

SECTION 1: IDENTIFICATION

- (a) Product Identifier: **ALPOLIC®/ fr Copper**
- (b) Other means of Identification: None
- (c) Recommended Use: Composite Building Material
- (d) Manufacturer/Importer/Distributor: Mitsubishi Chemical America, Inc.
401 Volvo Parkway, Chesapeake, VA 23320
757-382-5750
- (e) Emergency Phone Number: Chemtrec 1-800-424-9300

SECTION 2: HAZARD(S) IDENTIFICATION

- (a) Chemical Classification: Not classified as hazardous according to OSHA Hazard Communication Standard, 29 CFR 1910.1200.
- (b) Signal Word: Not applicable
- Hazard Statement(s): Not applicable
- Symbol(s): Not applicable
- Precautionary Statement(s): Not applicable
- (c) Hazards Not Otherwise Classified: None Known
- (d) Supplemental Information: None

NOTE: This product is an "article" according to 29 CFR 1910.1200.

"Article means a manufactured item other than a fluid or particle, which is formed to a specific shape or design during manufacture which has end use function dependent in whole or in part upon its shape or design during end use, and which under normal conditions does not release more than very small quantities or trace amounts of a hazardous chemical, and does not pose a physical hazard or health risk to employees."

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Components	CAS Number	Percent*
Copper	7440-50-8	53%
Aluminum Hydroxide	21645-51-2	32%
Polyethylene	9002-88-4	14%
Flouropolymer Coating	Trade Secret	1%

*Concentration of ingredients varies depending upon the thickness of the material.

SECTION 4: FIRST-AID MEASURES

- (a) Eye contact: Dust from processing. Rinse eyes with water or saline for at least 15 minutes. Consult a physician.

Skin Contact	Dust from processing. Wash with soap and water for at least 15 minutes. Get medical attention if irritation develops or persists.
Inhalation	Dust from processing. Move to fresh air. Consult a physician.
Ingestion	Not likely due to form of product.
(b) Most important Symptoms/Effects	
Inhalation	Short term exposure to fumes or dust may produce irritation of the mucous membranes and respiratory system. Exposure to metal fumes can produce an acute allergic condition known as “metal fume fever”. Symptoms may include chills, muscle aches, nausea, fever, dry throat, cough, weakness, and lassitude. The onset of symptoms may be delayed several hours and recovery generally occurs without intervention within 24 to 48 hours.
Skin Contact	Contact with fume or metal powder may irritate skin. Contact with hot, molten metal will cause thermal burns.
Eye Contact	Short term exposure to fumes or dust may cause eye irritation. Mechanical injury can result from particulate.
Ingestion	Ingestion of dust may cause nausea, vomiting, abdominal pain, metallic taste and diarrhea. Ingestion of large doses may cause stomach and intestine ulceration, jaundice, and kidney or liver damage.
(c) Medical conditions aggravated by exposure	Asthma, chronic lung disease, and skin rashes may be aggravated from exposure to dust during processing.
(d) Indication if immediate medical attention and special treatment	No data available.

SECTION 5: FIRE-FIGHTING MEASURES

(a) Suitable extinguishing media	Use Class D extinguishing agents on fines or molten metal.
Unsuitable extinguishing media	Do not use halogenated extinguishing agents on small chips/fine dusts.
(b) Specific hazards	Do not use water in fighting fires around molten metal. Dust or fines may burn if they are ignited. Fumes may contain oxides of copper and other ingredients. Fine particles or dust dispersed in the air may present a fire/explosion hazard.
(c) Special PPE and precautions for fire fighters	Fire fighters should wear NIOSH approved, positive pressure, self-contained breathing apparatus and full protective clothing when appropriate.

SECTION 6: ACCIDENTAL RELEASE MEASURES

(a) Personal precautions, PPE, and emergency procedures	Avoid contact with sharp edges or heated metal. Use PPE recommended in Section 8. Avoid generation of airborne dust.
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- (b) Environmental Precautions Do not flush dust or fines to surface waters, soil, or sanitary sewer system.
- (c) Methods and materials for containment and cleaning up Should a release of dust occur, contain by blocking routes to surface water and grassy areas. Clean up by sweeping and depositing in a closed container.

SECTION 7: HANDLING AND STORAGE

- (a) Precautions for safe handling As sold in the solid form, copper and copper alloys pose no chemical handling hazard. Avoid contact with sharp edges, where proper gloves when handling. Dust, fines, fume, or mist generated by processing may pose hazard through inhalation, ingestion, and eye or by skin contact. Avoid breathing metal fumes and/or dust. Practice good housekeeping and good hygiene. Avoid generating dust. Eating, drinking, or smoking should not be allowed in areas where processing of this product occurs.
- (b) Conditions for safe storage No special storage precautions noted.
- (c) Incompatible Materials Strong acids, strong bases, strong oxidizers, halogens, and mercury.

SECTION 8: EXPOSURE CONTROLS/ PERSONAL PROTECTION

- (a) Occupational Exposure Limits

Component	OSHA Permissible Exposure Limits (PEL)		ACGIH TLV
	Total	Respirable	Respirable Fraction
Polyethylene	10 mg/m ³	5 mg/m ³	N/A

Component	OSHA (PEL)	ACGIH (TLV)	IDLH
Copper (7440-50-8)	0.1 mg/m ³ (fume) 1 mg/m ³ (dust/mist)	0.2 mg/m ³ (fume)	100 mg/m ³ (dust, fume, mist)

- (b) Appropriate Engineering Controls If dust is generated through processing, use with adequate ventilation designed to handle particulates to meet the occupational exposure limits listed in Section 8(a).
- (c) Individual protective measures, PPE
- Eye/Face Protection Safety glasses with full side shields or goggles recommended.
- Skin Protection Avoid contact with sharp edges. Cut resistant gloves recommended.
- Respiratory Protection Dust from processing. Use NIOSH approved respiratory protection if concentrations exceed the limits listed in Section 8(a).

