

# Material Safety Data Sheet

Issue Date: 11/7/2003

MSDS Number: ALP03

Product Name: Alpolic CU

Revision: [02]01/15/2010

## Section 1 - Chemical Product and Company Identification

Product Name: Alpolic CU

Chemical Formula NA

CAS Number: NA (mixture)

General Use:

Other Designations NA

Company Name:	Mitsubishi Chemical Functional Products	Distributor:	Same as Manufacturer
Street Address:	401 Volvo Parkway	Street Address:	Same as Manufacturer
Town:	Chesapeake	Town:	Same as Manufacturer
State:	VA	State:	Same as Manufacturer
Zip Code:	23320	Zip Code:	Same as Manufacturer
Emergency Contacts:	Chemtec 1-800-424-9300	Other Contacts:	757-382-5750

Health	0
Fire	0
Reactivity	0
PPE	(See Sec. 8)

## <<<>> EMERGENCY OVERVIEW <<<>>

Metal machining or grinding operations may produce fine particulate or dust. Heating, melting, welding, or brazing, may produce metal fumes and particulates. Inhalation of excessive fume or dust concentrations may result in respiratory tract irritation and/or metal fume fever.

## Section 2 - Composition and Information on Ingredients

Ingredient	Copper	CAS No.	Proprietary	% in Mixture	20-50
	OSHA	ACGIH	NIOSH	UNIT OF MEASURE	
TWA	1.0 (dust) 0.1 (fume)	1.0 (dust) 0.1 (fume)	1.0 (dust) 0.1 (fume)	mg/cu.meter	
STEL	NE	NE	NE	mg/cu.meter	
IDLH	NA	NA	10	mg/cu.meter	

Ingredient	Fluoropolymer Coating	CAS No.	Proprietary	% in Mixture	<1
	OSHA	ACGIH	NIOSH	UNIT OF MEASURE	
TWA	NE	NE	NE	mg/cu.meter	
STEL	NE	NE	NE	mg/cu.meter	
IDLH	NA	NA	NE	mg/cu.meter	

Ingredient	Polyethylene	CAS No.	Proprietary	% in Mixture	50-80
	OSHA	ACGIH	NIOSH	UNIT OF MEASURE	
TWA	15* and 5**	10*	NE	mg/cu.meter	
STEL	NE	NE	NE	mg/cu.meter	
IDLH	NA	NA	NE	mg/cu.meter	

NA

## Section 3 - Hazards Identification

**Primary Entry Routes:**

Inhalation

**Target Organs:**

Respiratory System, Eyes, Skin

**Inhalation Effects:**

Fume exposure may cause irritation to the respiratory system. Metal fume fever, wheezing, and rales may occur with inhalation exposure. Symptoms of metal fume fever may last 24 to 48 hours and may include a sweet or metallic taste in the mouth, dryness and irritation of the throat, cough, shortness of breath, chest pain, nausea, vomiting, weakness, fatigue, muscle and joint pain, chills, sweating, and fever.

**Eye Effects:**

May cause eye irritation.

**Skin Effects:**

May cause allergic or irritant contact dermatitis.

**Ingestion Effects:**

May cause nausea and vomiting.

**Carcinogenicity:**

Not listed by IARC, NTP, or OSHA as a carcinogen.

**Medical Conditions Aggravated by Long-term Exposure:**

None determined.

**Chronic Effects and/or Recommendations:**

Tetratogenic and reproductive effects have been observed experimentally.

**Section 4 - First Aid Measures****Inhalation:**

Protect yourself with appropriate PPE, remove the person to fresh air. Decontaminate and begin rescue breathing if breathing has stopped and CPR if heart action has stopped. Seek prompt medical attention.

**Eye:**

DO NOT allow victim to rub or keep eyes tightly shut. Gently lift eyelids and immediately flush eyes with large amounts of water. Remove any contact lenses. Continue to flush for at least 30 minutes, occasionally lifting the upper and lower lids. Seek prompt medical attention.

**Skin:**

Quickly remove contaminated clothing. Immediately wash area with large amounts of water. Seek prompt medical attention for any reddened skin other than from washing.

**Ingestion:**

Never give anything by mouth to an unconscious or convulsing person. Contact a Poison Control Center (PCC). Unless the PCC advises otherwise, have the conscious and alert person drink 1 to 2 glasses of water to dilute. Induce vomiting only after recent ingestions due to the possibility of seizures. Seek prompt medical attention.

