

SAFETY DATA SHEET

Section 1: IDENTIFICATION

Product Identifier: T-2001

Other Means of Identification: None known

Recommended Use: Drilling Fluids Additive

Supplier: Bri-Chem Supply Ltd.
27075 Acheson Road
Acheson, AB T7X 6B1

Phone Number: 780-962-9490

Emergency Phone: CHEMTREC 1-800-424-9300, 24/7

Section 2: HAZARD(S) IDENTIFICATION

Physical Hazards:	Flammable liquids	Category 2
Health Hazards:	Acute toxicity, oral	Category 4
	Acute toxicity, dermal	Category 4
	Acute toxicity, inhalation	Category 3
	Skin corrosion/irritation	Category 1A
	Serious eye damage/irritation	Category 1
	Carcinogenicity	Category 1B
	Reproductive toxicity	Category 1
	Specific target organ toxicity following single exposure	Category 1
	Specific target organ toxicity following single exposure	Category 3 – Narcotic effects
	Specific target organ toxicity following repeated exposure	Category 1
	Aspiration hazard	Category 1
	Health hazards not otherwise classified	Category 1
	Environmental Hazards	Hazardous to the aquatic environment, acute hazard
Hazardous to the aquatic environment, long-term hazard		Category 2

Label Elements:



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Signal Word:	Danger
Hazard Statements:	Highly flammable liquid and vapour. Harmful if swallowed. May be fatal if swallowed and enters airways. Harmful in contact with skin. Causes severe skin burns and eye damage. Causes serious eye damage. Toxic if inhaled. May cause drowsiness or dizziness. May cause cancer. May damage fertility or the unborn child. Causes damage to organs. Causes damage to organs through prolonged or repeated exposure. Toxic to aquatic life. Toxic to aquatic life with long lasting effects. Presents a health hazard which is not otherwise classified.
Precautionary Statement	
Prevention:	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Keep container tightly closed. Ground and bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting equipment. Use non-sparking tools. Take action to prevent static discharges. Do not breathe mist/vapours. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Avoid release to the environment. Wear protective gloves/protective clothing/eye protection/face protection.
Response:	IF SWALLOWED: Immediately call a POISON CENTRE/doctor. Do NOT induce vomiting. IF SWALLOWED: rinse mouth. Do NOT induce vomiting. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. IF INHALED: Remove person to fresh air and keep comfortable for breathing. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTRE/doctor. Take off contaminated clothing and wash it before reuse. In case of fire: Use appropriate media to extinguish. Collect spillage.
Storage:	Keep cool. Store in a well-ventilated place. Keep container tightly closed. Store locked up.
Disposal:	Dispose of contents/container in accordance with local/regional/national/international regulations.
Other Hazards:	None known

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Supplemental Information: 31.5 % of the mixture consists of component(s) of unknown acute oral toxicity. 34.5 % of the mixture consists of component(s) of unknown acute dermal toxicity. 39 % of the mixture consists of component(s) of unknown acute hazards to the aquatic environment. 39 % of the mixture consists of component(s) of unknown long-term hazards to the aquatic environment.

Section 3: COMPOSITION / INFORMATION ON INGREDIENTS

Mixtures

Chemical Name	Common Name and Synonyms	CAS Number	%
Benzene, dimethyl		1330-20-7	50-60
Distillates (petroleum, catalytic reformer fractionator residue, low boiling)		68477-31-6	5-10
Ethylbenzene		100-41-4	5-10
Methyl Alcohol		67-56-1	5-10
Butylamine		109-73-9	1-5
Naphthalene		91-20-3	1-5
Solvent naphtha (petroleum), heavy arom		64742-94-5	1-5
Sulfuric acid		7664-93-9	1-5
Toluene		108-88-3	1-5

All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

Section 4: FIRST-AID MEASURES

Inhalation: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Oxygen or artificial respiration if needed. Do not use mouth-to-mouth method if victim inhaled the substance. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Call a poison center or doctor/physician.

Skin Contact: Take off immediately all contaminated clothing. Rinse skin with water/shower. Call a physician or poison control centre immediately. Chemical burns must be treated by a physician. Wash contaminated clothing before reuse.

Eye Contact: Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician or poison control centre immediately.

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Ingestion:	Call a physician or poison control centre immediately. Rinse mouth. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. Do not use mouth-to-mouth method if victim ingested the substance. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.
Most Important Symptoms and Effects, Acute and Delayed:	Aspiration may cause pulmonary oedema and pneumonitis. May cause drowsiness and dizziness. Headache. Nausea, vomiting. Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result. Prolonged exposure may cause chronic effects.
Indication or Immediate Medical Attention and Special Treatment Needed:	Provide general supportive measures and treat symptomatically. Thermal burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. Chemical burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. Keep victim warm. Keep victim under observation. Symptoms may be delayed.
General Information:	Take off all contaminated clothing immediately. IF exposed or concerned: Get medical advice/attention. If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance. Wash contaminated clothing before reuse.

