



MATERIAL SAFETY DATA SHEET

CFIPA - CFIPA PRECISION FLUID

1 IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

PRODUCT NAME	CFIPA - CFIPA PRECISION FLUID
PRODUCT NO.	CFIPAL, CFIPAG, CFIPAP, CFIPAD
SYNONYMS, TRADE NAMES	CFIPAL (2.5 lb- 1 Liter); CFIPAG (10 lb - 1 Gallon); CFIPAP (50lb - 5 Gallon Pail); CFIPAD (500lb - 55 Gallon Drum)
SUPPLIER	MICROCARE CORPORATION 595 John Downey Drive New Britain, CT 06019 United States of America CAGE: OATV9 +1 860-827-0626 +1 860-827-8105 techsupport@microcare.com
EMERGENCY TELEPHONE	CHEMTREC (800) 424-9300

2 HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

This chemical may cause skin/eye irritation.

HUMAN HEALTH

May cause minor irritation on eye contact. Prolonged skin contact may cause redness, irritation and dry skin. Degreasing to skin.

POTENTIAL HEALTH EFFECTS

INHALATION

Vapors may irritate the respiratory system and cause coughing, asthmatic breathing and breathlessness. Headache. Dizziness.

INGESTION

Harmful if swallowed. Irritating. May cause nausea, stomach pain and vomiting.

SKIN CONTACT

Liquid may irritate skin.

EYE CONTACT

Irritating to eyes.

ROUTE OF ENTRY

Skin and/or eye contact. Ingestion. Inhalation.

TARGET ORGANS

Eyes. Respiratory system, lungs. Skin.

MEDICAL SYMPTOMS

Acts as a defatting agent on skin. May cause cracking of skin, and eczema. In case of overexposure, organic solvents may depress the central nervous system causing dizziness and intoxication, and at very high concentrations unconsciousness and death.

CARCINOGENICITY

This substance has no evidence of carcinogenic properties.

3 COMPOSITION/INFORMATION ON INGREDIENTS

Name	EC No.	CAS-No.	Weight
1,1,1,2,3,4,4,5,5,5-decafluoropentane	420-640-8	138495-42-8	60-100%
PENTAFLUOROBUTANE		406-58-6	30-60%
PROPAN-2-OL	200-661-7	67-63-0	1-5%

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4 FIRST-AID MEASURES

GENERAL INFORMATION

NEVER MAKE AN UNCONSCIOUS PERSON VOMIT OR DRINK FLUIDS! Place unconscious person on the side in the recovery position and ensure breathing can take place. Perform artificial respiration if breathing has stopped. Keep out of the reach of children.

NOTES TO THE PHYSICIAN

No recommendation given, but first aid may still be required in case of accidental exposure, inhalation or ingestion of this chemical. If in doubt, GET MEDICAL ATTENTION PROMPTLY!

INHALATION

Move into fresh air and keep at rest. If respiratory problems, artificial respiration/oxygen.

INGESTION

Do not induce vomiting. Immediately rinse mouth and drink plenty of water (200-300 ml). Consult a physician for specific advice.

SKIN CONTACT

Remove contaminated clothes and rinse skin thoroughly with water. Contact physician if irritation continues.

EYE CONTACT

Promptly wash eyes with plenty of water while lifting the eye lids. Make sure to remove any contact lenses from the eyes before rinsing. Consult a physician for specific advice.

5 FIRE-FIGHTING MEASURES

EXTINGUISHING MEDIA

This product is not flammable. Use fire-extinguishing media appropriate for surrounding materials.

SPECIAL FIRE FIGHTING PROCEDURES

Containers close to fire should be removed immediately or cooled with water.

UNUSUAL FIRE & EXPLOSION HAZARDS

Closed containers can burst violently when heated, due to excess pressure build-up.

SPECIFIC HAZARDS

Avoid contact with naked flames and hot surfaces as corrosive and toxic decomposition products can be formed.

PROTECTIVE MEASURES IN FIRE

Self contained breathing apparatus and full protective clothing must be worn in case of fire.

