



CIMCO REFRIGERATION OIL TYPE "A"

SDS Preparation Date (mm/dd/yyyy): 02/25/2016

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SECTION 1. IDENTIFICATION

Product identifier used on the label

: **CIMCO REFRIGERATION OIL TYPE "A"**

Product Code(s) : CIMCO A

Recommended use of the chemical and restrictions on use

: Cimco Refrigeration Oil A is designed for use in refrigeration compressors containing ammonia gas.
Restriction on use: None known

Chemical family : Petroleum oil

Name, address, and telephone number of the supplier:

CIMCO Refrigeration

65 Villiers Street
Toronto, ON, Canada
M5A 3S1

Supplier's Telephone # : (416) 465 7581

24 Hr. Emergency Tel # : 1-800-451-8346; 1-760-602-8703 (3E Company)

Name, address, and telephone number of the manufacturer:

Refer to supplier

SECTION 2. HAZARDS IDENTIFICATION

Classification of the chemical

Viscous liquid. Hydrocarbon odour.

This material is not classified as hazardous under U.S. OSHA regulations (29CFR 1910.1200) (Hazcom 2012) and Canadian WHMIS regulations (Hazardous Products Regulations) (WHMIS 2015).

Label elements

Signal Word

None required.

Hazard statement(s)

None required.

Precautionary statement(s)

None required.

Other hazards

Other hazards which do not result in classification:

May cause mild eye irritation. Ingestion can cause gastrointestinal irritation, nausea, and diarrhea. Prolonged skin contact may cause dermatitis (rash), characterized by red, dry, itching skin.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Complex mixture.

<u>Chemical name</u>	<u>Common name and synonyms</u>	<u>CAS #</u>	<u>Concentration (% by weight)</u>
Lubricating oils, petroleum, C20-50, hydrotreated neutral oil-based, high-viscosity	Hydrotreated neutral oil-based, high-viscosity	72623-85-9	100.00



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SECTION 4. FIRST-AID MEASURES

Description of first aid measures

- Ingestion* : Do NOT induce vomiting. Never give anything by mouth to an unconscious person. When symptoms persist or in all cases of doubt, seek medical advice.
- Inhalation* : Move to fresh air. If breathing is difficult, give oxygen by qualified medical personnel only. If breathing is irregular or stopped, administer artificial respiration. When symptoms persist or in all cases of doubt, seek medical advice.
- Skin contact* : For skin contact, wash with soap and water while removing contaminated clothing. If skin irritation occurs: Get medical advice/attention. Wash contaminated clothing before reuse.
- Eye contact* : Flush eyes with water for at least 15 minutes while holding eyelids open. If irritation or symptoms develop, seek medical attention.

Most important symptoms and effects, both acute and delayed

- : Direct skin contact may cause slight or mild, transient irritation. Direct eye contact may cause temporary redness. Symptoms may include stinging and tearing. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Indication of any immediate medical attention and special treatment needed

- : Treat symptomatically.

SECTION 5. FIRE-FIGHTING MEASURES

Extinguishing media

- Suitable extinguishing media* : Carbon dioxide (CO2); Dry chemical; Alcohol resistant foam
- Unsuitable extinguishing media* : Do not use water if possible.

Special hazards arising from the substance or mixture / Conditions of flammability

- : Not flammable. Closed containers may build up pressure when exposed to heat and flame. Material can create slippery conditions.

Flammability classification (OSHA 29 CFR 1910.106)

- : Not flammable.

Hazardous combustion products

- : Carbon oxides and other irritating fumes and smoke.

Special protective equipment and precautions for firefighters

- Protective equipment for fire-fighters* : Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA. Firefighters should wear proper protective equipment and self-contained breathing apparatus with full face piece operated in positive pressure mode.
- Special fire-fighting procedures* : Move containers from fire area if safe to do so. Cool closed containers exposed to fire with water spray. Do not allow run-off from fire fighting to enter drains or water courses. Dike for water control.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

- : All persons dealing with the clean-up should wear the appropriate chemically protective equipment. Keep people away from and upwind of spill/leak. Restrict access to area until completion of clean-up. Refer to protective measures listed in sections 7 and 8.

Environmental precautions : Ecological injuries are not known or expected under normal use.

Methods and material for containment and cleaning up



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- : Ventilate the area. Prevent further leakage or spillage if safe to do so. Spilled material will create slippery surfaces. Clean up promptly. Contain and absorb spilled liquid with non-combustible, inert absorbent material (e.g. sand), then place absorbent material into a container for later disposal (see Section 13). For waste disposal, see Section 13 of the SDS. Contact the proper local authorities.

Special spill response procedures

- : If a spill/release in excess of the EPA reportable quantity is made into the environment, immediately notify the national response center in the United States (phone: 1-800-424-8802).
US CERCLA Reportable quantity (RQ): None known.

