

1. Chemical Product and Company Identification

Material name **CIMFREE® VG-990M**
METALWORKING FLUID

Version # 01

Issue date 05-18-2015

CAS # Mixture

MSDS Number Not applicable

Recommended use METALWORKING FLUID

Manufacturer

Company name CIMCOOL® Industrial Products LLC
3000 Disney Street
Cincinnati, Ohio 45209
513-458-8100

Telephone (General Information)

Emergency telephone number 1-800-424-9300 (CHEMTREC)

Emergency telephone number (outside USA) 1-703-527-3887 (CHEMTREC)

Supplier

Company name Milacron Canada Corp.
Address 1175 Appleby Line Road, Unit B-1
Burlington Ontario L7L5H9 Canada
905-319-1919

Telephone (General Information)

Emergency telephone number (outside USA) 1-703-527-3887 (CHEMTREC)

2. Hazards Identification

Emergency overview Irritating to eyes and skin. May cause an allergic skin reaction. Avoid prolonged contact with eyes, skin and clothing.

Potential health effects

Routes of exposure Eye contact. Skin contact. Inhalation. Ingestion.

Eyes Causes eye irritation. Avoid contact with eyes.

Skin May cause skin irritation. May be harmful if absorbed through skin. Do not get this material in contact with skin.

Inhalation Prolonged inhalation may be harmful. May cause irritation of respiratory tract.

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

Signs and symptoms Direct contact with eyes may cause temporary irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Symptoms may include redness, edema, drying, defatting and cracking of the skin. Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting.

Potential environmental effects May cause long-term adverse effects in the environment.

3. Composition/Information on Ingredients

Components	CAS #	Percent
2-(2-AMINOETHOXY)ETHANOL	929-06-6	3 - 7
TRIETHANOLAMINE	102-71-6	3 - 7
MORPHOLINE	110-91-8	1 - 5
POLYPROPYLENE GLYCOL ALKYL PHENYL ETHER	9064-13-5	0.5 - 1.5
Other components below reportable levels		60 - 100

4. FIRST AID MEASURES

First aid procedures

Inhalation	If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell. Under normal conditions of intended use, this material is not expected to be an inhalation hazard.
Skin contact	Immediately flush with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. If skin irritation occurs: Get medical advice/attention. Wash contaminated clothing before reuse.
Eye contact	Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses. Continue rinsing. Get medical attention if irritation develops and persists.
Ingestion	Rinse mouth thoroughly. Drink 1 or 2 glasses of water. Never give anything by mouth to a victim who is unconscious or is having convulsions. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. Get medical advice/attention if you feel unwell.
General advice	IF exposed or concerned: Get medical advice/attention. Show this safety data sheet to the doctor in attendance.

5. FIRE FIGHTING MEASURES

Flammable properties	Not flammable by WHMIS criteria.
Extinguishing media	
Suitable extinguishing media	Water fog. Foam. Dry chemical powder. Carbon dioxide (CO ₂). Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Unsuitable extinguishing media	Not applicable, non-combustible.
Protection of firefighters	
Specific hazards arising from the chemical	During fire, gases hazardous to health may be formed.
Protective equipment for firefighters	Wear suitable protective equipment.
Fire fighting equipment/instructions	Use standard firefighting procedures and consider the hazards of other involved materials. Move containers from fire area if you can do so without risk.
Specific methods	In the event of fire and/or explosion do not breathe fumes.
Explosion data	
Sensitivity to static discharge	Not applicable.
Sensitivity to mechanical impact	Not applicable.
Hazardous combustion products	Smoke, fumes, oxides of nitrogen, and oxides of carbon

6. ACCIDENTAL RELEASE MEASURES

Personal precautions	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate personal protective equipment. Do not breathe mist or vapor. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the MSDS.
Environmental precautions	Avoid discharge into drains, water courses or onto the ground. Contact local authorities in case of spillage to drain/aquatic environment. Use appropriate containment to avoid environmental contamination.
Methods for containment	Stop leak if you can do so without risk. Dike the spilled material, where this is possible. Prevent entry into waterways, sewer, basements or confined areas.

Methods for cleaning up

Should not be released into the environment. This product is miscible in water.

Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water.

Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Never return spills to original containers for re-use. Clean up in accordance with all applicable regulations. For waste disposal, see section 13 of the MSDS.

Other information

Clean up in accordance with all applicable regulations.

7. HANDLING AND STORAGE**Handling**

Do not cut, weld, solder, drill, grind, or expose containers to heat, flame, sparks, or other sources of ignition. Do not get in eyes, on skin, or on clothing. Avoid breathing mist or vapor. Avoid prolonged exposure. When using do not eat or drink. Do not use in areas without adequate ventilation. Wash thoroughly after handling. Avoid release to the environment.

