


# TRICAN MATERIAL SAFETY DATA SHEET

SECTION 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION		
<b>Product Name</b>	<b>AS-1</b>	<b>Code</b>
<b>Supplier</b>	Trican Well Service Ltd. 2900, 645 – 7 <sup>th</sup> Ave S.W. Calgary, Alberta, T2P 4G8 For Product Information/MSDS Call: 403-266-0202 or 403-723-3688 (8:00 AM-5:00 PM CST, Monday – Friday)	<b>Revision Date</b>
<b>Product Uses</b>	Work-over Fluid	<b>Supersedes Date</b> August 17, 2004
<b>24 Hour Emergency Numbers</b>	CANUTEC 613-996-6666 (Canada 24 hours)	<b>Preparation Date</b> April 19, 2008
<b>WHMIS (Pictograms)</b> 		<b>WHMIS (Classification)</b> <b>B3</b> – Combustible Liquid D1A-Very toxic material causing immediate and serious effects. D2A- Very toxic material causing Other toxic effects. <b>D2B</b> – Toxic materials causing other toxic effects
This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the Material Safety Data Sheet contains all information required by the CPR.		

SECTION 2. COMPOSITION AND INFORMATION ON INGREDIENTS					
Name	CAS #	%	TLV	LD(50)	LC(50)*
Kerosene Distillate	8008-20-6	60-100	TWA 200 mg/m <sup>3</sup> Skin (ACGIH)	5000 mg/kg Rat Oral	2000 mg/kg Rabbit Skin
2-Butoxyethanol	111-76-2	1-5	TWA 20 ppm (ACGIH)	1.2 g/kg Mouse Oral	486 ppm 4hr Rat
Xylene	1330-20-7	7-10	TWA 100 ppm (ACGIH) STEL 150 ppm (ACGIH)	Not Available	5000 ppm 4hr Rat
Alkylbenzene Sulphonic Acid	27176-87-0	1-5	Not Available	890 mg/kg Rat Oral	9.6 mg/L 96 hour
Please consult with local authorities for acceptable provincial exposure limits since values can vary from jurisdiction to jurisdiction. *All LC(50) are based on a four hour exposure unless otherwise noted.					

SECTION 3. HAZARDS IDENTIFICATION	
<b>Hazard Summary</b>	Flammable. Harmful by inhalation. Irritating to respiratory system. Will burn skin and eyes, harmful if swallowed. May cause pain and second-degree burns after a few minutes contact. Acidosis, CNS depression, renal injury, hematuria, oxaluria, ARDS and hypotension. Pulmonary damage, transient CNS depression or excitement and secondary effects of hypoxia, infection, pneumatocele formation and chronic lung dysfunction. Avoid contact with skin and eyes. CNS effects and irritation.
<b>Routes of Exposure</b>	Eyes, skin, inhalation and ingestion.
<b>Potential Acute Health Effects</b>	<p><b>Eyes Contact</b> May be irritating with prolonged or repeated exposure.</p> <p><b>Skin Contact/Absorption</b> Prolonged or repeated contact can result in dry, cracked skin or dermatitis.</p> <p><b>Inhalation</b> May (in increased exposure) cause headache, dizziness, loss of appetite, weakness, loss of coordination and consciousness.</p> <p><b>Ingestion</b> Pulmonary aspiration hazard if swallowed and vomiting occurs.</p>
<b>Medical Conditions Aggravated by Exposure</b>	Not Available
<b>See Toxicological Information (Section 11)</b>	

<b>Additional Hazard Identification Remarks</b>	Not Available
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<b>SECTION 4. FIRST AID MEASURES</b>	
<b>Skin Contact</b>	Wash with mild soap and water. Remove and wash contaminated clothing and wash before reuse. See a physician if irritation develops.
<b>Eye Contact</b>	Flush eyes immediately with clean, cool water for 15 minutes or until irritation subsides. See a physician if irritation persists.
<b>Inhalation</b>	Remove to fresh air (using proper respiratory protection for the rescuer if exposed person(s) is unable to move on their own). Administer artificial respiration if breathing has stopped. Get prompt medical attention.
<b>Ingestion</b>	DO NOT induce vomiting. Rinse out the remaining contents of the mouth with either milk or water, WITHOUT swallowing the rinse. NEVER give anything by mouth to an unconscious person. Call a physician immediately.
<b>Notes to Physician</b>	Not Available
<b>Additional First Aid Remarks</b>	Not Available