**Additional First Aid Information:**

NA

**Section 5 - Fire Fighting Measures**

<b>Flash Point:</b>		<b>Flash Point Method:</b>	
NA		NA	
<b>Flammability Classification:</b>		<b>Auto Ignition Temperature:</b>	
0, Not Flammable (HMIS, NFPA)		ND	
<b>LEL:</b>	<b>UEL:</b>	<b>Burning Rate:</b>	
NA	NA	NA	

**Extinguishing Media:**

Water spray, dry chemical, foam, carbon dioxide, or halon-type extinguishers.

**Unusual Fire / Explosion Hazards:**

May form flammable dust-air mixture.

**Hazardous Combustion Products:**

Carbon monoxide, carbon dioxide, nitrogen oxide, and smoke. Under certain conditions some aliphatic aldehydes and carboxylic acids may form.

**Fire-Fighting Instructions:**

Do not release runoff from fire control methods to sewers or waterways.

**Fire-Fighting Equipment:**

Because fire may produce toxic thermal decomposition products, wear a self-contained breathing apparatus (SCBA) with a full facepiece operated in pressure-demand or positive-pressure mode.

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## Section 6 - Accidental Release Measures

**Containment Method:**

No special requirements.

**Reporting Requirements:**

Follow applicable OSHA regulations (29 CFR 1910.120).

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## Section 7 - Handling and Storage

**Handling Precautions:**

Avoid contact with sharp edges and corners.

**Storage Requirements:**

NA

**Regulatory Requirements:**

NA

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## Section 8 - Exposure Controls and Personal Protection

**Ventilation**

The best protection is to enclose operations and/or provide local exhaust ventilation at the site of chemical release in order to maintain airborne concentrations of the product below OSHA PELs (See Section 2). Local exhaust ventilation is preferred because it prevents contaminant dispersion into the work area by controlling it at its source.

**Respiratory Protection**

IMPROPER USE OF RESPIRATORS IS DANGEROUS. Seek professional advice prior to respirator selection and use. Follow OSHA respirator regulations (29 CFR 1910.134 and 1910.137) and, if necessary, wear a NIOSH approved respirator. Select respirator based on its suitability to provide adequate worker protection for given work conditions, level of airborne contamination, and presence of sufficient oxygen. For emergency or non-routine operations (cleaning spills, reactor vessels, or storage tanks), wear an SCBA. **WARNING!** Air purifying respirators do not protect worker in oxygen-deficient atmospheres. If respirators are used, OSHA requires a written respiratory protection program that includes at least: medical certification, training, fit testing, periodic environmental monitoring, maintenance, inspection, cleaning and convenient, sanitary storage areas.

**Protective Clothing and Equipment**

Wear chemically protective gloves, boots, aprons, and gauntlets to prevent prolonged or repeated skin contact. Wear splash-proof chemical goggles and face shield when working with liquid, unless full facepiece respiratory protection is worn. Contact lenses are not eye protective devices. Appropriate eye protection must be worn instead of, or in conjunction with contact lenses.

**Safety Stations**

Make emergency eyewash stations, safety/quick-drench showers, and washing facilities available in work area.

**Contaminated Equipment**

Separate contaminated work clothes from street clothes. Launder before reuse. Remove material from your shoes

and clean personal protective equipment. Never take home contaminated clothing.

**Comments**

Never eat, drink, or smoke in work areas. Practice good personal hygiene after using this material, especially before eating, drinking, smoking, using the restroom, or apply cosmetics.

**Additional Information**

NA

**Section 9 - Physical and Chemical Properties**

<b>Boiling Point:</b> NA	<b>Freezing or Melting Point:</b> NA	<b>Odor Threshold:</b> ND	<b>Physical State:</b> Solid
<b>Viscosity:</b> NA	<b>Refractive Index:</b> NA	<b>Vapor Density (Air = 1):</b> NA	<b>Appearance and Odor:</b> Solid copper, polyethylene composite material.
<b>% Volatiles:</b> NA	<b>Surface Tension:</b> NA	<b>Vapor Pressures:</b> NA	<b>Water Solubility:</b> NA
<b>Density:</b> NA	<b>Evaporation Rate:</b> NA	<b>Formula Weight:</b> NA	<b>Other Solubilities:</b> NA
<b>pH:</b> NA	<b>Specific Gravity where Water = 1 at 4 deg C</b> NA		<b>Additional Comments:</b> NA

**Section 10 - Stability and Reactivity**

<b>Stability:</b> Stable under conditions of normal use.	<b>Polymerization:</b> Hazardous polymerization cannot occur.	<b>Hazardous Decomposition Products:</b> NA
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**Chemical Incompatibilities:**

NA

**Conditions to Avoid:**

NA

**Other Comments:**

NA

**Section 11 - Toxicological Information**

Checked box indicates that related health effects criteria applies to the overall mixture.