SECTION 7. HANDLING AND STORAGE

Precautions for safe handling

- : Use with adequate ventilation. Wear suitable protective equipment during handling. Avoid breathing vapours or mists. Wear protective gloves. Avoid contact with skin, eyes and clothing. Keep away from extreme heat and direct flame. Keep container tightly closed when not in use. Wash thoroughly after handling. Spilled material will create slippery surfaces. Clean up promptly.

Conditions for safe storage

- : Store in cool/well-ventilated place. Storage area should be clearly identified, clear of obstruction and accessible only to trained and authorized personnel. Inspect periodically for damage or leaks. Material can create slippery conditions.

Incompatible materials

- : Oxidizing agents

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Limits:

<u>Chemical Name</u>	<u>ACGIH TLV</u>		<u>OSHA PEL</u>	
	<u>TWA</u>	<u>STEL</u>	<u>PEL</u>	<u>STEL</u>
Lubricating oils, petroleum, C20-50, hydrotreated neutral oil-based, high-viscosity	5 mg/m3 (As 'Oil mist, mineral')	10 mg/m3 (As 'Oil mist, mineral')	5 mg/m3 (As 'Oil mist, mineral')	N/Av

Exposure controls

Ventilation and engineering measures

- : Use with adequate ventilation. Apply technical measures to comply with the occupational exposure limits. Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction. In case of insufficient ventilation wear suitable respiratory equipment.

Respiratory protection

- : None required under normal conditions. If airborne concentrations are above the permissible exposure limit or are not known, use NIOSH-approved respirators. Advice should be sought from respiratory protection specialists.

Skin protection

- : Gloves impervious to the material are recommended. Any liquid-tight rubber or vinyl gloves. Advice should be sought from glove suppliers. Wear sufficient clothing to prevent skin contact.

Eye / face protection

- : Safety glasses with side shields

Other protective equipment

- : Other equipment may be required depending on workplace standards. An eyewash station and safety shower should be made available in the immediate working area. Use non-slip safety shoes in areas where spills or leaks can occur.

General hygiene considerations

- : Avoid contact with skin, eyes and clothing. Wash thoroughly after handling. Remove and wash contaminated clothing before re-use. Handle in accordance with good industrial hygiene and safety practice.



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SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : Viscous liquid
Odour : Petroleum odour.
Odour threshold : N/Av
pH : N/Av
Melting/Freezing point : N/Av
Initial boiling point and boiling range
: 380-550°C (716-1022°F)
Flash point : >222°C(431.6°F)
Flashpoint (Method) : N/Av
Evaporation rate (BuAe = 1) : <1
Flammability (solid, gas) : Not applicable.
Lower flammable limit (% by vol.)
: N/Av
Upper flammable limit (% by vol.)
: N/Av
Oxidizing properties : None known.
Explosive properties : Not explosive
Vapour pressure : N/Av
Vapour density : Not available.
Relative density / Specific gravity
: 0.886
Solubility in water : insoluble
Other solubility(ies) : N/Av
Partition coefficient: n-octanol/water or Coefficient of water/oil distribution
: N/Av
Auto-ignition temperature : 260°C (500°F)
Decomposition temperature : N/Av
Viscosity : 57 cSt @ 40°C (104°F);
7.86 cSt @ 100°C (212°F)
Volatiles (% by weight) : Nil
Volatile organic Compounds (VOC's)
: N/Av
Absolute pressure of container
: N/Ap
Flame projection length : N/Ap
Other physical/chemical comments
: Pour Point: -42°C (-44°F)

SECTION 10. STABILITY AND REACTIVITY

Reactivity : Not normally reactive.
Chemical stability : Stable under normal conditions.
Possibility of hazardous reactions
: Hazardous polymerization does not occur.
Conditions to avoid : Avoid excessive heat or cold. Avoid contact with incompatible materials.
Incompatible materials : Oxidizing agents
Hazardous decomposition products
: None known, refer to hazardous combustion products in Section 5.



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SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure:

- Routes of entry inhalation : YES
- Routes of entry skin & eye : YES
- Routes of entry Ingestion : YES
- Routes of exposure skin absorption : NO

Potential Health Effects:

Signs and symptoms of short-term (acute) exposure

Sign and symptoms Inhalation

: No exposure symptoms reported under normal conditions of use.

Sign and symptoms ingestion

: Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Sign and symptoms skin

: May cause mild skin irritation on prolonged contact.

Sign and symptoms eyes

: May cause minor, temporary irritation to eyes. Symptoms may include stinging and tearing.

Potential Chronic Health Effects

: Prolonged skin contact may cause dermatitis (rash), characterized by red, dry, itching skin.