<b>SECTION 5. FIRE AND EXPLOSION DATA</b>	
<b>Conditions of Flammability</b>	Released vapours may form flammable/explosive concentrations in confined spaces. Care needs to be taken when opening drums or tank hatches to avoid exposing headspaces to ignition sources. Containers should be grounded to receiving containers when the product is transferred.
<b>Extinguishing Media</b>	Small Fires: Dry chemical, CO <sub>2</sub> , water spray or regular foam. Large Fires: Water spray, fog or regular foam.
<b>Protective Clothing (Fire)</b>	Wear positive pressure self-contained breathing apparatus (SCBA). Full body protection clothing is highly recommended.
<b>Hazardous combustion Products</b>	Not Available
<b>Sensitivity to Mechanical Impact</b>	May be sensitive to static discharge.
<b>Sensitivity to Static Discharge</b>	Not sensitive to mechanical impact.
<b>Special Remarks on Fire Hazards</b>	Use water spray or fog; do not use straight streams. Move containers from fire area if you can do it without risk.


<b>SECTION 6. ACCIDENTAL RELEASE MEASURES</b>	
<b>Leak and Spill Procedures</b>	<p>Put on appropriate personal protective equipment. Keep personnel removed and upwind of spill. Shut off all ignition sources; no flares, smoking or flames in hazard area. Approach release from upwind. Shut off leak if it can be done safely. Contain spilled material. Keep out of waterways. Dike large spills and use a non-sparking or explosion proof means to transfer material to an appropriate container for disposal. For small spills add absorbent (soil may be used in the absence of other suitable materials) scoop up material and place in a sealed, liquid-proof container. Note that flammable vapours may form an ignitable mixture with air. Vapours may travel considerable distances from spill and flash back if ignited. Waste must be disposed of in accordance with federal, provincial and local environmental control regulations.</p> <p>***</p> <p>Issue "hazard" warning. Eliminate all ignition sources. Isolate hazard area and restrict access. Try to work upwind of spill. Avoid direct contact with material. Wear NIOSH approved self-contained breathing apparatus (if applicable) and protective clothing.</p> <p>Prevent spilled material from entering sewers, watercourses or low-lying areas.</p> <p>Stop leak only if safe to do so. Dike and contain land spills with inert material (earth, clay or sand). For large spills, remove by mechanical means and place in containers. Absorb residue or small spills with inert absorbent material and remove to non-leaking containers for disposal. Flush area with water to remove trace residue.</p> <p>Dispose of recovered materials as in section 13. Notify fire and environmental agencies.</p> <p>Provincial and federal regulations may require that environmental and/or other agencies be notified of a spill incident. Spill area must be cleaned and</p>

	restored to original condition or to the satisfaction of authorities.
<b>Additional Accidental Release Measures Remarks</b>	Not Available

## SECTION 7. HANDLING AND STORAGE

<b>Handling Procedure and Equipment</b>	<p>Put on appropriate personal protective equipment. Avoid contact with eyes, skin and clothing. Avoid breathing vapours or spray mists. Use only with adequate ventilation. Store in a dry, cool and well ventilated area. Keep away from heat, sparks and flame. Keep away from incompatibles. Keep container tightly closed and dry. To avoid fire or explosion, ground container equipment and personnel before handling product.</p> <p>*****</p> <p>Maintain good personal hygiene. Wear appropriate personal protective equipment and avoid contact with skin, eyes or clothing. No smoking, eating or drinking allowed when using this product. Wash thoroughly after handling product. Avoid breathing vapours and prolonged or repeated contact with skin or eyes. Use adequate ventilation. Locate safety shower and eyewash station in use area.</p> <p>Empty containers may contain product residue. Follow labeled warnings even after container is emptied. Do not cut, drill, grind or weld on or near container.</p> <p>Air dry and then launder contaminated clothing prior to reuse. Store product-contaminated rags in container with tight-fitting lid.</p>
<b>Storage Requirements</b>	<p>Store in a cool, well-ventilated area, away from incompatibles. Keep container tightly closed when not in use. Store in totally enclosed equipment, designed to avoid ignition and human contact. Store in an isolated building that is cool and well ventilated. Storage tanks should be above ground, over an area sealed on the bottom and diked to hold entire contents.</p>
<b>Additional Accidental Release Measures Remarks</b>	Not Available

