headache, nausea, dizziness, incoordination and unconsciousness.
Skin: Prolonged exposure may cause irritation. Product may be absorbed through the skin.
Ingestion: Severe irritation of mouth and throat.

Effects of Chronic Exposure:

Eyes: N/av
Inhalation: Chronic exposure to high concentrations of solvent vapour can result in anemia, neurological effects and liver and kidney damage.
Skin: Dermatitis and cracking.
Ingestion: N/av

Section VI: Reactivity Data

Chemical stability: This material is chemically stable.

Reactivity: This material will not react under anticipated conditions of use and storage.

Incompatibility: Avoid contact with strong acids, alkalines and oxidizing agents.

Hazardous Decomposition Products: This material will not decompose under anticipated conditions of use and storage.

Section VII: Preventative Measures

Protective Equipment:

Respiratory Protection:	Wear self-contained breathing apparatus where levels of vapour are high.
Eye Protection:	Always wear safety glasses.
Other:	To avoid skin contact wear neoprene gloves, and protective clothing and boots.

Protective Controls: Ensure adequate ventilation. Ensure that ventilation and electrical systems are non-sparking.

General Precautions:

Storage:	Store in a closed container and in a cool and well ventilated area, away from sources of heat and ignition. Guard against the accumulation of static discharge. Hazardous product residue may remain in empty container.
Handling:	Use non-sparking tools, and ground all equipment used in handling this product

Spill / Leak Procedure:

For small spills, eliminate all sources of ignition and absorb the product with a rag. Transfer the rag to a container approved for the temporary storage of flammable materials. For larger spills, eliminate all sources of ignition and increase ventilation. Prevent from entering sewers or watercourses by diking with sand or earth. Absorb the product with sand or earth. Using non-sparking shovels, transfer to a container approved for the temporary storage of large amount flammable material. Consult the appropriate authorities for proper disposal.

Waste Disposal Method: Consult the appropriate authorities.

Section VIII: First Aid Measures

Inhalation:	Remove victim from exposure. Administer artificial respiration or oxygen if breathing has stopped. Get immediate medical attention.
Eyes:	Flush eyes with water for at least 15 minutes. Get immediate medical attention if irritation persists.
Skin:	Wash with soap and water. Get medical attention if irritation persists.
Ingestion:	Do not induce vomiting. Keep at rest. Get immediate medical attention.

Section XI: Preparation Information

Prepared by: K. Mushani

Note: This information is provided in good faith. Although it is based on data from sources deemed to be reliable, Quest Inks and Coatings cannot guarantee its accuracy, and assumes no responsibility for conditions resulting from its use.