SAFETY DATA SHEET

1. Identification

Product identifier **CIMTECH® 420**
METALWORKING FLUID

Other means of identification

SDS number Not applicable

Product code B00859

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 DUBOIS CHEMICAL CANADA INC dba CIMCOOL® Canada

Address B1 – 1175 Appleby Line
Burlington, ON L7L 5H9 Canada

Telephone (General Information) 905-319-1919

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

Supplier Not available.

2. Hazard identification

Physical hazards Not classified.

Health hazards

Skin irritation	Category 2
Serious eye irritation	Category 2
Sensitization, skin	Category 1
Reproductive toxicity	Category 2

Environmental hazards Not classified.

Label elements

Signal word Warning

Hazard statement Causes skin irritation. May cause an allergic skin reaction. Causes serious eye irritation. Suspected of damaging fertility or the unborn child.

Precautionary statement

Prevention	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Wear protective gloves/protective clothing/eye protection/face protection.
Response	IF ON SKIN: Wash with plenty of water. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. IF exposed or concerned: Get medical advice/attention. If skin irritation or rash occurs: Get medical advice/attention. If eye irritation persists: Get medical advice/attention. Take off contaminated clothing and wash it before reuse.
Storage	Store locked up.
Disposal	Dispose of contents/container in accordance with local/regional/national/international regulations.
Other hazards	None known.
Supplemental information	2% of the mixture consists of component(s) of unknown acute oral toxicity. 2% 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. Use in manufacturing processes only.

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
MORPHOLINE		110-91-8	5 - 10
MONOETHANOLAMINE		141-43-5	1 - 5
POLYPROPYLENE GLYCOL		25322-69-4	1 - 5
4-(2-NITROBUTYL)MORPHOLINE		2224-44-4	0.1 - 1
Other components below reportable levels			90 - 100

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	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 Spray or Fog. Foam. Dry chemical powder. Carbon dioxide (CO2). Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire. 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	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/vapors. 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	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. 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/vapors. Avoid prolonged exposure. Pregnant or breastfeeding women must not handle this product. Should be handled in closed systems, if possible. Provide adequate ventilation. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.
Conditions for safe storage, including any incompatibilities	Store locked up. Store in tightly closed container. If frozen, product may separate. Thaw completely at room temperature and stir thoroughly prior to use. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits

US. ACGIH Threshold Limit Values

Components	Type	Value
MONOETHANOLAMINE (CAS 141-43-5)	STEL	6 ppm
	TWA	3 ppm
MORPHOLINE (CAS 110-91-8)	TWA	20 ppm

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

Components	Type	Value
MONOETHANOLAMINE (CAS 141-43-5)	STEL	15 mg/m3
		6 ppm
	TWA	7.5 mg/m3
		3 ppm
MORPHOLINE (CAS 110-91-8)	TWA	71 mg/m3
		20 ppm

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

Components	Type	Value
MONOETHANOLAMINE (CAS 141-43-5)	STEL	6 ppm
	TWA	3 ppm
MORPHOLINE (CAS 110-91-8)	TWA	20 ppm

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

Components	Type	Value
MONOETHANOLAMINE (CAS 141-43-5)	STEL	6 ppm
	TWA	3 ppm
MORPHOLINE (CAS 110-91-8)	TWA	20 ppm

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

Components	Type	Value
MONOETHANOLAMINE (CAS 141-43-5)	STEL	6 ppm
	TWA	3 ppm
MORPHOLINE (CAS 110-91-8)	TWA	20 ppm

Canada. Quebec OELs. (Ministry of Labor - Regulation respecting occupational health and safety)

Components	Type	Value
MONOETHANOLAMINE (CAS 141-43-5)	STEL	15 mg/m3
		6 ppm
	TWA	7.5 mg/m3
		3 ppm
MORPHOLINE (CAS 110-91-8)	TWA	71 mg/m3
		20 ppm

Canada. Saskatchewan OELs (Occupational Health and Safety Regulations, 1996, Table 21)

Components	Type	Value
MONOETHANOLAMINE (CAS 141-43-5)	15 minute	6 ppm
	8 hour	3 ppm
MORPHOLINE (CAS 110-91-8)	15 minute	30 ppm
	8 hour	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) Danger of cutaneous absorption

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) Danger of cutaneous absorption

Appropriate engineering controls Good general ventilation 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. Provide eyewash station and safety shower.

Individual protection measures, such as personal protective equipment

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

Skin protection

Hand protection Nitrile gloves are recommended.

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 Observe any medical surveillance requirements. 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 1.03

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	9.0 @ 5%
Specific gravity	1.030
VOC ASTM D2369	10 %

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	Health injuries are not known or expected under normal use.
Skin contact	Causes skin irritation. May cause an allergic skin reaction.
Eye contact	Causes eye irritation.
Ingestion	Expected to be a low ingestion hazard. Health injuries are not known or expected under normal use.
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.

Information on toxicological effects

Acute toxicity

Components	Species	Test Results
POLYPROPYLENE GLYCOL (CAS 25322-69-4)		
Acute		
Dermal		
Liquid		
LD50	Rabbit	> 10000 mg/kg
Oral		
Liquid		
LD50	Rat	1000 - 2000 mg/kg

Skin corrosion/irritation	Causes skin irritation.
Serious eye damage/eye irritation	Causes eye irritation.

Respiratory or skin sensitization

Canada - Alberta OELs: Irritant

MONOETHANOLAMINE (CAS 141-43-5)	Irritant

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.

Reproductive toxicity Morpholine, a component of this product, is suspected of damaging the unborn child (per EC/List no.: 203-815-1).

Specific target organ toxicity - single exposure Not classified.

Specific target organ toxicity - repeated exposure Not classified.

Aspiration hazard Not an aspiration hazard.

Chronic effects Prolonged inhalation may be harmful. May be harmful if absorbed through skin.

Prolonged or repeated exposure may cause liver and kidney damage. These effects have not been observed in humans.

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 The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Components		Species	Test Results
MONOETHANOLAMINE (CAS 141-43-5)			
Aquatic			
Fish	LC50	Rainbow trout,donaldson trout (Oncorhynchus mykiss)	114 - 196 mg/l, 96 hours
Acute			
Crustacea	EC50	Daphnia	65 mg/l, 48 hours ECHA
MORPHOLINE (CAS 110-91-8)			
Aquatic			
Acute			
Crustacea	EC50	Daphnia	45 mg/l, 48 hours ECHA
Fish	LC50	Fish	179 - 380 mg/l, 96 hours ECHA
POLYPROPYLENE GLYCOL (CAS 25322-69-4)			
Aquatic			
Acute			
Crustacea	EC50	Daphnia	> 100 mg/l, 48 hours
Fish	LC50	Ide, silver or golden orfe (Leuciscus idus)	> 100 mg/l, 96 hours

Persistence and degradability No data is available on the degradability of any ingredients in the mixture.

Bioaccumulative potential

Partition coefficient n-octanol / water (log Kow)

MONOETHANOLAMINE	-1.31
MORPHOLINE	-0.86
POLYPROPYLENE GLYCOL	-0.21

Mobility in soil This product is miscible with 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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Version #	06
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	This document has undergone significant changes and should be reviewed in its entirety.