Section 5: FIRE-FIGHTING MEASURES

Suitable Extinguishing Media:	Water fog. Foam. Carbon dioxide (CO ₂). Dry chemical powder, carbon dioxide, sand or earth may be used for small fires only.
Unsuitable Extinguishing Media:	Do not use water jet as an extinguisher, as this will spread the fire.
Special Hazards Arising from the Chemical:	Vapours may form explosive mixtures with air. Vapours may travel considerable distance to a source of ignition and flash back. This product is a poor conductor of electricity and can become electrostatically charged. If sufficient charge is accumulated, ignition of flammable mixtures can occur. To reduce potential for static discharge, use proper bonding and grounding procedures. This liquid may accumulate static electricity when filling properly grounded containers. Static electricity accumulation may be significantly increased by the

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	presence of small quantities of water or other contaminants. Material will float and may ignite on surface of water. During fire, gases hazardous to health may be formed.
Special Protective Equipment and Precautions for Firefighters:	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Fire Fighting Equipment/Instructions:	In case of fire and/or explosion do not breathe fumes. Move containers from fire areas if you can do so without risk.
Specific Methods:	Use standard firefighting procedures and consider the hazards of other involved materials.
General Fire Hazards:	Highly flammable liquid and vapour.

Section 6: ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment, and Emergency Procedures:	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Wear appropriate protective equipment and clothing during clean-up. Do not breathe mist/vapours. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Use appropriate containment to avoid environmental contamination. Transfer by mechanical means such as vacuum truck to a salvage tank or other suitable container for recovery or safe disposal. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.
Methods and Materials for Containment and Cleaning Up:	Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep combustibles (wood, paper, oil etc) away from spilled material. Take precautionary measures against static discharge. Use only non-sparking tools. Prevent entry into waterways, sewer, basements or confined areas. Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Following product recovery, flush area with water. Small Spills: Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal. Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination. Never return spills to original containers for re-use. Put material in suitable, covered, labeled containers. For waste disposal, see section 13 of the SDS.

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Environmental Precautions: Avoid release to the environment. Inform appropriate managerial or supervisory personnel of all environmental releases. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground. Use appropriate containment to avoid environmental contamination.

Section 7: HANDLING AND STORAGE

Precautions for Safe Handling: Respiratory protection is “only required” when sprays are present in the air.

Conditions for Safe Storage, Including any Incompatibilities: Store locked up. Keep away from heat, sparks and open flame. Prevent electrostatic charge build-up by using common bonding and grounding techniques. Eliminate sources of ignition. Avoid spark promoters. Ground/bond container and equipment. These alone may be insufficient to remove static electricity. Store in a cool, dry place out of direct sunlight. Store in tightly closed container. Store in a well-ventilated place. Keep in an area equipped with sprinklers. Store away from incompatible materials (see Section 10 of the SDS).

Section 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

Recommendations listed in this section indicate the type of equipment, which will provide protection against overexposure to this product. Conditions of use, adequacy of engineering or other control measures, and actual exposures will dictate the need for specific protective devices at your workplace.

Occupational Exposure Limits

US. ACGIH Threshold Limit Values

Components	Type	Value	Form
Benzene, dimethyl (CAS 1330-20-7)	STEL	150 ppm	-
	TWA	100 ppm	-
Butylamine (CAS 109-73-9)	Ceiling	5 ppm	-
Ethylbenzene (CAS 100-41-4)	TWA	20 ppm	-
Methyl Alcohol (CAS 67-56-1)	STEL	250 ppm	-
	TWA	200 ppm	-
Naphthalene (CAS 91-20-3)	TWA	10 ppm	-
Sulfuric Acid (CAS 7664-93-9)	TWA	0.2 mg/m ³	Thoracic fraction
Toluene (CAS 108-88-3)	TWA	20 ppm	-

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Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2)

Components	Type	Value
Benzene, dimethyl (CAS 1330-20-7)	STEL	651 mg/m ³
		150 ppm
	TWA	434 mg/m ³
		100 ppm
Butylamine (CAS 109-73-9)	Ceiling	15 mg/m ³
		5 ppm
Ethylbenzene (CAS 100-41-4)	STEL	543 mg/m ³
		125 ppm
	TWA	434 mg/m ³
		100 ppm
Methyl Alcohol (CAS 67-56-1)	STEL	328 mg/m ³
		250 ppm
	TWA	262 mg/m ³
		200 ppm
Naphthalene (CAS 91-20-3)	STEL	79 mg/m ³
		15 ppm
	TWA	52 mg/m ³
		10 ppm
Sulfuric Acid (CAS 7664-93-9)	STEL	3 mg/m ³
		TWA
Toluene (CAS 108-88-3)	TWA	188 mg/m ³
		50 ppm

Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended)

Components	Type	Value	Form
Benzene, dimethyl (CAS 1330-20-7)	STEL	150 ppm	
	TWA	100 ppm	
Butylamine (CAS 109-73-9)	Ceiling	5 ppm	
Ethylbenzene (CAS 100-41-4)	TWA	20 ppm	
Methyl Alcohol (CAS 67-56-1)	STEL	250 ppm	
	TWA	200 ppm	
Naphthalene (CAS 91-20-3)	STEL	15 ppm	
	TWA	10 ppm	

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Sulfuric Acid (CAS 7664-93-9)	TWA	0.2 mg/m ³	Mist
Toluene (CAS 108-88-3)	TWA	20 ppm	

Canada. Manitoba OELs (Reg. 217/2006, The Workplace Safety and Health Act)

Components	Type	Value	Form
Benzene, dimethyl (CAS 1330-20-7)	STEL	150 ppm	
	TWA	100 ppm	
Butylamine (CAS 109-73-9)	Ceiling	5 ppm	
Ethylbenzene (CAS 100-41-4)	TWA	20 ppm	
Methyl Alcohol (CAS 67-56-1)	STEL	250 ppm	
	TWA	200 ppm	
Naphthalene (CAS 91-20-3)	TWA	10 ppm	
Sulfuric Acid (CAS 7664-93-9)	TWA	0.2 mg/m ³	Thoracic fraction
Toluene (CAS 108-88-3)	TWA	20 ppm	

Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents)

Components	Type	Value	Form
Benzene, dimethyl (CAS 1330-20-7)	STEL	150 ppm	
	TWA	100 ppm	
Butylamine (CAS 109-73-9)	Ceiling	5 ppm	
Ethylbenzene (CAS 100-41-4)	TWA	20 ppm	
Methyl Alcohol (CAS 67-56-1)	STEL	250 ppm	
	TWA	200 ppm	
Naphthalene (CAS 91-20-3)	TWA	10 ppm	
Sulfuric Acid (CAS 7664-93-9)	TWA	0.2 mg/m ³	Thoracic fraction
Toluene (CAS 108-88-3)	TWA	20 ppm	

Canada. Quebec OELs. (Ministry of Labor - Regulation respecting occupational health and safety)

Components	Type	Value	Form
Benzene, dimethyl (CAS 1330-20-7)	STEL	651 mg/m ³	
		150 ppm	
	TWA	434 mg/m ³	
Butylamine (CAS 109-73-9)	Ceiling	100 ppm	
		15 mg/m ³	
		5 ppm	

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Ethylbenzene (CAS 100-41-4)	STEL	543 mg/m ³ 125 ppm
	TWA	434 mg/m ³ 100 ppm
Methyl Alcohol (CAS 67-56-1)	STEL	328 mg/m ³ 250 ppm
	TWA	262 mg/m ³ 200 ppm
Naphthalene (CAS 91-20-3)	STEL	79 mg/m ³ 15 ppm
	TWA	52 mg/m ³ 10 ppm
Sulfuric Acid (CAS 7664-93-9)	STEL	3 mg/m ³
	TWA	1 mg/m ³
Toluene (CAS 108-88-3)	TWA	188 mg/m ³ 50 ppm

Canada. Saskatchewan OELs (Occupational Health and Safety Regulations, 1996, Table 21)

Components	Type	Value	Form
Benzene, dimethyl (CAS 1330-20-7)	15 minute	150 ppm	
	8 hour	100 ppm	
Butylamine (CAS 109-73-9)	Ceiling	5 ppm	
Ethylbenzene (CAS 100-41-4)	15 minute	125 ppm	
Methyl Alcohol (CAS 67-56-1)	8 hour	100 ppm	
Naphthalene (CAS 91-20-3)	15 minute	15 ppm	
	8 hour	10 ppm	
Sulfuric Acid (CAS 7664-93-9)	15 minute	0.6 mg/m ³	Thoracic fraction
	8 hour	0.2 mg/m ³	Thoracic fraction
Toluene (CAS 108-88-3)	15 minute	60 ppm	
	8 hour	50 ppm	

Consult provincial or territorial exposure values, as may apply.

