Advance Chemicals Ltd.

Safety Data Sheet

Section 01 - Identification

Product Identifier	Reefer Cleaner – 200
Other Means of Identification	None
Product Use and Restrictions on Use	Removes soil, food concentrates and other grime from floors and other surfaces of cold storage and freezer areas.
Initial Supplier Identifier	Advance Chemicals Ltd. 1500 Quebec Avenue Saskatoon, SK. Canada S7K 1V7
Prepared By	ClearTech Industries Inc. Technical Writer Phone: 1 (800) 387-7503
24-Hour Emergency Phone	Phone: 1 (306) 664 – 2522

Section 02 - Hazard Identification

GHS-Classification

STOT-Single Exposure Category 1

Physical Hazards

Flammable Liquid Category 3

Danger

Hazards Statements
H370 – Causes damage to the optic nerve and central nervous system.
H226 – Flammable liquid and vapour.

Pictograms

Precautionary Statements
P405 – Store locked up.
P403 + P235 – Store in a well-ventilated place. Keep cool.
P210 – Keep away from heat, sparks, open flames, and hot surfaces. — No smoking.
P240 – Ground/bond container and receiving equipment.
P241 – Use explosion-proof electrical, ventilating, lighting, and equipment.
P242 – Use only non-sparking tools.

P243 – Take precautionary measures against static discharge.
P370 + P378 – In case of fire: Use carbon dioxide, dry chemical powder, appropriate foam, water spray, or fog for extinction.
P260 – Do not breathe mist, vapours or spray.
P270 – Do not eat, drink or smoke when using this product.
P321 – Specific treatment: Both ethanol and fomepizol are effective antidotes for methanol poisoning, although fomepizol is preferred.
P280 – Wear protective gloves, protective clothing, eye protection, and face protection.
P303 + P361 + P353 – IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P308 + P311 – IF exposed or concerned: Call a POISON CENTER or doctor/physician.
P501 – Dispose of contents/container in accordance with all federal, provincial, and/or local regulations including the Canadian Environmental Protection Act.

Section 03 - Composition / Information on Ingredients

Chemical Name	CAS Number	Weight %	Unique Identifiers
Methanol	67-56-1	25-40%	
Water and/or ingredients not classified as hazardous under the Hazardous Products Regulations		60-75%	

Section 04 - First Aid Measures

Inhalation

Remove victim to fresh air. Give artificial respiration only if breathing has stopped. If breathing is difficult, give oxygen. Seek immediate medical attention.

Skin Contact / Absorption

Remove contaminated clothing. Rinse skin with lukewarm, gently flowing water for 30 minutes. Seek medical attention. Completely decontaminate clothing, shoes and leather goods before re-use or discard.

Eye Contact

Immediately rinse eye(s) with lukewarm, gently flowing water for at least 30 minutes, while forcibly holding eyelid(s) open to ensure complete irrigation of the eye tissue. If a contact lens is present, remove only if easy to do so. If irritation persists, seek medical attention.

Ingestion

NEVER give anything by mouth if vitim is rapidly losing consciousness, is unconscious or convulsing. Have victim rinse mouth with water. DO NOT INDUCE VOMITING. If vomiting occurs naturally, have victim rinse mouth with water again. Seek immediate medical attention.

Additional Information

The chemical is very toxic. Take proper precautions to ensure your own safety before assisting others. The severity of outcome following methanol ingestion may be more related to the time between ingestion and treatment, rather than the amount ingested. There is a need for rapid treatment. Both ethanol and fomepizol are effective antidotes for methanol poisoning, although fomepizol is preferred.

Section 05 - Fire Fighting Measures

Suitable Extinguishing Media

Carbon dioxide, dry chemical powder, appropriate foam, water spray, or fog. Water may be effective for cooling, but may not be effective for extinguishing a fire.

Unsuitable Extinguishing Media

Not Available

Specific Hazards Arising From the Chemical

During a fire, carbon monoxide, carbon dioxide and irritating and toxic gases such as formaldehyde may be generated. Closed containers may rupture violently and release large amounts of product when exposed to fire or excess heat for a period of time.

Special Protective Equipment and Precautions for Fire-Fighters

Wear NIOSH-approved self-contained breathing apparatus and protective gear.

Further Information

Not Available

Section 06 - Accidental Release Measures

Personal Precautions / Protective Equipment / Emergency Procedures	This material is a VERY TOXIC, FLAMMABLE liquid. Wear appropriate personal protective equipment. Ventilate area. Only enter area with PPE. Stop or reduce leak if safe to do so.
Environmental Precautions	Prevent material from entering sewers, waterways or confined spaces.
Methods and Materials for Containment and Cleaning Up	SMALL SPILLS: Soak up spill with non-reactive absorbent material. Put material in suitable, labelled containers. Flush area with water. Contaminated absorbent material may pose the same hazards as the spilled product. LARGE SPILLS: Contact fire and emergency services and supplier for advice.