- Eye Effects
- Acute Oral Effects
- Acute Inhalation Effects
- Mutagenicity
- Skin Effects
- Chronic Effects
- Carcinogenicity
- Teratogenicity

**EXPLANATION of HEALTH EFFECTS:**

NA

**EXPLANATION of TOXICOLOGICAL CRITERIA:**

**Chemical Component:** Copper

Acute Oral Effects:

Rat TDLo : 152 mg/kg; Rat TDLo: 1210 ug/kg; Rat TDLo: 1520 ug/kg; Human TDLo: 120 ug/kg.

Teratogenicity: Experimental teratogen and reproductive effects.

**Chemical Component:** Fluoropolymer Coating

Data Not Available

**Chemical Component:** Polyethylene

>3 gm/kg oral-rat LD50; 5 gm/kg oral-mouse LDLo

## Section 12 - Ecological Information

Checked box indicates that information regarding the criteria applies to the overall mixture.

Ecotoxicity  Environmental Fate  Environmental Degradation  Soil Absorption and Mobility

**EXPLANATION of APPLICABLE ECOLOGICAL CRITERIA:**

NA

## Section 13 - Disposal Considerations

**Disposal:**

Contact your local supplier or a licensed contractor for detailed recommendations. Follow applicable Federal, state and local regulations.

**Disposal Regulatory Requirements:**

Copper metal is recyclable.

**Container Cleaning and Disposal:**

NA

## Section 14 - Transport Information

**DOT Transportation Data (49CFR 172.101)**

<b>Shipping Name:</b> NA	<b>Label:</b> NA	<b>Passenger Air and Railcar:</b> NA
<b>Shipping Symbols:</b> NA	<b>Special Provisions:</b> NA	<b>Cargo Aircraft:</b> NA
<b>Hazard Class:</b> NA	<b>Exceptions:</b> NA	<b>Oceangoing Vessel Stowage:</b> NA
<b>ID Number:</b> NA	<b>Non-bulk Packaging:</b> NA	<b>Other:</b> NA
<b>Packing Group:</b> NA	<b>Bulk Packaging:</b> NA	

**EXPLANATION of APPLICATION TRANSPORTATION CRITERIA:**

NA

## Section 15 - Regulatory Information

Checked box(es) indicate that the chemical is subject to the associated regulatory requirements and/or appears on the associated chemical inventory list