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Biological Limit Values

ACGIH Biological Exposure Indices

Components	Value	Determinant	Specimen	Sampling Time
Benzene, dimethyl (CAS 1330-20-7)	1.5 g/g	Methylhippuric acid	Creatinine in urine	*
Ethylbenzene (CAS 100-41-4)	0.15 g/g	Sum of mandelic acid and phenylglyoxylic acid	Creatinine in urine	*
Methyl Alcohol (CAS No 67-56-1)	15 mg/l	Methanol	Urine	*
Toluene (CAS No 108-88-3)	0.3 mg/g	o-Cresol, with hydrolysis	Creatinine in urine	*
	0.3 mg/g	Toluene	Urine	*
	0.2 mg/g	Toluene	Blood	*

* - For sampling details, please see the source document.

Exposure Guidelines

Canada – Alberta OELs: Skin Designation

Butylamine (CAS 109-73-9)	Can be absorbed through the skin.
Methyl Alcohol (CAS 67-56-1)	Can be absorbed through the skin.
Naphthalene (CAS 91-20-3)	Can be absorbed through the skin.
Toluene (CAS 108-88-3)	Can be absorbed through the skin.

Canada - British Columbia OELs: Skin designation

Butylamine (CAS 109-73-9)	Can be absorbed through the skin.
Methyl Alcohol (CAS 67-56-1)	Can be absorbed through the skin.
Naphthalene (CAS 91-20-3)	Can be absorbed through the skin.

Canada - Manitoba OELs: Skin designation

Butylamine (CAS 109-73-9)	Can be absorbed through the skin.
Methyl Alcohol (CAS 67-56-1)	Can be absorbed through the skin.
Naphthalene (CAS 91-20-3)	Can be absorbed through the skin.

Canada - Ontario OELs: Skin designation

Butylamine (CAS 109-73-9)	Can be absorbed through the skin.
Methyl Alcohol (CAS 67-56-1)	Can be absorbed through the skin.
Naphthalene (CAS 91-20-3)	Can be absorbed through the skin.

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Canada - Quebec OELs: Skin designation

Butylamine (CAS 109-73-9) Can be absorbed through the skin.

Methyl Alcohol (CAS 67-56-1) Can be absorbed through the skin.

Naphthalene (CAS 91-20-3) Can be absorbed through the skin.

Canada – Saskatchewan OELs: Skin Designation

Butylamine (CAS 109-73-9) Can be absorbed through the skin.

Methyl Alcohol (CAS 67-56-1) Can be absorbed through the skin.

Naphthalene (CAS 91-20-3) Can be absorbed through the skin.

Toluene (CAS 108-88-3) Can be absorbed through the skin.

US ACGIH Threshold Limit Values: Skin designation

Butylamine (CAS 109-73-9) Can be absorbed through the skin.

Methyl Alcohol (CAS 67-56-1) Can be absorbed through the skin.

Naphthalene (CAS 91-20-3) Can be absorbed through the skin.

Appropriate Engineering Controls:

Explosion-proof general and local exhaust ventilation. Good general ventilation should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Eye wash facilities and emergency shower must be available when handling this product.

Individual Protection Measures, Such as Personal Protective Equipment:

The following are recommendations only for the use of PPE. These recommendations cannot anticipate the variety of workplaces where the product will be used, nor how the product will be used in a variety of applications and processes. In determining appropriate PPE and engineering controls, it is the duty of the employer / user to evaluate their use of this product in accordance with the requirements of the local jurisdiction, and, if necessary, in conjunction with a professional industrial hygienist.

Eye/Face Protection:

Chemical respirator with organic vapour cartridge and full facepiece.

Skin Protection

Hand Protection:

Wear appropriate chemical resistant gloves.

Other:

Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended.

Respiratory Protection:

Chemical respirator with organic vapour cartridge and full facepiece.

Thermal Hazards:

Wear appropriate thermal protective clothing, when necessary.

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General Hygiene Considerations:

Observe any medical surveillance requirements. When using do not smoke. Keep away from food and drink. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Physical State:	Liquid
Form:	Liquid
Colour:	Dark red
Odour:	Aromatic
Odour Threshold:	Not available
pH:	11.5
Melting Point/Freezing Point:	-35°C (-31°F)
Initial Boiling Point and Boiling Range:	133.17°C (271.7°F) estimated
Flash Point:	11.1°C (52.0°F)
Evaporation Rate:	Not available
Flammability (Solid, Gas):	Not applicable
Upper/Lower Flammability or Explosive Limits	
Flammability Limit – Lower (%):	Not available
Flammability Limit – Upper (%):	Not available
Explosive Limit – Lower (%):	Not available
Explosive Limit – Lower (%):	Not available
Vapor Pressure:	Not available
Vapour Density:	Not available
Relative Density:	Not available
Solubility(ies)	
Solubility (water):	Not available
Partition Coefficient (n-Octanol/Water):	Not available
Auto-Ignition Temperature:	Not available