Storage

To maintain product quality, do not store in heat or direct sunlight. Store in a closed container away from incompatible materials. Room temperature - normal conditions. Use care in handling/storage. Store away from incompatible materials (see Section 10 of the MSDS). Keep this material away from food, drink and animal feed. Do not allow material to freeze. If frozen, product may separate. Thaw completely at room temperature and stir thoroughly prior to use.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION**Occupational exposure limits****US. ACGIH Threshold Limit Values**

	Type	Value
TRIETHANOLAMINE (CAS 102-71-6)	TWA	5 mg/m3
MORPHOLINE (CAS 110-91-8)	TWA	20 ppm

Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2)

	Type	Value
MORPHOLINE (CAS 110-91-8)	TWA	71 mg/m3
TRIETHANOLAMINE (CAS 102-71-6)	TWA	5 mg/m3
MORPHOLINE (CAS 110-91-8)	TWA	20 ppm

Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended)

	Type	Value
TRIETHANOLAMINE (CAS 102-71-6)	TWA	5 mg/m3
MORPHOLINE (CAS 110-91-8)	TWA	20 ppm

Canada. Manitoba OELs (Reg. 217/2006, The Workplace Safety And Health Act)

	Type	Value
TRIETHANOLAMINE (CAS 102-71-6)	TWA	5 mg/m3
MORPHOLINE (CAS 110-91-8)	TWA	20 ppm

Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents)

	Type	Value
MORPHOLINE (CAS 110-91-8)	STEL	105 mg/m3
		30 ppm
	TWA	70 mg/m3
TRIETHANOLAMINE (CAS 102-71-6)	TWA	3.1 mg/m3

Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents)

	Type	Value
MORPHOLINE (CAS 110-91-8)	TWA	20 ppm
TRIETHANOLAMINE (CAS 102-71-6)	TWA	0.5 ppm

Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment)

	Type	Value
MORPHOLINE (CAS 110-91-8)	TWA	71 mg/m3
TRIETHANOLAMINE (CAS 102-71-6)	TWA	5 mg/m3
MORPHOLINE (CAS 110-91-8)	TWA	20 ppm

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

	Type	Value
MORPHOLINE (CAS 110-91-8)	PEL	70 mg/m3
		20 ppm

Biological limit values No biological exposure limits noted for the ingredient(s).

Exposure guidelines**Canada - Alberta OELs: Skin designation**

MORPHOLINE (CAS 110-91-8) Can be absorbed through the skin.

Canada - British Columbia OELs: Skin designation

MORPHOLINE (CAS 110-91-8) Can be absorbed through the skin.

Canada - Manitoba OELs: Skin designation

MORPHOLINE (CAS 110-91-8) Can be absorbed through the skin.

Canada - Ontario OELs: Skin designation

MORPHOLINE (CAS 110-91-8) Can be absorbed through the skin.

Canada - Quebec OELs: Skin designation

MORPHOLINE (CAS 110-91-8) Can be absorbed through the skin.

Canada - Saskatchewan OELs: Skin designation

MORPHOLINE (CAS 110-91-8) Can be absorbed through the skin.

US ACGIH Threshold Limit Values: Skin designation

MORPHOLINE (CAS 110-91-8) Can be absorbed through the skin.

Engineering controls Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Ensure adequate ventilation, especially in confined areas. Eye wash fountain and emergency showers are recommended.

Personal protective equipment

Eye/face protection Wear safety glasses with side shields (or goggles). Do not get in eyes. Eye wash fountain is recommended.

Skin protection Wear suitable protective clothing and gloves.

Respiratory protection In case of insufficient ventilation, wear suitable respiratory equipment.

Hand protection Use protective gloves made of: Nitrile.

9. PHYSICAL & CHEMICAL PROPERTIES

Appearance	CLEAR
Physical state	Liquid.
Form	Liquid.
Color	Not available.
Odor	CHEMICAL
Odor threshold	Not available.
pH	10.0

Vapor pressure	Not available.
Vapor density	Not available.
Boiling point	> 212 °F (> 100 °C)
Melting point/Freezing point	< 32 °F (< 0 °C)
Solubility (water)	100 % Water Miscible
Specific gravity	1.025
Relative density	Not available.
Flash point	Not Applicable
Flammability limits in air, upper, % by volume	Not available.
Flammability limits in air, lower, % by volume	Not available.
Auto-ignition temperature	Not available.
Evaporation rate	Like water when diluted
Other data	
pH in aqueous solution	9.1 @ 5%
VOC ASTM D2369	11 %

10. Stability and Reactivity

Chemical stability	Material is stable under normal conditions.
Conditions to avoid	Heat, flames and sparks. Contact with incompatible materials.
Incompatible materials	Acids. Avoid contact with oxidizers or reducing agents. Do not add sodium nitrite or other nitrosating agents which may form cancer causing nitrosamines.
Hazardous decomposition products	Smoke, fumes, oxides of nitrogen, and oxides of carbon
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use. Hazardous polymerization does not occur.

