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## SECTION 1: Identification of the substance/mixture and of the company/undertaking

### 1.1 Product identifier

Product name : REFLO™/MC 46A  
Product code : REFL46A, REFL46ADRX

### 1.2 Relevant identified uses of the substance or mixture and uses advised against

Use of the Substance/Mixture : This product is designed for use in refrigeration compressors containing ammonia gas.

### 1.3 Details of the supplier of the safety data sheet

Manufacturer or supplier's details  
Petro-Canada Europe Lubricants Limited  
Wellington House, Starley Way  
Birmingham International Park Solihull B37 7HB  
United Kingdom

E-mail address of person responsible for the SDS : EUSDS@suncor.com

### 1.4 Emergency telephone number

Emergency telephone number : Suncor Energy: +1 403-296-3000;  
Poison Control Centre: Consult local telephone directory for emergency number(s).

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## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

**Classification (REGULATION (EC) No 1272/2008)**

Not a hazardous substance or mixture.

**Classification (67/548/EEC, 1999/45/EC)**

Not a hazardous substance or mixture.

### 2.2 Label elements

**Labelling (REGULATION (EC) No 1272/2008)**

Not a hazardous substance or mixture.



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### 2.3 Other hazards

None known.

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## SECTION 3: Composition/information on ingredients

### 3.2 Mixtures

#### Hazardous components

Remarks : No hazardous ingredients

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## SECTION 4: First aid measures

### 4.1 Description of first aid measures

- If inhaled : Move to fresh air.  
Artificial respiration and/or oxygen may be necessary.  
Seek medical advice.
- In case of skin contact : In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.  
Wash skin thoroughly with soap and water or use recognized skin cleanser.  
Wash clothing before reuse.  
Seek medical advice.
- In case of eye contact : Remove contact lenses.  
Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.  
Obtain medical attention.
- If swallowed : Rinse mouth with water.  
DO NOT induce vomiting unless directed to do so by a physician or poison control center.  
Never give anything by mouth to an unconscious person.  
Seek medical advice.

### 4.2 Most important symptoms and effects, both acute and delayed

Risks : First aider needs to protect himself.



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#### 4.3 Indication of any immediate medical attention and special treatment needed

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### SECTION 5: Firefighting measures

#### 5.1 Extinguishing media

Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media : No information available.

#### 5.2 Special hazards arising from the substance or mixture

Specific hazards during firefighting : Cool closed containers exposed to fire with water spray.

Hazardous combustion products : Carbon oxides (CO, CO<sub>2</sub>), nitrogen oxides (NO<sub>x</sub>), sulphur oxides (SO<sub>x</sub>), hydrocarbons, smoke and irritating vapours as products of incomplete combustion.

#### 5.3 Advice for firefighters

Further information : Prevent fire extinguishing water from contaminating surface water or the ground water system.

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### SECTION 6: Accidental release measures

#### 6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions : Use personal protective equipment.  
Ensure adequate ventilation.  
Evacuate personnel to safe areas.  
Material can create slippery conditions.  
Mark the contaminated area with signs and prevent access to unauthorized personnel.  
Only qualified personnel equipped with suitable protective equipment may intervene.

#### 6.2 Environmental precautions

Environmental precautions : If the product contaminates rivers and lakes or drains inform respective authorities.

#### 6.3 Methods and material for containment and cleaning up

Methods for cleaning up : Prevent further leakage or spillage if safe to do so.  
Remove all sources of ignition.  
Soak up with inert absorbent material.  
Non-sparking tools should be used.  
Ensure adequate ventilation.



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Contact the proper local authorities.

#### 6.4 Reference to other sections

For personal protection see section 8.

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### SECTION 7: Handling and storage

#### 7.1 Precautions for safe handling

- Advice on safe handling : For personal protection see section 8.  
Smoking, eating and drinking should be prohibited in the application area.  
In case of insufficient ventilation, wear suitable respiratory equipment.  
Avoid contact with skin, eyes and clothing.  
Do not ingest.  
Keep away from heat and sources of ignition.  
Keep container closed when not in use.
- Advice on protection against fire and explosion : None known.
- Hygiene measures : Remove and wash contaminated clothing and gloves, including the inside, before re-use. Wash face, hands and any exposed skin thoroughly after handling.

#### 7.2 Conditions for safe storage, including any incompatibilities

- Requirements for storage areas and containers : Store in original container. Containers which are opened must be carefully resealed and kept upright to prevent leakage.  
Keep in a dry, cool and well-ventilated place. Keep in properly labelled containers. To maintain product quality, do not store in heat or direct sunlight.

#### 7.3 Specific end use(s)

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### SECTION 8: Exposure controls/personal protection

#### 8.1 Control parameters

#### 8.2 Exposure controls

##### Engineering measures

No special ventilation requirements. Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

##### Personal protective equipment

- Eye protection : Wear face-shield and protective suit for abnormal processing problems.