**Chemical Component:** Copper

**CAS #** Proprietary

40 CFR 261.33	<input type="checkbox"/>	CAA 40 CFR 112	<input type="checkbox"/>	TSCA inventory (US)	<input checked="" type="checkbox"/>
40 CFR 261 classified	<input type="checkbox"/>	SARA 40 CFR 311 and 312	<input type="checkbox"/>	AICS inventory (Australia)	<input checked="" type="checkbox"/>
RCRA Section 3001	<input type="checkbox"/>	SARA 40 CFR 372.65	<input type="checkbox"/>	EINECS inventory (Europe)	<input checked="" type="checkbox"/>
CERCLA RQ established	<input type="checkbox"/>	SARA 40 CFR 355	<input type="checkbox"/>	DSL inventory (Canada)	<input checked="" type="checkbox"/>
40 CFR 302.4	<input type="checkbox"/>	OSHA 1910 1000 Z-1 tables	<input type="checkbox"/>	ECL inventory (Korea)	<input checked="" type="checkbox"/>
CWA 40 CFR 311( b)(4)	<input type="checkbox"/>	OSHA 1910 subpart Z	<input type="checkbox"/>	ENCS inventory (Japan)	<input type="checkbox"/>
CWA 40 CFR 307(a)	<input type="checkbox"/>			PICCS inventory (Phillipines)	<input checked="" type="checkbox"/>
				CHINA inventory	<input type="checkbox"/>
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<b>Chemical Component:</b>	Fluoropolymer Coating		CAS #	Proprietary	
40 CFR 261.33	<input type="checkbox"/>	CAA 40 CFR 112	<input type="checkbox"/>	TSCA inventory (US)	<input type="checkbox"/>
40 CFR 261 classified	<input type="checkbox"/>	SARA 40 CFR 311 and 312	<input type="checkbox"/>	AICS inventory (Australia)	<input type="checkbox"/>
RCRA Section 3001	<input type="checkbox"/>	SARA 40 CFR 372.65	<input type="checkbox"/>	EINECS inventory (Europe)	<input type="checkbox"/>
CERCLA RQ established	<input type="checkbox"/>	SARA 40 CFR 355	<input type="checkbox"/>	DSL inventory (Canada)	<input type="checkbox"/>
40 CFR 302.4	<input type="checkbox"/>	OSHA 1910 1000 Z-1 tables	<input type="checkbox"/>	ECL inventory (Korea)	<input type="checkbox"/>
CWA 40 CFR 311( b)(4)	<input type="checkbox"/>	OSHA 1910 subpart Z	<input type="checkbox"/>	ENCS inventory (Japan)	<input type="checkbox"/>
CWA 40 CFR 307(a)	<input type="checkbox"/>			PICCS inventory (Phillipines)	<input type="checkbox"/>
				CHINA inventory	<input type="checkbox"/>
<hr/>					
<b>Chemical Component:</b>	Polyethylene		CAS #	Proprietary	
40 CFR 261.33	<input type="checkbox"/>	CAA 40 CFR 112	<input type="checkbox"/>	TSCA inventory (US)	<input checked="" type="checkbox"/>
40 CFR 261 classified	<input type="checkbox"/>	SARA 40 CFR 311 and 312	<input type="checkbox"/>	AICS inventory (Australia)	<input checked="" type="checkbox"/>
RCRA Section 3001	<input type="checkbox"/>	SARA 40 CFR 372.65	<input type="checkbox"/>	EINECS inventory (Europe)	<input type="checkbox"/>
CERCLA RQ established	<input type="checkbox"/>	SARA 40 CFR 355	<input type="checkbox"/>	DSL inventory (Canada)	<input checked="" type="checkbox"/>
40 CFR 302.4	<input type="checkbox"/>	OSHA 1910 1000 Z-1 tables	<input type="checkbox"/>	ECL inventory (Korea)	<input checked="" type="checkbox"/>
CWA 40 CFR 311( b)(4)	<input type="checkbox"/>	OSHA 1910 subpart Z	<input type="checkbox"/>	ENCS inventory (Japan)	<input checked="" type="checkbox"/>
CWA 40 CFR 307(a)	<input type="checkbox"/>			PICCS inventory (Phillipines)	<input type="checkbox"/>
				CHINA inventory	<input type="checkbox"/>

## Section 16 - Other Information

**Abbreviations:** ACGIH - American Conference of Governmental Industrial Hygienists

IDLH - Immediately Dangerous to Life and Health

NA - Not Applicable to the criteria OR Not Available

ND- Not Determined OR Not Known

NE - None established

OSHA - Occupational Safety and Health Administration

PEL - Permissible Exposure Limit

RCRA - Resource Conservation Recovery Act

STEL - Short Term Exposure Limit

TLV - Threshold Limit Value

TSCA - Toxic Substances Control Act

TWA - Time Weighted Average

**Disclaimer:** The information presented in this Material Safety Data Sheet is based on data believed to be accurate as of the date this Material Safety Data Sheet was prepared. The information above is provided on the condition that parties receiving the product make their own determination as to the suitability of the product for their particular purpose and assume the risk of use of the product. NO WARRANTY OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR ANY OTHER WARRANTY IS EXPRESSED OR IS TO BE IMPLIED REGARDING THE ACCURACY OR COMPLETENESS OF THE INFORMATION PROVIDED ABOVE, THE RESULTS TO BE OBTAINED FROM THE USE OF THIS INFORMATION OR THE PRODUCT, THE SAFETY OF THIS PRODUCT, OR THE HAZARDS RELATED TO ITS USE. Mitsubishi has no responsibility or liability for any damage or injury resulting from abnormal use or from any failure to adhere to recommended procedures. Mitsubishi neither grants, nor shall the party receiving the product imply any authorization to practice any patented invention without a license.

**Additional Comments:** NA

**Revision Notes:** ACB

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