

SAFETY DATA SHEET

1. Identification

Product identifier **MILCOOL® SAW PLUS**
METALWORKING FLUID

Other means of identification

SDS number Not applicable

Product code B01746

Recommended use METALWORKING FLUID

Recommended restrictions None known.

Manufacturer/Importer/Supplier/Distributor information

Company name CIMCOOL® Industrial Products LLC
3000 Disney Street
Cincinnati, Ohio 45209

Telephone (General Information) 513-458-8100

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

Telephone (General Information) 905-319-1919

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

Supplier Not available.

2. Hazard(s) identification

Physical hazards Not classified.

Health hazards Skin irritation Category 2
Serious eye irritation Category 2A
Sensitization, skin Category 1

Environmental hazards Not classified.

Label elements



Signal word Warning

Hazard statement Causes skin irritation. Causes serious eye irritation. May cause an allergic skin reaction.

Precautionary statement

Prevention

Avoid breathing mist or vapor. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Wear eye protection/face protection. Wear protective gloves.

Response	IF ON SKIN: Wash with plenty of water. If skin irritation or rash occurs: Get medical advice/attention. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. Take off contaminated clothing and wash it before reuse.
Storage	Store away from incompatible materials.
Disposal	Dispose of contents/container in accordance with local/regional/national/international regulations.
Other hazards	None known.
Supplemental information	5.26% of the mixture consists of component(s) of unknown acute oral toxicity. 12.26% of the mixture consists of component(s) of unknown acute dermal toxicity.

The classified hazards shown on this SDS are associated with the product concentrate. These hazards are not expected under recommended use conditions and dilution.

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
TRIETHANOLAMINE		102-71-6	≤7
2-(2-AMINOETHOXY)ETHANOL		929-06-6	≤5
ALCOHOLS, C12-14, ETHOXYLATED PROPOXYLATED		68439-51-0	≤3
MORPHOLINE		110-91-8	≤3
PETROLEUM SULFONIC ACID, SODIUM SALT		68608-26-4	≤3
Other components below reportable levels			≤90

All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

4. First-aid measures

Inhalation	Move to fresh air. Call a physician if symptoms develop or persist. Under normal conditions of intended use, this material is not expected to be an inhalation hazard.
Skin contact	Rinse skin with water. If skin irritation or rash occurs: Get medical advice/attention. Wash contaminated clothing before reuse.
Eye contact	Rinse with water. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.
Ingestion	Rinse mouth thoroughly. Drink 1 or 2 glasses of water. 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.
Most important symptoms/effects, acute and delayed	Direct contact with eyes may cause temporary irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Skin irritation. May cause an allergic skin reaction.
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically. Symptoms may be delayed.
General information	If exposed or concerned: Get medical advice/attention. Show this safety data sheet to the doctor in attendance.

5. Fire-fighting measures

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.
Specific hazards arising from the chemical	During fire, gases hazardous to health may be formed.
Special protective equipment and precautions 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	Use standard firefighting procedures and consider the hazards of other involved materials. In the event of fire and/or explosion do not breathe fumes.
General fire hazards	No unusual fire or explosion hazards noted.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Avoid breathing 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 SDS.

Methods and materials for containment and cleaning up

Local authorities should be advised if significant spillages cannot be contained. This product is miscible in water. Clean up in accordance with all applicable regulations.

Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. 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. For waste disposal, see section 13 of the SDS.

Environmental precautions

Contact local authorities in case of spillage to drain/aquatic environment. Avoid discharge into drains, water courses or onto the ground. Use appropriate containment to avoid environmental contamination.

7. Handling and storage

Precautions for safe 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. Provide adequate ventilation. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities

Store in original tightly closed container. Store away from incompatible materials (see Section 10 of the SDS). 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/m ³
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/m ³
TRIETHANOLAMINE (CAS 102-71-6)	TWA	5 mg/m ³
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/m ³
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/m ³
MORPHOLINE (CAS 110-91-8)	TWA	20 ppm

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

	Type	Value
TRIETHANOLAMINE (CAS 102-71-6)	TWA	3.1 mg/m3
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

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.

Appropriate 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. Eye wash fountain and emergency showers are recommended.

Individual protection measures, such as 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

Hand protection Use protective gloves made of: Nitrile.

Other Wear appropriate chemical resistant clothing.

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

Thermal hazards Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations When using, do not eat, drink or smoke. Do not get in eyes, on skin, on clothing. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

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

pH	9.9
Melting point/freezing point	< 32 °F (< 0 °C)
Initial boiling point and boiling range	> 212 °F (> 100 °C)
Flash point	Not Applicable
Evaporation rate	Like water when diluted
Flammability (solid, gas)	Not applicable.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	Not available.
Flammability limit - upper (%)	Not available.
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	Not available.
Vapor density	Not available.
Relative density	Not available.
Solubility(ies)	
Solubility (water)	100 % Water Miscible
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Not available.
Other information	
Explosive properties	Not explosive.
Oxidizing properties	Not oxidizing.
pH in aqueous solution	8.8 @ 5%
Specific gravity	1.022

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Heat, flames and sparks. Contact with incompatible materials.
Incompatible materials	Acids. Oxidizing 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

11. Toxicological information

Information on likely routes of exposure

Inhalation	Not classified.
Skin contact	Causes skin irritation. May cause an allergic skin reaction.
Eye contact	Causes eye irritation.
Ingestion	Not classified.