Section 07 - Handling and Storage

Precautions for Safe Handling	Use proper equipment for lifting and transporting all containers. Use sensible industrial hygiene and housekeeping practices. Wash thoroughly after handling. Avoid all situations that could lead to harmful exposure.
Conditions for Safe Storage	Store this material in a cool, dry, well-ventilated area away from oxidizing materials and corrosive atmospheres, in a fireproof area. Keep amount in storage to a minimum.
Incompatibilities	Strong oxidizing agents, acids and alkalis.

Section 08 - Exposure Controls and Personal Protection

Exposure Limit(s)

Component	Regulation	Type of Listing	Value
Methanol	ACGIH	TLV-TWA	200ppm
	ACGIH	TLV-STEL	250ppm

Engineering Control(s)

Ventilation Requirements	Mechanical ventilation (dilution or local exhaust), process or personnel enclosure and control of process conditions must be provided in accordance with all fire codes and regulatory requirements. Supply sufficient replacement air to make up for air removed by exhaust systems.
Other	Emergency shower and eyewash must be available and tested in accordance with regulations and be in close proximity.

Protective Equipment

Eyes/Face	Chemical safety goggles and a face shield should be worn while the product is being handled. Contacts should not be worn as they may contribute to severe eye damage.
Hand Protection	Impervious gloves of chemically resistant material (rubber or PVC) should be worn at all times. Wash contaminated clothing and dry thoroughly before reuse.
Skin and Body Protection	Body suits, aprons, and/or coveralls of chemical resistant material should be worn at all times. Wash contaminated clothing and dry thoroughly before reuse. Impervious boots of chemically resistant material should be worn at all times. No special footwear is required other than what is mandated at place of work.
Respiratory Protection	NIOSH/OSHA RECOMMENDATIONS FOR METHYL ALCOHOL CONCENTRATIONS IN AIR: Up to 2000 ppm: SAR Up to 5000 ppm: SAR operated in a continuous-flow mode. Up to 6000 ppm: SAR with a tight-fitting face piece operated in a continuous-flow mode; or full-face piece SCBA r full-face piece SAR.

	EMERGENCY OR PLANNED ENTRY INTO UNKNOWN CONCENTRATIONS OR IDLH CONDITIONS: Positive pressure, full-face piece SCBA; or positive pressure, full-face piece SAR with an auxiliary positive pressure SCBA. NOTE: the IDLH concentration for methanol is 6000 ppm.
Thermal Hazards	Not Available

Section 09 - Physical and Chemical Properties

Appearance

Physical State	Liquid
Colour	Blue
Odour	Blended
Odour Threshold	Not Available

Property

pH	10.6
Melting Point/Freezing Point	-35°C
Initial Boiling Point and Boiling Range	Not Available
Flash Point	29°C
Evaporation Rate	Not Available
Flammability	Flammable liquid.
Upper Flammable Limit	36%
Lower Flammable Limit	5.5%
Vapour Pressure (mm Hg, 20^{o}C)	Not Available
Vapour Density (Air=1)	Not Available
Relative Density	Not Available
Solubility(ies)	Soluble in water
Partition Coefficient: n-octanol/water	Not Available
Auto-ignition Temperature	385°C
Decomposition Temperature	Not Available
Viscosity	Not Available
Explosive Properties	None
Specific Gravity (Water=1)	0.943
% Volatiles by Volume	Not Available

Formula	Mixture
Molecular Weight	Not Available

Section 10 - Stability and Reactivity

Reactivity	Not Available
Stability	Normally stable.
Possibility of Hazardous Reactions	None known.
Conditions to Avoid	Heat, open flames, static discharge, sparks and other ignition sources.
Incompatible Materials	Strong oxidizing agents, acids and alkalis.
Hazardous Decomposition Products	Decomposes on heating to produce carbon monoxide and formaldehyde.

Section 11 - Toxicological Information

Acute Toxicity Estimate

Component	Oral LD_{50}	Dermal LD_{50}	Inhalation LC_{50}
Reefer Cleaner 200	5.9 g/kg	45.3 g/kg	245.7 mg/L

This product has been classified in accordance with the Hazardous Products Regulations using ATE formula documented in the GHS standard.

Chronic Toxicity – Carcinogenicity

Component	IARC
Reefer Cleaner 200	None of the components present in this material at concentrations equal to or greater than 0.1% are listed by IARC, NTP, or OSHA, as a carcinogen.