FLAMMABILITY LIMIT - Not Determined

LOWER(%)

FLAMMABILITY LIMIT - UPPER(%) Not Determined

FLASH POINT (°C)

6 ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS

Warn everybody of potential hazards and evacuate if necessary. Ventilate well, avoid breathing vapours. Use approved respirator if air contamination is above accepted level.

ENVIRONMENTAL PRECAUTIONS

Contain spillages with sand, earth or any suitable adsorbent material. Avoid release to the environment.

SPILL CLEAN UP METHODS

Large quantities should not be discharged into the drain but removed with absorbing material. Dam and absorb spillages with sand, earth or other non-combustible material. Collect spillage with shovel, broom or the like and reuse, if possible. Dispose of large amounts of spillage/waste according to agreement with local authorities.

7 HANDLING AND STORAGE

HANDLING

Provide good ventilation. Avoid inhalation of vapors/spray and contact with skin and eyes.

STORAGE

Store in tightly closed original container in a dry and cool place. Keep out of the reach of children.

8 EXPOSURE CONTROLS/PERSONAL PROTECTION

PROTECTIVE EQUIPMENT

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ENGINEERING MEASURES

No specific ventilation requirements noted, except this product must not be used in a confined space without good ventilation.

RESPIRATORY EQUIPMENT

Vapors are heavier than air and may travel along the floor and in the bottom of containers. At work in confined or poorly ventilated spaces, respiratory protection with air supply must be used.

HAND PROTECTION

Use suitable protective gloves if risk of skin contact.

EYE PROTECTION

Wear approved, tight fitting safety glasses where splashing is probable. If risk of splashing, wear safety goggles or face shield.

OTHER PROTECTION

Wear suitable protective clothing as protection against splashing or contamination.

HYGIENE MEASURES

No specific hygiene procedures noted, but good personal hygiene practices are always advisable, especially when working with chemicals. When using do not eat, drink or smoke.

SKIN PROTECTION

Wear apron or protective clothing in case of splashes.

9 PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE	Clear liquid		
COLOR	Water-white		
ODOR	Slight odor of alcohol		
VOLATILITY DESCRIPTION	Volatile.		
SOLUBILITY	Slightly soluble in water.		
UDF Phrase 1	This product is not flammable.		
This product is not flammable.			
BOILING POINT (°C)	Not Determined	VAPOR DENSITY (air=1)	4.3 (Estimated)
VAPOR PRESSURE	318 (Estimated) mm Hg 25	VOLATILE BY VOL. (%)	100
FLASH POINT (°C)	None TCC		

10 STABILITY AND REACTIVITY

STABILITY

Stable under normal temperature conditions and recommended use.

CONDITIONS TO AVOID

Avoid contact with naked flames and hot surfaces as corrosive and toxic decomposition products can be formed.

HAZARDOUS POLYMERISATION

Will not polymerise.

MATERIALS TO AVOID

Alkali metals. Alkali earth metals. Powdered metal.

HAZARDOUS DECOMPOSITION PRODUCTS

When heated, toxic and corrosive vapours/gases may be formed. Halogenated hydrocarbons. Hydrogen fluoride (HF). Carbon dioxide (CO₂). Carbon monoxide (CO).

11 TOXICOLOGICAL INFORMATION

Name	PROPAN-2-OL
Toxic Dose 1 - LD 50	5045 mg/kg (oral rat)
Toxic Dose 2 - LD 50	3600 mg/kg (oral-mouse)
Toxic Conc. - LC 50	16,000 ppm/1h (inh-rat)

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Name	1,1,1,2,3,4,4,5,5,5-decafluoropentane
Toxic Dose 1 - LD 50	>5,000 mg/kg (oral rat)
Toxic Conc. - LC 50	11,100 ppm/4h (inh-rat)
Name	PENTAFLUOROBUTANE
Toxic Dose 1 - LD 50	>2000 mg/kg (oral rat)
Toxic Conc. - LC 50	25000 ppm/4h (inh-rat)

CARCINOGENICITY

IARC Not Listed. OSHA Not Regulated.