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Decomposition Temperature:	Not available
Viscosity:	Not available
Other Information	
Density:	7.77 lbs/gal 0.93 g/ml
Explosive Properties:	Not explosive
Flammability Class:	Flammable IB estimated
Oxidizing Properties:	Not oxidising
Percent Volatile:	66.96% estimated
Specific Gravity:	0.93
VOC:	66.96% estimated

Section 10: STABILITY AND REACTIVITY

Reactivity:	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical Stability:	Material is stable under normal conditions.
Possibility of Hazardous Reactions:	Hazardous polymerisation does not occur.
Conditions to Avoid:	Avoid heat, sparks, open flames and other ignition sources. Avoid temperatures exceeding the flash point. Contact with incompatible materials.
Incompatible Materials	Strong acids. Strong oxidising agents. Halogens.
Hazardous Decomposition Products:	No hazardous decomposition products are known.

Section 11: TOXICOLOGICAL INFORMATION

Information on Likely Routes of Exposure

Inhalation:	Toxic if inhaled. May cause damage to organs by inhalation. May cause drowsiness and dizziness. Headache. Nausea, vomiting.
Skin Contact:	Causes severe skin burns. Harmful in contact with skin.
Eye Contact:	Causes serious eye damage.
Ingestion:	Causes digestive tract burns. Harmful if swallowed. Droplets of the product aspirated into the lungs through ingestion or vomiting may cause a serious chemical pneumonia.

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Symptoms Related to the Physical, Chemical and Toxicological Characteristics:

Aspiration may cause pulmonary oedema and pneumonitis. May cause drowsiness and dizziness. Headache. Nausea, vomiting. Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result.

Information on Toxicological Effects

Acute Toxicity: May be fatal if swallowed and enters airways. Toxic if inhaled. Harmful in contact with skin.

Note: When no route specific LD50 data is available for an acute toxin, the converted acute toxicity point estimate was used in the calculation of the product's ATE (Acute Toxicity Estimate).

Components	Species	Test Results
Benzene, dimethyl- (CAS 1330-20-7)		
Acute		
Dermal		
LD50	Rabbit	>43 g/kg
Inhalation		
LC50	Rat	6350 mg/l, 4 hours
Oral		
LD50	Rat	3523 – 8600 mg/kg
ETHYLBENZENE (CAS 100-41-4)		
Acute		
Dermal		
LD50	Rabbit	17800 mg/kg
Oral		
LC50	Rat	3500 mg/kg
METHYL ALCOHOL (CAS 67-56-1)		
Dermal		
LD50	Rabbit	15800 mg/kg
Inhalation		
LC50	Cat	85.41 mg/l, 4.5 hours
	Rat	64000 ppm, 4 hours
		87.5 mg/l, 6 hours
Oral		
LD50	Dog	8000 mg/kg
	Monkey	2 g/kg
	Mouse	7300 mg/kg
	Rabbit	14.4 g/kg
	Rat	5628 mg/kg

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NAPHTHALENE (CAS 91-20-3)

Acute

Dermal

LD50 Rabbit > 2 g/kg

Oral

LC50 Rat 490 mg/kg

TOLUENE (CAS 108-88-3)

Acute

Dermal

LD50 Rabbit 12120 mg/kg

Skin Corrosion/Irritation: Causes severe skin burns and eye damage.

Serious Eye Damage/Irritation: Causes serious eye damage.

Respiratory or Skin Sensitization

Respiratory Sensitization: Due to partial or complete lack of data the classification is not possible.

Skin Sensitization: Due to partial or complete lack of data the classification is not possible.

Germ Cell Mutagenicity: Due to partial or complete lack of data the classification is not possible.

Carcinogenicity: May cause cancer.

ACGIH Carcinogens

Benzene, dimethyl- (CAS 1330-20-7) A4 Not classifiable as a human carcinogen.

ETHYLBENZENE (CAS 100-41-4) A3 Confirmed animal carcinogen with unknown relevance to humans.

NAPHTHALENE (CAS 91-20-3) A3 Confirmed animal carcinogen with unknown relevance to humans.

TOLUENE (CAS 108-88-3) A4 Not classifiable as a human carcinogen.

Canada - Alberta OELs: Carcinogen category

SULFURIC ACID (CAS 7664-93-9) Suspected human carcinogen.

Canada - Manitoba OELs: carcinogenicity

Benzene, dimethyl- (CAS 1330-20-7) Not classifiable as a human carcinogen.