11. TOXICOLOGICAL INFORMATION

Toxicological data

Components	Species	Test Results
2-(2-AMINOETHOXY)ETHANOL (CAS 929-06-6)		
Acute		
<i>Dermal</i>		
LD50	Rabbit	> 3000 mg/kg
<i>Inhalation</i>		
LC50	Rat	8.7 mg/l, 8 hours
<i>Oral</i>		
LD50	Rat	3400 mg/kg
MORPHOLINE (CAS 110-91-8)		
Acute		
<i>Dermal</i>		
LD50	Rabbit	500 mg/kg 0.5 ml/kg
<i>Inhalation</i>		
LC50	Rat	8 g/l
<i>Oral</i>		
LD50	Guinea pig	0.09 g/kg
	Mouse	720 mg/kg
	Rat	1.05 g/kg

Components	Species	Test Results
POLYPROPYLENE GLYCOL ALKYL PHENYL ETHER (CAS 9064-13-5)		
Acute		
<i>Oral</i>		
LD50	Rat	6000 mg/kg
TRIETHANOLAMINE (CAS 102-71-6)		
Acute		
<i>Dermal</i>		
LD50	Rabbit	> 2000 mg/kg
<i>Oral</i>		
LD50	Guinea pig	5300 mg/kg
	Rat	8 g/kg
Acute effects	Expected to be a low hazard for usual industrial or commercial handling by trained personnel.	
Sensitization	May cause sensitization by skin contact.	
Chronic effects	May be harmful if absorbed through skin. Prolonged inhalation may be harmful.	
	Prolonged or repeated exposure may cause liver and kidney damage. These effects have not been observed in humans.	
Carcinogenicity	This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.	
ACGIH Carcinogens		
MORPHOLINE (CAS 110-91-8)	A4 Not classifiable as a human carcinogen.	
IARC Monographs. Overall Evaluation of Carcinogenicity		
MORPHOLINE (CAS 110-91-8)	3 Not classifiable as to carcinogenicity to humans.	
TRIETHANOLAMINE (CAS 102-71-6)	3 Not classifiable as to carcinogenicity to humans.	
Skin corrosion/irritation	Prolonged skin contact may cause temporary irritation. Defatting, drying and cracking of skin.	
Serious eye damage/irritation	Direct contact with eyes may cause temporary irritation.	
Mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.	
Reproductive effects	This product is not expected to cause reproductive or developmental effects.	
Teratogenicity	Not classified.	
Synergistic materials	Not applicable.	

12. ECOLOGICAL INFORMATION

Ecotoxicological data

Components	Species	Test Results
2-(2-AMINOETHOXY)ETHANOL (CAS 929-06-6)		
Aquatic		
<i>Acute</i>		
Algae	IC50	Algae 160 mg/l, 72 hours
Crustacea	EC50	Daphnia 190 mg/l, 48 hours
Fish	LC50	Fish 460 mg/l, 96 hours
MORPHOLINE (CAS 110-91-8)		
Aquatic		
Fish	LC50	Zebra danio (Danio rerio) > 1 mg/l, 96 hours
POLYPROPYLENE GLYCOL ALKYL PHENYL ETHER (CAS 9064-13-5)		
Aquatic		
<i>Acute</i>		
Fish	LC50	Ide, silver or golden orfe (Leuciscus idus) 53 mg/l, 96 hours

Components	Species		Test Results
TRIETHANOLAMINE (CAS 102-71-6)			
Aquatic			
Crustacea	EC50	Water flea (Ceriodaphnia dubia)	565.2 - 658.3 mg/l, 48 hours
Fish	LC50	Fathead minnow (Pimephales promelas)	10610 - 13010 mg/l, 96 hours
Ecotoxicity	Contains a substance which causes risk of hazardous effects to the environment.		
Environmental effects	An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.		
Aquatic toxicity	Contains a substance which causes risk of hazardous effects to the environment.		
Persistence and degradability	Not available.		
Partition coefficient			
2-(2-AMINOETHOXY)ETHANOL			-1.89
MORPHOLINE			-2.55
POLYPROPYLENE GLYCOL ALKYL PHENYL ETHER			> 12
TRIETHANOLAMINE			-1
Mobility in environmental media	This product is miscible in water.		

13. DISPOSAL CONSIDERATIONS

Disposal instructions	Consult authorities before disposal. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.
Waste from residues / unused products	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
Contaminated packaging	Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied. Do not re-use empty containers.

14. Transport Information

TDG	Not regulated as dangerous goods.
IATA	Not regulated as dangerous goods.
IMDG	Not regulated as dangerous goods.

15. REGULATORY INFORMATION

Canadian regulations	This product has been classified in accordance with the hazard criteria of the CPR and the MSDS contains all the information required by the CPR.
WHMIS status	Controlled
WHMIS classification	D2B - Other Toxic Effects-TOXIC
WHMIS labeling	



International Inventories

Country(s) or region	Inventory name	On inventory or exempt (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	No
Canada	Domestic Substances List (DSL)	No
Canada	Non-Domestic Substances List (NDSL)	Yes
China	Inventory of Existing Chemical Substances in China (IECSC)	No
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	No

Country(s) or region	Inventory name	On inventory or exempt (yes/no)*
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	No
New Zealand	New Zealand Inventory	No
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

16. OTHER INFORMATION

HMIS® ratings

Health: 1
Flammability: 0
Physical hazard: 0

NFPA ratings

Health: 1
Flammability: 0
Instability: 0

Disclaimer

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.

Prepared by

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This data sheet contains changes from the previous version in section(s):

This document has undergone significant changes and should be reviewed in its entirety.