Symptoms related to the physical, chemical and toxicological characteristics	Direct contact with eyes may cause temporary irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Skin irritation. May cause an allergic skin reaction.
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Information on toxicological effects

Acute toxicity	Not known.
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Components	Species	Test Results
2-(2-AMINOETHOXY)ETHANOL (CAS 929-06-6)		
Acute		
Oral		
<i>Liquid</i>		
LD50	Rat	3400 mg/kg
ALCOHOLS, C12-14, ETHOXYLATED PROPOXYLATED (CAS 68439-51-0)		
Acute		
Dermal		
<i>Liquid</i>		
LD50	Rabbit	> 2000 mg/kg ATE
Oral		
<i>Liquid</i>		
LD50	Rat	> 2000 mg/kg
MORPHOLINE (CAS 110-91-8)		
Acute		
Dermal		
<i>Liquid</i>		
LD50	Rabbit	500 mg/kg
Inhalation		
<i>Vapor</i>		
LC50	Rat	8 mg/l
Oral		
LD50	Rat	1.05 g/kg
TRIETHANOLAMINE (CAS 102-71-6)		
Acute		
Dermal		
<i>Liquid</i>		
LD50	Rabbit	> 2000 mg/kg
Oral		
<i>Liquid</i>		
LD50	Rat	4190 mg/kg

* Estimates for product may be based on additional component data not shown.

Skin corrosion/irritation Causes skin irritation.

Serious eye damage/eye irritation Causes eye irritation.

Respiratory or skin sensitization

Canada - Alberta OELs: Irritant

TRIETHANOLAMINE (CAS 102-71-6) Irritant

Canada - Quebec OELs: Sensitizer

TRIETHANOLAMINE (CAS 102-71-6) Sensitizer.

Respiratory sensitization Not a respiratory sensitizer.

Skin sensitization May cause an allergic skin reaction.

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

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.

Canada - Manitoba OELs: carcinogenicity

MORPHOLINE (CAS 110-91-8) 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.

Reproductive toxicity	This product is not expected to cause reproductive or developmental effects.
Specific target organ toxicity - single exposure	Not classified.
Specific target organ toxicity - repeated exposure	Not classified.
Aspiration hazard	Not an aspiration hazard.
Chronic effects	Not classified.
Further information	The classification for health and environmental hazards is derived by a combination of calculation methods and test data, if available.

12. Ecological information

Ecotoxicity Contains a substance which causes risk of hazardous effects to the environment.

Components		Species	Test Results
2-(2-AMINOETHOXY)ETHANOL (CAS 929-06-6)			
Aquatic			
<i>Acute</i>			
Crustacea	EC50	Daphnia	189 mg/l, 48 hours
Fish	LC50	Fish	> 681 mg/l, 96 hours
ALCOHOLS, C12-14, ETHOXYLATED PROPOXYLATED (CAS 68439-51-0)			
<i>Acute</i>			
	EC50	Bacteria	> 1000 mg/l
Aquatic			
<i>Acute</i>			
Crustacea	EC50	Daphnia	0.5 mg/l, 48 hours ATE
Fish	LC50	Ide, silver or golden orfe (Leuciscus idus)	1 - 10 mg/l, 96 hours
MORPHOLINE (CAS 110-91-8)			
Aquatic			
Fish	LC50	Zebra danio (Danio rerio)	> 1 mg/l, 96 hours
TRIETHANOLAMINE (CAS 102-71-6)			
Aquatic			
Crustacea	EC50	Water flea (Ceriodaphnia dubia)	565.2 - 658.3 mg/l, 48 hours
<i>Acute</i>			
Fish	LC50	Bluegill (Lepomis macrochirus)	450 - 1000 mg/l, 96 hours

* Estimates for product may be based on additional component data not shown.

Persistence and degradability

Bioaccumulative potential

Partition coefficient n-octanol / water (log Kow)

2-(2-AMINOETHOXY)ETHANOL	-1.89
ALCOHOLS, C12-14, ETHOXYLATED PROPOXYLATED	1 - 4
MORPHOLINE	-2.55
TRIETHANOLAMINE	-2.3

Bioconcentration factor (BCF)

MORPHOLINE	< 2.8
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Mobility in soil This product is miscible in water.

Other adverse effects No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal instructions Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Dispose of contents/container in accordance with local/regional/national/international regulations.

Local disposal regulations Dispose in accordance with all applicable regulations.

Hazardous waste code The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

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

Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport information**TDG**

Not regulated as dangerous goods.

IATA

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not established.

15. Regulatory information

Canadian regulations This product has been classified in accordance with the hazard criteria of the HPR and the SDS contains all the information required by the HPR.

Controlled Drugs and Substances Act

Not regulated.

Export Control List (CEPA 1999, Schedule 3)

Not listed.

Greenhouse Gases

Not listed.

Precursor Control Regulations

Not regulated.

International regulations**Stockholm Convention**

Not applicable.

Rotterdam Convention

Not applicable.

Kyoto protocol

Not applicable.

Montreal Protocol

Not applicable.

Basel Convention

Not applicable.

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
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

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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.

Revision information Product and Company Identification: Product Codes
Hazards Identification: US Hazard Categories
Composition / Information on Ingredients: Ingredients
Physical & Chemical Properties: Multiple Properties
Transport Information: Material Transportation Information
Regulatory Information: United States
HazReg Data: North America
GHS: Classification