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Hand protection	
Material	: neoprene, nitrile, polyvinyl alcohol (PVA), Viton(R).
Remarks	: Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.
Skin and body protection	: Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place.
Respiratory protection	: Use respiratory protection unless adequate local exhaust ventilation is provided or exposure assessment demonstrates that exposures are within recommended exposure guidelines. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.
Filter type	: organic vapour filter
Protective measures	: Wash hands and face before breaks and immediately after handling the product. Wash contaminated clothing before re-use. Ensure that eyewash station and safety shower are proximal to the work-station location.

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## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

Appearance	: viscous liquid
Colour	: Clear, slightly yellow.
Odour	: Hydrocarbon.
Odour Threshold	: No data available
pH	: No data available
Pour point	: -42 °C (-44 °F)
Boiling point/boiling range	: No data available
Flash point	: 222 °C (432 °F) Method: Cleveland open cup
Fire Point	: 246 °C (475 °F)
Auto-Ignition Temperature	: No data available
Evaporation rate	: No data available

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Flammability (solid, gas)	: Low fire hazard. This material must be heated before ignition will occur.
Upper explosion limit	: No data available
Lower explosion limit	: No data available
Vapour pressure	: No data available
Relative vapour density	: No data available
Density	: 0.86 kg/l (15 °C / 59 °F)
Solubility(ies)	
Water solubility	: insoluble
Partition coefficient: n-octanol/water	: No data available
Viscosity	
Viscosity, kinematic	: 46 cSt (40 °C / 104 °F)
	6.92 cSt (100 °C / 212 °F)
Explosive properties	: Do not pressurise, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.

## 9.2 Other information

No data available

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## SECTION 10: Stability and reactivity

### 10.1 Reactivity

### 10.2 Chemical stability

### 10.3 Possibility of hazardous reactions

Hazardous reactions : Hazardous polymerisation does not occur.  
Stable under normal conditions.

### 10.4 Conditions to avoid

Conditions to avoid : No data available

### 10.5 Incompatible materials

Materials to avoid : Reactive with oxidising agents, acids and alkalis.

### 10.6 Hazardous decomposition products

Hazardous decomposition : May release COx, NOx, SOx, hydrocarbons, diphenylamine,

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products

smoke and irritating vapours when heated to decomposition.

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## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

Information on likely routes of exposure : Eye contact  
Ingestion  
Inhalation  
Skin contact

#### Acute toxicity

**Product:**

Acute oral toxicity : Remarks: No data available

Acute inhalation toxicity : Remarks: No data available

Acute dermal toxicity : Remarks: No data available

#### Skin corrosion/irritation

**Product:**

Remarks: No data available

#### Serious eye damage/eye irritation

**Product:**

Remarks: No data available

#### Respiratory or skin sensitisation

No data available

#### Germ cell mutagenicity

No data available

#### Carcinogenicity

No data available

#### Reproductive toxicity

No data available

#### STOT - single exposure

No data available

#### STOT - repeated exposure



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No data available

**Aspiration toxicity**

No data available

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**SECTION 12: Ecological information**

**12.1 Toxicity**

**Product:**

Toxicity to fish : Remarks: No data available

Toxicity to daphnia and other aquatic invertebrates : Remarks: No data available

Toxicity to algae : Remarks: No data available

Toxicity to bacteria :  
Remarks: No data available

**12.2 Persistence and degradability**

**Product:**

Biodegradability : Remarks: No data available

**12.3 Bioaccumulative potential**

No data available

**12.4 Mobility in soil**

No data available

**12.5 Results of PBT and vPvB assessment**

Not relevant

**12.6 Other adverse effects**

No data available

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**SECTION 13: Disposal considerations**

**13.1 Waste treatment methods**

Product : The product should not be allowed to enter drains, water courses or the soil.  
Offer surplus and non-recyclable solutions to a licensed disposal company.  
Waste must be classified and labelled prior to recycling or disposal.  
Send to a licensed waste management company.  
Dispose of as hazardous waste in compliance with local and





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national regulations.  
Dispose of product residue in accordance with the instructions  
of the person responsible for waste disposal.

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## SECTION 14: Transport information

### International Regulation

**IATA-DGR**

Not regulated as a dangerous good

**IMDG-Code**

Not regulated as a dangerous good

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

Not applicable for product as supplied.

**49 CFR**

Not regulated as a dangerous good

**TDG**

Not regulated as a dangerous good

### Special precautions for user

Not applicable

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## SECTION 15: Regulatory information

### 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

Water contaminating class : WGK 1 slightly water endangering  
(Germany)

#### The components of this product are reported in the following inventories:

DSL : On the inventory, or in compliance with the inventory

TSCA : All chemical substances in this product are either listed on the  
TSCA Inventory or are in compliance with a TSCA Inventory  
exemption.

EINECS : On the inventory, or in compliance with the inventory

### 15.2 Chemical Safety Assessment

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## SECTION 16: Other information

For Copy of (M)SDS : Internet: [lubricants.petro-canada.ca/msds](http://lubricants.petro-canada.ca/msds)

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Europe, telephone: 00-800-7387-6000  
For Product Safety Information: 1 905-804-4752

Prepared by : Product Safety: +1 905-804-4752

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