## SECTION 8. EXPOSURE CONTROL/PERSONAL PROTECTION

<b>Engineering Controls</b>	<p>Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapours or particles below their respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to the work-station location.</p>
<b>Personal Protection</b>	<p>Personal Protective Equipment recommendations are based on anticipated known manufacturing and use conditions. These conditions are expected to result in only incidental exposure. A thorough review of the job tasks and conditions by a safety professional is recommended, however, to determine the level of personal protective equipment appropriate for these job tasks and conditions.</p> <p><b>Respirator</b> Respirator use is not expected to be necessary under normal conditions of use. In poorly ventilated areas, emergency situations or if exposure may or does exceed exposure limits use a NIOSH/MSHA approved atmosphere-supplying respirator or an air-purifying respirator for organic vapours.</p> <p><b>Hands</b> Nitrile or Laminated film gloves.</p> <p><b>Eyes</b> Chemical safety glasses or goggles and face shield.</p> <p><b>Body</b> Wear long sleeves to prevent repeated or prolonged skin contact.</p> <p><b>Feet</b> Steeptoed, chemical resistant boots.</p> <p><b>Other</b> Emergency eyewash fountains and safety showers should be in the immediate vicinity of any potential exposure. Remove contaminated clothing and launder before reuse.</p>
<b>Protective Clothing (Pictograms)</b>	
<b>Additional Exposure Control Remarks</b>	Not Available

## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Physical State</b>	Liquid
<b>Odour and Appearance</b>	Petroleum odour; clean to slight yellow in colour

<b>Odour Threshold</b>	Not Available
<b>Specific Gravity</b>	0.84 kg/L @ 25°C
<b>Flashpoint</b>	48°C (Tag closed cup)
<b>Upper Flammable Limit (% by volume)</b>	6.0%
<b>Lower Flammable Limit (% by volume)</b>	1.1%
<b>Autoignition Temperature</b>	Not Available.
<b>Vapour Density (air=1)</b>	Not Available
<b>Vapour Pressure</b>	Not Available
<b>Evaporation Rate</b>	Not Available
<b>Boiling Point</b>	> 100°C
<b>Freezing Point</b>	Not Available
<b>Pour Point</b>	Not Available
<b>pH</b>	Not Available
<b>Viscosity</b>	Not Available
<b>Solubility in Water</b>	Nil
<b>Coefficient of Water/Oil</b>	Not Available
<b>Physical Chemical Comments</b>	

## SECTION 10. STABILITY AND REACTIVITY DATA

<b>Chemical Stability</b>	Stable
<b>Conditions of Instability</b>	Not Available
<b>Incompatible Material</b>	Strong acids, peroxides and chlorine.
<b>Conditions of Reactivity</b>	This product is sensitive to static discharge.
<b>Hazardous Decomposition Products</b>	Combustion can result in the evolution of CO <sub>2</sub> , CO, and oxides of sulfur.
<b>Hazardous Polymerization</b>	Will not occur.
<b>Special Stability &amp; Reactivity Remarks</b>	Not Available

