

SAFETY DATA SHEET

CALFLO^{TM/MC} AF

000003001300



Version 4.1

Revision Date 2017/02/10

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SECTION 1. IDENTIFICATION

Product name : CALFLO^{TM/MC} AF

Product code : CALAFP5R, CALAFP20, CALAFIBC, CALAFDRR, CALAFDRM, CALAFDCT, CALAF, CALAFBLK

Manufacturer or supplier's details

Petro-Canada Lubricants Inc.
2310 Lakeshore Road West
Mississauga ON L5J 1K2
Canada

Emergency telephone number : Petro-Canada Lubricants Inc.: +1 905-403-5770;
CHEMTREC Transport Emergency: 1-800-424-9300;
Poison Control Centre: Consult local telephone directory for emergency number(s).

Recommended use of the chemical and restrictions on use

Recommended use : CALFLO AF is a heat transfer fluid recommended for non-pressurized, liquid-phase, closed heat transfer systems.

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

SECTION 2. HAZARDS IDENTIFICATION

Emergency Overview

Appearance	viscous liquid
Colour	Colourless to light yellow.
Odour	Mild petroleum oil like.

GHS Classification

Not a hazardous substance or mixture.

GHS label elements

Not a hazardous substance or mixture.

Potential Health Effects

Primary Routes of Entry : Eye contact
Ingestion
Inhalation
Skin contact

Aggravated Medical Condition : None known.

SAFETY DATA SHEET

CALFLO ^{TM/MC} **AF**

000003001300



Version 4.1

Revision Date 2017/02/10

Print Date 2017/02/10

Other hazards

None known.

IARC

No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH

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.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Hazardous components

Chemical name	CAS-No.	Concentration
lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based	72623-87-1	50 - 70 %
White mineral oil (petroleum)	8042-47-5	30 - 50 %

SECTION 4. 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.
- Most important symptoms and effects, both acute and delayed : First aider needs to protect himself.

SAFETY DATA SHEET

CALFLO ^{TM/MC} **AF**

000003001300

Version 4.1

Revision Date 2017/02/10

Print Date 2017/02/10



SECTION 5. FIREFIGHTING MEASURES

- Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
- Unsuitable extinguishing media : No information available.
- Specific hazards during fire-fighting : Cool closed containers exposed to fire with water spray.
- Hazardous combustion products : Carbon oxides (CO, CO₂), nitrogen oxides (NO_x), sulphur oxides (SO_x), hydrocarbons, smoke and irritating vapours as products of incomplete combustion.
- Further information : Prevent fire extinguishing water from contaminating surface water or the ground water system.

SECTION 6. ACCIDENTAL RELEASE MEASURES

- Personal precautions, protective equipment and emergency procedures : Use personal protective equipment.
Ensure adequate ventilation.
Evacuate personnel to safe areas.
Material can create slippery conditions.
- Environmental precautions : Do not allow uncontrolled discharge of product into the environment.
- Methods and materials for containment and 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.
Contact the proper local authorities.

SECTION 7. HANDLING AND STORAGE

- Advice on safe handling : For personal protection see section 8.
Smoking, eating and drinking should be prohibited in the application area.
Use only with adequate ventilation.
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.
- Conditions for safe storage : Store in original container.

SAFETY DATA SHEET

CALFLO^{TM/MC} AF

000003001300



Version 4.1

Revision Date 2017/02/10

Print Date 2017/02/10

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.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based	72623-87-1	TWA (Mist)	5 mg/m ³	CA AB OEL
		STEL (Mist)	10 mg/m ³	CA AB OEL
		TWAEV (Mist)	5 mg/m ³	CA QC OEL
		STEV (Mist)	10 mg/m ³	CA QC OEL
		TWA (Inhalable fraction)	5 mg/m ³	ACGIH
White mineral oil (petroleum)	8042-47-5	TWA (Mist)	5 mg/m ³	CA AB OEL
		STEL (Mist)	10 mg/m ³	CA AB OEL
		TWAEV (Mist)	5 mg/m ³	CA QC OEL
		STEV (Mist)	10 mg/m ³	CA QC OEL
		TWA (Inhalable fraction)	5 mg/m ³	ACGIH