ETHYLBENZENE (CAS 100-41-4) Confirmed animal carcinogen with unknown relevance to humans.

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NAPHTHALENE (CAS 91-20-3) Confirmed animal carcinogen with unknown relevance to humans.
 TOLUENE (CAS 108-88-3) Not classifiable as a human carcinogen.

IARC Monographs. Overall Evaluation of Carcinogenicity

Benzene, dimethyl- (CAS 1330-20-7) 3 Not classifiable as to carcinogenicity to humans.
 ETHYLBENZENE (CAS 100-41-4) 2B Possibly carcinogenic to humans.
 NAPHTHALENE (CAS 91-20-3) 2B Possibly carcinogenic to humans.
 TOLUENE (CAS 108-88-3) 3 Not classifiable as to carcinogenicity to humans.

US. National Toxicology Program (NTP) Report on Carcinogens

NAPHTHALENE (CAS 91-20-3) Reasonably anticipated to be a human carcinogen.

Reproductive Toxicity: Components in this product have been shown to cause birth defects and reproductive disorders in laboratory animals. May damage fertility or the unborn child.

Specific Target Organ Toxicity – Single Exposure: Causes damage to organs. May cause drowsiness and dizziness.

Specific Target Organ Toxicity – Repeated Exposure: Causes damage to organs through prolonged or repeated exposure.

Aspiration Hazard: May be fatal if swallowed and enters airways.

Chronic Effects: Prolonged inhalation may be harmful. Causes damage to organs through prolonged or repeated exposure. Prolonged exposure may cause chronic effects.

Section 12: ECOLOGICAL INFORMATION

Ecotoxicity: Toxic to aquatic life with long lasting effects.

Component	Species	Test Results
Benzene, dimethyl- (CAS 1330-20-7)		
Aquatic Fish	LC50 Bluegill (Lepomis macrochirus)	7.711 – 9.591 mg/l, 96 hours
BUTYLAMINE (CAS 109-73-9)		
Aquatic Crustacea	EC50 Water flea (Daphnia magna)	> 100 mg/l, 48 hours
Aquatic Fish	LC50 Inland silverside (Menidia beryllina)	24 mg/l, 96 hours

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ETHYLBENZENE (CAS 100-41-4)

Aquatic

Crustacea	EC50	Water flea (Daphnia magna)	1.37 – 4.4 mg/l, 48 hours
Fish	LC50	Fathead minnow (Pimephales promelas)	7.5 – 11 mg/l, 96 hours

METHYL ALCOHOL (CAS 67-56-1)

Aquatic

Crustacea	EC50	Water flea (Daphnia magna)	> 10000 mg/l, 48 hours
Fish	LC50	Fathead minnow (Pimephales promelas)	> 100 mg/l, 96 hours

NAPHTHALENE (CAS 91-20-3)

Aquatic

Crustacea	EC50	Water flea (Daphnia magna)	1.09 – 3.4 mg/l, 48 hours
Fish	LC50	Pink salmon (Oncorhynchus gorbuscha)	1.11 – 1.68 mg/l, 96 hours

SULFURIC ACID (CAS 7664-93-9)

Aquatic

Crustacea	EC50	Daphnia magna	> 100 mg/l, 48 hours
	LC50	Aesop shrimp (Pandalus montagui)	42.5 mg/l, 48 hours
		Cockle (Cerastoderma edule)	200 - 500 mg/l, 48hours
		Common shrimp, sand shrimp (Crangon crangon)	70 - 80 mg/l, 48 hours
Fish	LC50	Green or European shore crab (Carcinus maenas)	70 - 80 mg/l, 48 hours
		Starry, European flounder (platichthys flesus)	100 - 330 mg/l, 48 hours
		Western mosquitofish (gambusia affinis)	42 mg/l, 24 hours 42 mg/l, 48 hours 42 mg/l, 96 hours

TOLUENE (CAS 108-88-3)

Aquatic

Crustacea	EC50	Water flea (Daphnia magna)	5.46 – 9.83 mg/l, 48 hours
Fish	LC50	Coho salmon, silver salmon (Oncorhynchus kisutch)	8.11 mg/l, 96 hours

Persistence and Degradability:

No data is available on the degradability of any ingredients in the mixture.

Bioaccumulative Potential

Partition Coefficient n-Octanol/Water (log Kow)

Benzene, dimethyl-	3.12-3.2
BUTYLAMINE	0.97
ETHYLBENZENE	3.15
METHYL ALCOHOL	-0.77
NAPHTHALENE	3.3
TOLUENE	2.73

SAFETY DATA SHEET

Mobility in Soil: No data available

Other Adverse Effects: The product contains volatile organic compounds which have a photochemical ozone creation potential.