12 ECOLOGICAL INFORMATION

Name	PROPAN-2-OL
LC 50, 96 hrs, Fish mg/l	9,640
EC 50, 48 hrs, Daphnia, mg/l	5102
IC 50, 72 hrs, Algae, mg/l	>2,000

Name 1,1,1,2,3,4,4,5,5,5-decafluoropentane

Ecotoxicity

It is unlikely that the substance will dissolve in water in amounts big enough to have a toxic effect on fish and daphnies.

LC 50, 96 hrs, Fish mg/l 27.2

IC 50, 72 hrs, Algae, mg/l 120

Bioaccumulation potential

Bioaccumulation is unlikely to be significant because of the low water solubility of this product.

Degradability

The product is not expected to be biodegradable.

Name PENTAFLUOROBUTANE

LC 50, 96 hrs, Fish mg/l >200

EC 50, 48 hrs, Daphnia, mg/l >200

IC 50, 72 hrs, Algae, mg/l 113

Mobility

The product has poor water-solubility.

Bioaccumulation potential

Bioaccumulation is unlikely to be significant because of the low water solubility of this product.

Degradability

The product is not readily biodegradable.

13 DISPOSAL CONSIDERATIONS

WASTE MANAGEMENT

Waste to be treated as controlled waste. Disposal to licensed waste disposal site in accordance with local Waste Disposal Authority.

DISPOSAL METHODS

Dispose of waste and residues in accordance with local authority requirements.

WASTE CLASS

No information available.

14 TRANSPORT INFORMATION

TRANSPORT NOTES Not regulated. The product is not covered by international regulation on the transport of dangerous goods (IMDG, IATA, DOT).

U.S DOT HAZARD LABEL No DOT label requirement noted

15 REGULATORY INFORMATION

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INVENTORIES

COMPONENT	CAN	US	EU	AUS	JAP	KOR	CHN	PHLP
PROPAN-2-OL	DSL	Yes.						
1,1,1,2,3,4,4,5,5,5-decafluoropentane	DSL	Yes.						
PENTAFLUOROBUTANE	DSL	Yes.						

COMPONENT	TSCA 12(b) Export Notification
1,1,1,2,3,4,4,5,5,5-decafluoropentane	Yes.
PENTAFLUOROBUTANE	No.

SARA (311/312) HAZARD CATEGORIES

Acute

REGULATORY STATUS (US)

SECTION 313: This product contains toxic chemical subject to the reporting requirements of Section 313 of Title III of the Superfund Amendment and Reauthorization Act of 1986 and 40 CFR Part 372. TSCA: The ingredients of this product are on the TSCA Inventory. This Product is Not Hazardous under the OSHA Hazard Communication Standard.

REGULATORY REFERENCES

29 CFR 1910.1010 Federal Regulations (OSHA Standard).

WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM -WHMIS

LABEL(S) FOR SUPPLY



Materials Causing
 Other Toxic
 Effects.

CONTROLLED PRODUCT CLASSIFICATION

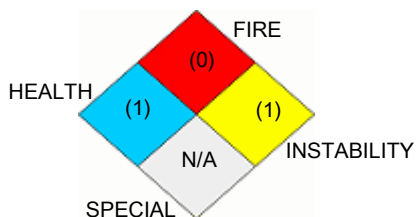
Canadian WHMIS Classification D2B WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM (CPR SECTION (33)) This product has been classified according to the hazard criteria of the Controlled Product Regulations, and the MSDS contains all required information.

16 OTHER INFORMATION

HAZARDOUS MATERIAL INFORMATION SYSTEM (HMIS)

HEALTH	1
FLAMMABILITY	0
PHYSICAL	1
PERSONAL PROTECTION	upervisor

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)



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REVISION COMMENTS

NOTE: Lines within the margin indicate significant changes from the previous revision.

REVISION DATE 29/06/2009

VERSION No. 4

SAFETY DATA SHEET STATUS

Approved.

DATE August 13, 2010

DISCLAIMER

This 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. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.