Skin Corrosion/Irritation	Methanol can be absorbed through the skin and produce harmful effects.
Ingestion	Toxic. Can cause central nervous system depression with symptoms such as nausea, headache, vomiting, dizziness, incoordination and an appearance of drunkeness.
Inhalation	Toxic. Cause mild central nervous system depression with symptoms such as nausea, headache, vomiting, dizziness, incoordination and an appearance of drunkeness. This latent period is then followed by development of metabolic acidosis and severe visual effects. Symptoms such as headached, dizziness, nause and vomiting, followed in more severe cases by abdominal and muscular pain and difficult periodic breathin have been observed.
Serious Eye Damage/Irritation	Methanol is a moderate to severe eye irritant.
Respiratory or Skin Sensitization	Not Available
Germ Cell Mutagenicity	Not Available
Reproductive Toxicity	Not Available
STOT-Single Exposure	May cause damage to the optic nerve and central nervous system.
STOT-Repeated Exposure	Not Available
Aspiration Hazard	Not Available

Synergistic Materials	In animals, high concentrations of methanol can increase the toxicity of other chemicals, particularly liver toxins like carbon tetrachloride. Ethanol significantly decreases the toxicity of methanol, because it competes for the same metabolic enzymes, and has been used to treat methanol poisoning.

Section 12 – Ecological Information

Ecotoxicity

Component	Toxicity to Algae	Toxicity to Fish	Toxicity to Daphnia and Other Aquatic Invertebrates
Methanol	EC_{50}(Green algae, 48hr): 60.4 mg/L	LC_{50}(Lepomis macrochirus, 96hr): 15,400 mg/L	EC_{50}(Daphnia magna, 24hr): >10,000 mg/L

Biodegradability	Not Available
Bioaccumulation	Not Available
Mobility	Not Available
Other Adverse Effects	Not Available

Section 13 – Disposal Considerations

Waste From Residues/Unused Products	Dispose in accordance with all federal, provincial, and/or local regulations including the Canadian Environmental Protection Act.
Contaminated Packaging	Dispose in accordance with all federal, provincial, and/or local regulations including the Canadian Environmental Protection Act.

Section 14 – Transport Information

UN Number	UN1993
UN Proper Shipping Name	FLAMMABLE LIQUID, N.O.S. (Methanol)
Transport Hazard Class(es)	3
Packaging Group	III
Environmental Hazards	Not listed as a marine pollutant under Canadian TDG Regulations, schedule III.
Special Precautions	Not Available
Transport in Bulk	Not Available

Additional Information

Packing Group	Limited Quantity Index
I	0
II	1 L
III	5 L

TDG

Other	Secure containers (full and/or empty) with suitable hold down devises during shipment and ensure all caps, valves, or closures are secured in the closed position.

TDG PRODUCT CLASSIFICATION: This product has been classified on the preparation date specified at section 14 of this MSDS / SDS, for transportation in accordance with the requirements of part 2 of the Transportation of Dangerous Goods Regulations. If applicable, testing and/or published test data regarding the classification of this product are listed in the references at section 16 of this MSDS / SDS.

Section 15 – Regulatory Information

NOTE: THE PRODUCT LISTED ON THIS SDS HAS BEEN CLASSIFIED IN ACCORDANCE WITH THE HAZARD CRITERIA OF THE CANADIAN CONTROLLED PRODUCTS REGULATIONS. THIS SDS CONTAINS ALL INFORMATION REQUIRED BY THOSE REGULATIONS.

Section 16 – Other Information

Preparation Date November 13, 2015

Note: The responsibility to provide a safe workplace remains with the user. The user should consider the health hazards and safety information contained herein as a guide and should take those precautions required in an individual operation to instruct employees and develop work practice procedures for a safe work environment. The information contained herein is, to the best of our knowledge and belief, accurate. However, since the conditions of handling and use are beyond our control, we make no guarantee of results, and assume no liability for damages incurred by the use of this material. It is the responsibility of the user to comply with all applicable laws and regulations.

Attention: Receiver of the chemical goods / SDS coordinator

As part of our commitment to the Canadian Association of Chemical Distributors (CACD) Responsible Distribution® initiative, ClearTech Industries Inc. and its associated companies require, as a condition of sale, that you forward the attached Safety Data Sheet(s) to all affected employees, customers, and end-users. ClearTech will send any available supplementary handling, health, and safety information to you at your request.

If you have any questions or concerns please call our customer service center.

References:

1) CHEMINFO
2) eChemPortal
3) TOXNET
4) Transportation of Dangerous Goods Canada
5) HSDB
6) ECHA
7) PAN

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