Section 13: DISPOSAL CONSIDERATIONS

Disposal Instructions: Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.

Local Disposal Regulations: Dispose in accordance with all applicable regulations.

Hazardous Waste Code: The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

Waste from Residues/Unused Products: Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see Disposal instructions).

Contaminated Packaging: Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

Section 14: TRANSPORT INFORMATION

Transportation information on packaging may be different from that listed.

Transport in Bulk According to Annex II of MARPOL 73/78 and the IBC Code: Not established

TDG:



General Information: IMDG Regulated Marine Pollutant.

TDG

UN Number: UN2924

UN Proper Shipping Name: FLAMMABLE LIQUIDS, CORROSIVE, NOS (METHANOL, SULPHURIC ACID)

Transport Hazard Class(es)

Class: 3

Subsidiary Risk: 8

SAFETY DATA SHEET

Packing Group: II

Environmental Hazards: Not available

Special Precautions for User: Read safety instructions, SDS and emergency procedures before handling.

Section 15: REGULATORY INFORMATION

Canadian Regulations: This product has been classified in accordance with the hazard criteria of the HPR and the SDS contains all the information required by the HPR.

Canada DSL Inventory: Registration Status

1-Butanamine (CAS 109-73-9)	Listed
Benzene, dimethyl- (CAS 1330-20-7)	Listed
Benzene, ethyl- (CAS 100-41-4)	Listed
Benzene, methyl- (CAS 108-88-3)	Listed
Distillates, petroleum, catalytic reformer fractionator residue, low boiling (CAS 68477-31-6)	Listed
METHANOL (CAS 67-56-1)	Listed
NAPHTHALENE (CAS 91-20-3)	Listed
Solvent naphtha, petroleum, heavy arom. (CAS 64742-94-5)	Listed
SULFURIC ACID (CAS 7664-93-9)	Listed

Canada Environmental Emergency Regulations Schedule 1: Listed Substance

ETHYLBENZENE (CAS 100-41-4)	Listed
NAPHTHALENE (IN LIQUID FORM) (CAS 91-20-3)	Listed
TOLUENE (CAS 108-88-3)	Listed
XYLENES (CAS 1330-20-7)	Listed

Canada NPRI (Supplier Notification Required): Listed substance

ETHYLBENZENE (CAS 100-41-4)	Listed
METHANOL (CAS 67-56-1)	Listed
NAPHTHALENE (CAS 91-20-3)	Listed
SULPHURIC ACID (CAS 7664-93-9)	Listed
TOLUENE (CAS 108-88-3)	Listed
XYLENE, ALL ISOMERS (CAS 1330-20-7)	Listed

Controlled Drug and Substances Act: Not regulated.

Export Control List (CEPA 1999, Schedule 3): Not listed.

Greenhouse Gases: Not listed.

SAFETY DATA SHEET

Ontario. Toxic Substances. Toxic Reduction Act, 2009. Regulation 455/09 (July 1, 2011)

Benzene, dimethyl- (CAS 1330-20-7)
 ETHYLBENZENE (CAS 100-41-4)
 METHYL ALCOHOL (CAS 67-56-1)
 NAPHTHALENE (CAS 91-20-3)
 SULFURIC ACID (CAS 7664-93-9)
 TOLUENE (CAS 108-88-3)

Precursor Control Regulations

SULFURIC ACID (CAS 7664-93-9)	Class B
TOLUENE (CAS 108-88-3) Class B	Class B

Superfund Amendments and Reauthorization Act of 1986 (SARA)

SARA 311/312 Hazardous Chemicals: Yes

Classified Hazard Categories:

Flammable (gases, aerosols, liquids, or solids)
 Acute toxicity (any route of exposure)
 Skin corrosion or irritation
 Serious eye damage or eye irritation
 Carcinogenicity
 Reproductive toxicity
 Specific target organ toxicity (single or repeated exposure)
 Aspiration hazard
 Hazard not otherwise classified (HNOC)

SARA 313 (TRI Reporting)

Chemical Name	CAS Number	% by wt.
Benzene, dimethyl-	1330-20-7	50-60
ETHYLBENZENE	100-41-4	5-10
METHYL ALCOHOL	67-56-1	5-10
NAPHTHALENE	91-20-3	1-5
SULFURIC ACID	7664-93-9	1-5
TOLUENE	108-88-3	1-5

Other Federal Regulations

Drug Enforcement Administration (DEA). List 2, Essential Chemicals (21 CFR 1310.02(b) and 1310.04(f)(2) and Chemical Code Number

SULFURIC ACID (CAS 7664-93-9)	6552
TOLUENE (CAS 108-88-3)	6594

Drug Enforcement Administration (DEA). List 1 & 2 Exempt Chemical Mixtures (21 CFR 1310.12(c))