Mutagenicity

: No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Carcinogenicity

: No component of this product present at levels greater than, or equal to, 0.1% is identified as a carcinogen or potential carcinogen by ACGIH, IARC, OSHA, or NTP.

Reproductive effects & Teratogenicity

: Not expected to cause reproductive effects.

Sensitization to material

: None known or reported by the manufacturer.

Specific target organ effects

: No data available to indicate the product, or any components present at greater than 1%, are classified as hazardous for target organ toxicity.

Medical conditions aggravated by overexposure

: Pre-existing skin, eye and respiratory disorders.

Synergistic materials

: None reported by the manufacturer.

Toxicological data

: See below for toxicological data on the substance.

<u>Chemical name</u>	<u>LC₅₀(4hr)</u>	<u>LD₅₀</u>	
	<u>inh, rat</u>	<u>(Oral, rat)</u>	<u>(Rabbit, dermal)</u>
Lubricating oils, petroleum, C20-50, hydrotreated neutral oil-based, high-viscosity	2.18 mg/L 4 h	>5000 mg/kg	>2000 mg/kg

Other important toxicological hazards

: None known or reported by the manufacturer.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

: Not expected to be harmful to aquatic organisms. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment. See the following tables for individual ingredient ecotoxicity data.



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Ecotoxicity data:

<u>Ingredients</u>	CAS No	Toxicity to Fish		
		LC50 / 96h	NOEC / 21 day	M Factor
Lubricating oils, petroleum, C20-50, hydrotreated neutral oil-based, high-viscosity	72623-85-9	>100 mg/L (Fathead minnow)	N/Av	None.

<u>Ingredients</u>	CAS No	Toxicity to Daphnia		
		EC50 / 48h	NOEC / 21 day	M Factor
Lubricating oils, petroleum, C20-50, hydrotreated neutral oil-based, high-viscosity	72623-85-9	N/Av	N/Av	None.

<u>Ingredients</u>	CAS No	Toxicity to Algae		
		EC50 / 96h or 72h	NOEC / 96h or 72h	M Factor
Lubricating oils, petroleum, C20-50, hydrotreated neutral oil-based, high-viscosity	72623-85-9	N/Av	N/Av	None.

Persistence and degradability

: Readily biodegradable.

Bioaccumulation potential

: This product has no known eco-toxicological effects.

<u>Components</u>	<u>Partition coefficient n-octanol/water (log Kow)</u>	<u>Bioconcentration factor (BCF)</u>
Lubricating oils, petroleum, C20-50, hydrotreated neutral oil-based, high-viscosity (CAS 72623-85-9)	N/Av	N/Av

Mobility in soil

: Expected to be ultimately biodegradable

Other Adverse Environmental effects

: None known.

SECTION 13. DISPOSAL CONSIDERATIONS

Handling for Disposal

: Handle in accordance with good industrial hygiene and safety practice. Refer to protective measures listed in sections 7 and 8.

Methods of Disposal

: Dispose in accordance with all applicable federal, state, provincial and local regulations.

RCRA

: If this product, as supplied, becomes a waste in the United States, it may meet the criteria of a hazardous waste as defined under RCRA, Title 40 CFR 261. It is the responsibility of the waste generator to determine the proper waste identification and disposal method. For disposal of unused or waste material, check with local, state and federal environmental agencies.



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SECTION 14. TRANSPORTATION INFORMATION

Regulatory Information	UN Number	UN proper shipping name	Transport hazard class(es)	Packing Group	Label
TDG	None.	Not regulated.	not regulated	none	
TDG Additional information	None.				
49CFR/DOT	None.	Not regulated.	not regulated	none	
49CFR/DOT Additional information	None.				

Special precautions for user : Appropriate advice on safety must accompany the package.

Environmental hazards : This product does not meet the criteria for an environmentally hazardous mixture, according to the IMDG Code. See ECOLOGICAL INFORMATION, Section 12.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

: Not applicable.

SECTION 15 - REGULATORY INFORMATION

US Federal Information:

Components listed below are present on the following U.S. Federal chemical lists:

<u>Ingredients</u>	CAS #	TSCA Inventory	CERCLA Reportable Quantity (RQ) (40 CFR 117.302):	SARA TITLE III: Sec. 302, Extremely Hazardous Substance, 40 CFR 355:	SARA TITLE III: Sec. 313, 40 CFR 372, Specific Toxic Chemical	
					Toxic Chemical	de minimus Concentration
Lubricating oils, petroleum, C20-50, hydrotreated neutral oil-based, high-viscosity	72623-85-9	Yes	N/Ap	N/Av	No	N/Ap

SARA TITLE III: Sec. 311 and 312, SDS Requirements, 40 CFR 370 Hazard Classes: None. ; . Under SARA Sections 311 and 312, the EPA has established threshold quantities for the reporting of hazardous chemicals. The current thresholds are 500 pounds for the threshold planning quantity (TPQ), whichever is lower, for extremely hazardous substances and 10,000 pounds for all other hazardous chemicals.