Thermal Hazards

When material is heated, wear gloves to protect against thermal burns.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

(a) Appearance	Solid panel, reddish to dark brown
(b) Odor	Odorless
(c) Odor Threshold	Not applicable
(d) pH	Not applicable
(e) Melting Point/Freezing Point	1981°F Copper / 219-239 °F Polyethylene
(f) Initial Boiling Point and Boiling Range	Not determined
(g) Flash Point	811 °F
(h) Evaporation Rate	Not applicable
(i) Flammability (solid, gas)	Not applicable
(j) Upper/Lower Flammability Explosive Limits	Not applicable Dust clouds may be explosive under certain conditions
(k) Vapor Pressure	Not applicable
(l) Vapor Density	Not applicable
(m) Density (specific gravity)	3.13
(n) Solubility	Insoluble
(o) Partition Coefficient	Not applicable
(p) Auto Ignition Temperature	837 °F
(q) Decomposition Temperature	Not determined
(r) Viscosity	Not applicable

SECTION 10: STABILITY AND REACTIVITY

(a) Reactivity	The product is stable and non-reactive under normal conditions of use, storage, and transport.
(b) Chemical Stability	Stable under normal conditions of use, storage, and transport.
(c) Possibility of hazardous reactions	Hazardous polymerizations does not occur.
(d) Conditions to avoid	Avoid creating or spreading dust and incompatible materials.
(e) Incompatible materials	Strong acids, strong bases, strong oxidizers, halogens, and mercury.
(f) Hazardous decomposition products	Carbon monoxide, carbon dioxide, nitrogen oxide, metal oxides, and fumes. Under certain conditions some aliphatic aldehydes and carboxylic acids may form. Contact with strong acids will release hydrogen gas.

SECTION 11: TOXICOLOGICAL INFORMATION

(a) Acute toxicity	Not classified.
(b) Skin corrosion/irritation	Not corrosive.
(c) Serious eye damage/irritation	Dust from processing may cause eye irritation.

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| (d) Respiratory or skin sensitization | Dust and fumes from processing may cause respiratory irritation. Not a skin sensitizer. |
| (e) Germ cell mutagenicity | Not classified. |
| (f) Carcinogenicity | Not classified. |
| (g) Reproductive toxicity | Not classified. |
| (h) STOT-single exposure | Not classified. |
| (i) STOT-repeated exposure | Not classified. |
| (j) Aspiration hazard | Not an aspiration hazard. |
| (k) Chronic effects | Dust and fumes from processing may cause scarring of the lungs, central nervous system damage. |

SECTION 12: ECOLOGICAL INFORMATION

- (a) Ecotoxicity No additional information available.

Copper (7440-50-8)	
LC50 Fish 1	<=0.0068 (0.0068-0.0156) mg/l (Exposure time: 96h – species: Pimephales promelas)
EC50 Daphnia 1	0.03 mg/l (Exposure time: 48h – species: Daphnia magna [static])
EC50 Other Aquatic Organisms 1	0.0426 (0.0426-0.0535) mg/l (Exposure time: 72h – species: Pseudokirchneriella subcapitata [static])
LC50 Fish 2	0.3 mg/l (Exposure time: 96h – species: Pimephales promelas [static])
EC50 Other Aquatic Organisms 2	0.031 (0.031-0.054) mg/l (Exposure time: 96h – species: Pseudokirchneriella subcapitata [static])

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| (b) Persistence and degradability | Not readily biodegradable. |
| (c) Bioaccumulative potential | No information available. |
| (d) Mobility in soil | No information available. |
| (e) Other adverse effects | None known |

SECTION 13: DISPOSAL CONSIDERATIONS

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| Disposal Instructions | Reuse or recycle material whenever possible. If reuse or recycling is not possible, dispose in accordance with federal, state, and/or local regulations. |
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SECTION 14: TRANSPORT INFORMATION

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| (a) UN Number | Not applicable |
| (b) UN proper shipping name | Not Regulated |
| (c) Transport Hazard Class(es) | Not Applicable |
| (d) Packing Group | Not Applicable |
| (e) Environmental Hazards | Not Applicable |
| (f) Transport in Bulk | Not Applicable |
| (g) Special Precautions | Not Applicable |

SECTION 15: REGULATORY INFORMATION

OSHA: This product is not classified as hazardous under the criteria set forth by 29 CFR 1910.1200, Hazard Communication.

Federal and State Regulations: There is no classification data available on carcinogenic properties of this material from EPA, IARC, NTP, OSHA, or ACGIH.

California Proposition 65: WARNING – This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

Components of this product are subject to the following regulatory requirements and/or appear on the following associated chemical inventory list(s): Toxic Substance Control Act (TSCA), European Inventory of Existing Commercial Substances (EINECS), Australian Inventory of Chemical Substances (AICS), Domestic Substances List (DSL), Korea Existing Chemicals List (KECL), Philippines Chemical Inventory (PICCS).

CERCLA Hazardous Substance List (40 CFR 302.4)

Copper (CAS 7440-50-8) - Listed

SARA 313 (TRI Reporting)

Copper (CAS 7440-50-8)

SECTION 16: OTHER INFORMATION

SDS #: ALP08

Issue Date: 11/29/12

Revision Date: 9/20/18

Revision #: 6

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