SULFURIC ACID (CAS 7664-93-9)	20 %WV
TOLUENE (CAS 108-88-3)	35 %WV

SAFETY DATA SHEET

DEA Exempt Chemical Mixtures Code Number

SULFURIC ACID (CAS 7664-93-9)	6552
TOLUENE (CAS 108-88-3)	594

US State Regulations

US. California Proposition 65

California Proposition 65 - CRT: Listed date/Carcinogenic substance

ETHYLBENZENE (CAS 100-41-4)	Listed: June 11, 2004
NAPHTHALENE (CAS 91-20-3)	Listed: April 19, 2002

California Proposition 65 - CRT: Listed date/Developmental toxin

METHYL ALCOHOL (CAS 67-56-1)	Listed: March 16, 2012
TOLUENE (CAS 108-88-3)	Listed: January 1, 1991

US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))

Benzene, dimethyl- (CAS 1330-20-7)
Distillates (petroleum), catalytic reformer fractionator residue, low boiling (CAS 68477-31-6)
ETHYLBENZENE (CAS 100-41-4)
METHYL ALCOHOL (CAS 67-56-1)
NAPHTHALENE (CAS 91-20-3)
SULFURIC ACID (CAS 7664-93-9)
TOLUENE (CAS 108-88-3)

California Proposition 65

California Proposition 65 - CRT: Listed date/Carcinogenic Substance

ETHYLBENZENE (CAS 100-41-4)	Listed: June 11, 2004
NAPHTHALENE (CAS 91-20-3)	Listed: April 19, 2002

California Proposition 65 - CRT: Listed date/Developmental Toxin

METHYL ALCOHOL (CAS 67-56-1)	Listed: March 16, 2012
TOLUENE (CAS 108-88-3)	Listed: January 1, 1991

US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))

Benzene, dimethyl- (CAS 1330-20-7)
Distillates (petroleum), catalytic reformer fractionator residue, low-boiling (CAS 68477-31-6)
ETHYLBENZENE (CAS 100-41-4)
METHYL ALCOHOL (CAS 67-56-1)
NAPHTHALENE (CAS 91-20-3)
SULFURIC ACID (CAS 7664-93-9)
TOLUENE (CAS 108-88-3)

SAFETY DATA SHEET

International Regulations

Stockholm Convention:	Not applicable
Rotterdam Convention:	Not applicable
Kyoto Protocol:	Not applicable
Montreal Protocol:	Not applicable
Basel Convention:	Not applicable

International Inventories

Country(s) or Region	Inventory Name	On Inventory (Yes/No)*
Australia	Australian Inventory of Chemical Substances (AICS)	No
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	No
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	No
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	No
New Zealand	New Zealand Inventory	No
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	No
Taiwan	Taiwan Chemical Substance Inventory (TCSI)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

US Federal Regulations: This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D): Not regulated

SAFETY DATA SHEET

CERCLA Hazardous Substance List (40 CFR 302.4):

Benzene, dimethyl- (CAS 1330-20-7)	Listed
BUTYLAMINE (CAS 109-73-9)	Listed
ETHYLBENZENE (CAS 100-41-4)	Listed
METHYL ALCOHOL (CAS 67-56-1)	Listed
NAPHTHALENE (CAS 91-20-3)	Listed
SULFURIC ACID (CAS 7664-93-9)	Listed
TOLUENE (CAS 108-88-3)	Listed

SARA 304 Emergency Release Notification:	SULFURIC ACID (CAS 7664-93-9)	1000 lbs
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OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053): Not listed

Superfund Amendments and Reauthorization Act of 1986 (SARA)

SARA 302 Extremely Hazardous Substance

Chemical Name	CAS Number	Reportable Quantity (Pounds)	Threshold Planning Quantity (Pounds)	Threshold Planning Quantity, Lower Value (Pounds)	Threshold Planning Quantity, Upper Value (Pounds)
SULFURIC ACID	7664-93-9	1000	1000	-	-

Section 16: OTHER INFORMATION

Disclaimer:

The information contained herein is based on data available to us and is believed to be true and accurate. However, no guarantee or warranty is provided, expressed or implied, by the company or its subsidiaries regarding accuracy of the information, the hazards connected with the use of the material, or the results to be obtained from the use thereof. Since the use of this product is within the exclusive control of the user, we do not assume any responsibility and expressly disclaim any liability for any use of this product. It is the user's responsibility to determine the conditions of safe use, storage, and disposal of the product. Compliance with all applicable federal, provincial, and local regulations remains the responsibility of the user.

Prepared by: Bri-Chem Supply Ltd.
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