US State Right to Know Laws:

The following chemicals are specifically listed by individual States:

<u>Ingredients</u>	CAS #	California Proposition 65		State "Right to Know" Lists					
		Listed	Type of Toxicity	CA	MA	MN	NJ	PA	RI
Lubricating oils, petroleum, C20-50, hydrotreated neutral oil-based, high-viscosity	72623-85-9	No	N/Ap	No	No	No	No	No	No



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Canadian Information:

Canadian Environmental Protection Act (CEPA): All ingredients listed appear on the Domestic Substances List (DSL) or Non-Domestic Substances List (NDSL).

Canadian National Pollutant Release Inventory (NPRI): This product contains the following substances listed on the NPRI: None known.

WHMIS information: Refer to Section 2 for a WHMIS Classification for this product.

International Information:

Components listed below are present on the following International Inventory list:

<u>Ingredients</u>	<u>CAS #</u>	<u>European EINECS</u>	<u>Australia AICS</u>	<u>Philippines PICCS</u>	<u>Japan ENCS</u>	<u>Korea KECI/KECL</u>	<u>China IECSC</u>	<u>NewZealand IOC</u>
Lubricating oils, petroleum, C20-50, hydrotreated neutral oil-based, high-viscosity	72623-85-9	276-736-3	Present	Present	(9)-1692	KE-22624	Present	No data available.

SECTION 16. OTHER INFORMATION

Legend

- : ACGIH: American Conference of Governmental Industrial Hygienists
- AICS: Australian Inventory of Chemical Substances
- CA: California
- CAS: Chemical Abstract Services
- CERCLA: Comprehensive Environmental Response, Compensation, and Liability Act of 1980
- CFR: Code of Federal Regulations
- CSA: Canadian Standards Association
- DOT: Department of Transportation
- EC50: Effective Concentration 50%.
- EINECS: European Inventory of Existing Commercial chemical Substances
- ENCS: Existing and New Chemical Substances
- EPA: Environmental Protection Agency
- HSDB: Hazardous Substances Data Bank
- IARC: International Agency for Research on Cancer
- IBC: Intermediate Bulk Container
- IECSC: Inventory of Existing Chemical Substances
- IMDG: International Maritime Dangerous Goods
- IOC: Inventory of Chemicals
- KECI: Korean Existing Chemicals Inventory
- KECL: Korean Existing Chemicals List
- LC: Lethal Concentration
- LD: Lethal Dose
- MA: Massachusetts
- MN: Minnesota
- N/Ap: Not Applicable
- N/Av: Not Available
- NIOSH: National Institute of Occupational Safety and Health
- NJ: New Jersey
- NOEC: No observable effect concentration
- NTP: National Toxicology Program
- OECD: Organisation for Economic Co-operation and Development
- OSHA: Occupational Safety and Health Administration
- PA: Pennsylvania
- PEL: Permissible exposure limit



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PICCS: Philippine Inventory of Chemicals and Chemical Substances
RCRA: Resource Conservation and Recovery Act
RI: Rhode Island
RTECS: Registry of Toxic Effects of Chemical Substances
SARA: Superfund Amendments and Reauthorization Act
SDS: Safety Data Sheet
STEL: Short Term Exposure Limit
TDG: Canadian Transportation of Dangerous Goods Act & Regulations
TLV: Threshold Limit Values
TSCA: Toxic Substance Control Act
TWA: Time Weighted Average
WHMIS: Workplace Hazardous Materials Identification System

References



- : 1. ACGIH, Threshold Limit Values for Chemical Substances and Physical Agents & Biological Exposure Indices for 2016.
- 2. International Agency for Research on Cancer Monographs, searched 2016.
- 3. Canadian Centre for Occupational Health and Safety, CCInfoWeb databases, 2016 (Chempendium, HSDB and RTECs).
- 4. Material Safety Data Sheets from manufacturer.
- 5. US EPA Title III List of Lists - 2016 version.
- 6. California Proposition 65 List - 2016 version.
- 7. OECD - The Global Portal to Information on Chemical Substances - eChemPortal, 2016.

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Other special considerations for handling

: Provide adequate information, instruction and training for operators.

<p><u>Prepared for:</u> CIMCO Refrigeration 65 Villiers Street Toronto, ON, Canada, M5A 3S1 Telephone: 416-465-7581</p>	
<p><u>Prepared by:</u> ICC The Compliance Center Inc. Telephone: (888) 442-9628 (U.S.); (888) 977-4834 (Canada) http://www.thecompliancecenter.com</p>	

DISCLAIMER

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