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

Personal protective equipment

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

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 nec-

SAFETY DATA SHEET

CALFLO^{TM/MC} AF

000003001300



Version 4.1

Revision Date 2017/02/10

Print Date 2017/02/10

	essary.
Eye protection	: Wear face-shield and protective suit for abnormal processing problems.
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.
Protective measures	: Wash contaminated clothing before re-use.
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.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	: viscous liquid
Colour	: Colourless to light yellow.
Odour	: Mild petroleum oil like.
Odour Threshold	: No data available
pH	: No data available
Pour point	: -39 °C (-38 °F)
Boiling point/boiling range	: No data available
Flash point	: 203 °C (397 °F) Method: Pensky-Martens closed cup
Auto-Ignition Temperature	: 343 °C (649 °F)
Evaporation rate	: No data available
Flammability	: 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	: 0.8647 kg/l (15 °C / 59 °F)
Solubility(ies)	
Water solubility	: insoluble
Partition coefficient: n-octanol/water	: No data available

SAFETY DATA SHEET

CALFLO™/MC AF

000003001300



Version 4.1

Revision Date 2017/02/10

Print Date 2017/02/10

Viscosity

Viscosity, kinematic : 32.3 cSt (40 °C / 104 °F)

5.40 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.

SECTION 10. STABILITY AND REACTIVITY

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

Conditions to avoid : No data available

Incompatible materials : Reactive with oxidising agents, acids, alkalis and reducing agents.

Hazardous decomposition products : May release COx, SiOx, diphenylamine, methacrylate monomers, aldehydes, smoke and irritating vapours when heated to decomposition.

SECTION 11. TOXICOLOGICAL INFORMATION

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 : Assessment: The substance or mixture has no acute dermal toxicity
Remarks: No data available

Components:

lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based:

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg,

Acute inhalation toxicity : LC50 (Rat): > 5.2 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist

SAFETY DATA SHEET

CALFLO ^{TM/MC} **AF**

000003001300



Version 4.1

Revision Date 2017/02/10

Print Date 2017/02/10

Acute dermal toxicity : LD50 (Rabbit): > 2,000 mg/kg,

White mineral oil (petroleum):

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg,

Acute inhalation toxicity : LC50 (Rat): > 5.2 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist

Acute dermal toxicity : LD50 (Rabbit): > 2,000 mg/kg,

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

No data available

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Product:

Toxicity to fish :
Remarks: No data available

Toxicity to daphnia and other :

SAFETY DATA SHEET

CALFLO ^{TM/MC} **AF**

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Version 4.1

Revision Date 2017/02/10

Print Date 2017/02/10

aquatic invertebrates Remarks: No data available

Toxicity to algae :
Remarks: No data available

Toxicity to bacteria : Remarks: No data available

Persistence and degradability

Product:

Biodegradability : Remarks: No data available

Bioaccumulative potential

No data available

Mobility in soil

No data available

Other adverse effects

No data available

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues : 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 product residue in accordance with the instructions of the person responsible for waste disposal.

SECTION 14. TRANSPORT INFORMATION

International Regulations

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.

National Regulations

TDG

Not regulated as a dangerous good

Calflo AF safety data sheet

SAFETY DATA SHEET

CALFLO ^{TM/MC} **AF**

000003001300

Version 4.1

Revision Date 2017/02/10

Print Date 2017/02/10



SECTION 15. REGULATORY INFORMATION

This product has been classified according to the hazard criteria of the CPR and the MSDS contains all of the information required by the CPR.

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.
IECSC	On the inventory, or in compliance with the inventory
EINECS	On the inventory, or in compliance with the inventory

SECTION 16. OTHER INFORMATION

For Copy of SDS : Internet: lubricants.petro-canada.com/sds
Western Canada, telephone: 1-800-661-1199; fax: 1-800-378-4518
Ontario & Central Canada, telephone: 1-800-268-5850; fax: 1-800-201-6285
Quebec & Eastern Canada, telephone: 1-800-576-1686; fax: 1-800-201-6285
For Product Safety Information: 1 905-804-4752

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

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The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.