## SECTION 11. TOXICOLOGICAL INFORMATION

<b>Component Toxicological Information</b>	
<b>Acute Toxicity</b>	
1) Kerosene Distillate [8008-20-6]	Oral (LD50): Acute: 5000 mg/kg Rat Dermal (LD50): Acute: 2000 mg/kg Rabbit
2) 2-Butoxyethanol [111-76-2]	Oral (LD50): Acute: 1.2 g/kg Mouse Vapour (LC50): Acute: 486 ppm Rat
3) Xylene [1330-20-7]	Vapour (LC50): Acute: 5000 ppm Rat
4) Alkylbenzene Sulphonic Acid [27176-87-0]	Oral (LD50): Acute: 890 mg/kg Rat Vapour (LC50): Acute: 9.6 mg/L 96 hour
<b>Effects of Acute Exposure</b>	<i>See Hazards Identification (Section 3)</i>
<b>Effects of Chronic Exposure</b>	Hematologic, hepatotoxic, renal, neurological, neuropsychiatric and carcinogenic effects. Dehydration, electrolyte abnormalities, acidosis, eczema and skin irritation. Spontaneous abortion and/or congenital defects.
<b>Irritancy of Product</b>	Irritant to skin, eyes and respiratory system.
<b>Skin Sensitization</b>	Not a sensitizer.
<b>Respiratory Sensitization</b>	Not a sensitizer.
<b>Carcinogenicity</b>	Confirmed animal carcinogen (ACGIH A3).
<b>Reproductive Toxicity</b>	Major congenital malformations, toxicosis, miscarriage, hemorrhage during childbirth and infertility. Is a reproductive toxin.
<b>Teratogenicity</b>	Not Available
<b>Embryotoxicity</b>	Not Available
<b>Mutagenicity</b>	Not mutagenic
<b>Synergistic Products/Effects</b>	Components may operate in a synergistic manner.
<b>Other Adverse Effects</b>	Not Available

## SECTION 12. ECOLOGICAL INFORMATION

<b>Ecotoxicity</b>	Not Available
<b>BOD5 and COD</b>	Not Available
<b>Biodegradable/OECD</b>	Not Available
<b>Toxicity of the Products of Biodegradation</b>	Not Available
<b>Special Remarks</b>	Do not allow product or run-off from fire control to enter storm or sanitary sewers, lakes, rivers, streams or public waterways. Block off drains and ditches. May be harmful to aquatic life.

### SECTION 13. DISPOSAL CONSIDERATIONS

Responsibility for proper waste disposal rests with the generator of the waste. Dispose of any waste material in accordance with all applicable federal, provincial and local regulations.

**Additional Waste Remarks** Note that these regulations may also apply to empty containers, liners and rinsate. Processing, use, dilution or contamination of this product may cause its physical and chemical properties to change.

### SECTION 14. TRANSPORT INFORMATION

**TDG Classification**

Kerosene  
Class 3, UN1223, PG III



**Marine Pollutant** Not applicable.  
**Additional TDG Information** Not applicable.  
**Emergency Response Guide** Guide No. 128  
**Page Number** Page 204

### SECTION 15. REGULATORY INFORMATION

**Canadian Regulations**



**WHMIS**

This product has been classified in accordance with the hazard criteria of the Controlled Product Regulations (CPR) and the MSDS contains all information required by the CPR. Class B3, D2B

**Environmental Regulations**

Not available.

**DSL Inventory**

All components of this product are either on the Domestic Substances List (DSL), the Non-Domestic Substances List (NDSL) or exempt.

**TSCA Inventory Status**

All components are included or are exempted from listing on the US Toxic Substances Control Act Inventory.

This product contains the following components that are subject to the reporting requirements of TSCA Section 12(b) if exported from the United States.

**International Regulations**

**European Union**

All components are included or are exempted from listing on the European Inventory of Existing Commercial Chemical Substances or the European List of Notified Chemical Substances.

**ILO Risk and Safety Phrases**

Risk Phrases: 20/21/22-37/38-10  
Harmful by inhalation, in contact with skin and if swallowed. Irritating to respiratory system and skin. Flammable.  
Safety Phrases: (2-)24/25  
Avoid contact with skin and eyes.  
Symbols: Xn,F,T,P  
Harmful, Flammable, Toxic, Poisonous.

**Other Regulatory Information**

No further regulatory information is available.

### SECTION 16. OTHER INFORMATION

**Other Special Considerations** Format Change; New Issue

**Trican Well Service Ltd. Disclaimer**

*NOTE: The information on this MSDS is based on data which is considered to be accurate. Trican Well Service Ltd., however, makes no guarantees or warranty, either expressed or implied of the accuracy or completeness of this information.*

*The conditions or methods of handling, storage, use and disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of this product.*

*This MSDS was prepared and is to be used for this product. If the product is used as a component in another product, this MSDS information may not be applicable.*

END OF MATERIAL SAFETY DATA