



# NEW ENGLAND ELECTRIC WIRE CORPORATION

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## MATERIAL SAFETY DATA SHEET

MSDS # 4

**MANUFACTURER'S NAME:** New England Electric Wire Corporation  
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**TELEPHONE:** 1-603-838-6625  
**PREPARATION DATE:** October 16, 1991  
**REVISION DATE:** July 27, 1993

→ **CHEMICAL NAME AND SYNONYMS:** Newaloy 61 (CADMIUM COPPER)

**PRODUCT TYPE:** Round and flattened wire products fabricated by mechanical means such as bending, coiling, stranding, braiding, or weaving, etc.

In the solid form this product is not hazardous. However, caution must be exercised when burning, grinding, or welding.

### HAZARDOUS INGREDIENTS

INGREDIENT	%	CAS#	OSHA PEL	ACGIH TLV	ACGIH-STEL
Copper*	98.8-100	7440-50-8			
Fume			0.1 mg/M <sup>3</sup>	0.2 mg/M <sup>3</sup>	2.0 mg/M <sup>3</sup>
Dust			1.0 mg/M <sup>3</sup>	1.0 mg/M <sup>3</sup>	
Cadmium*	0.7-1.2	7440-43-9			
Fume				0.1 mg/M <sup>3</sup>	
Dust				0.2 mg/M <sup>3</sup>	
Oxide					.05 mg/M <sup>3</sup>

\* SARA Title III, Section 313 listed chemical.

### PHYSICAL DATA

Density: 8.76-8.92  
Boiling Point: 2324° C.  
Melting Point: 1083° C. (solidus)  
Vapor Pressure: 1mm Hg @ 887 C. as copper.  
Vapor Density: N/A  
Evaporation Rate: N/A  
Solubility in Water: Insoluble  
Odor: None  
Appearance: Red brown metal

#### FIRE AND EXPLOSION HAZARD DATA

Flash Point: N/A Auto Ignition Temperature: N/A  
Flammability Limits in Air % by volume - LEL: N/A UEL: N/A

Extinguishing Media: Powdered dolomite, sodium chloride, or graphite.

Special Fire Fighting Procedures: Copper or tin in the form of dust or powder is a slight to moderate fire hazard when exposed to heat, or by spontaneous chemical reaction with halogenates,  $\text{Cu}(\text{NO}_3)_2$ ,  $\text{H}_2\text{O}_2$ , and explosive with the addition of heat, percussion, or friction to the chemical reaction. For copper and cadmium powder fires do not use water.

Unusual Fire and Explosion Hazards: Reacts violently with  $\text{C}_2\text{H}_2$ ,  $\text{NH}_4\text{NO}_3$ , bromates, chlorates, iodates,  $\text{Cl}_2$ ,  $\text{Br}_2$ ,  $\text{ClF}_2$ ,  $\text{ClF}_3$ ,  $\text{BrF}_3$  ( $\text{Cl}_2 + \text{OF}_2$ ), ethylene oxide,  $\text{F}_2$ ,  $\text{H}_2\text{O}_2$ , hydrazine mononitrate, hydrazoic acid,  $\text{H}_2\text{S}$ ,  $\text{Pb}(\text{N}_3)_2$ ,  $\text{K}_2\text{O}_2$ ,  $\text{NaN}_3$ ,  $\text{Na}_2\text{O}_2$ ,  $\text{Cu}(\text{NO}_3)_2$  and S.

#### REACTIVITY HAZARD DATA

Stability: Stable

Conditions to Avoid: High temperatures may release toxic metal fumes.

Materials to Avoid: 1-Bromo-2-propyne,  $\text{NH}_3$ , Zn, Se, Te, and oxidizing agents (also materials listed under Fire and Explosion Hazard Data).

Hazardous Decomposition Products: Toxic metal fumes.

Hazardous Polymerization: Will not occur.

#### HEALTH HAZARD DATA

Primary Routes of Entry: Inhalation

Carcinogen: Cadmium is a suspected carcinogen by NTP and IARC Monograph.

Health Hazards: Acute - Metal Fume Fever  
Chronic - Cadmium may cause kidney dysfunction, emphysema, and bronchitis.

Symptoms of Exposure: Chills, fever, aching muscles, dry mouth and throat, headache, nausea, vomiting, and diarrhea.

Medical Conditions aggravated by exposure: Wilson's disease or pre-existing respiratory or kidney disease.

#### Emergency First Aid Procedures

Eye Contact: Fragments in cornea may cause cataracts. Remove fragments and flush eyes with fresh water for 15 minutes.

Skin Contact: May irritate skin. Wash skin with fresh water for 5 minutes. Remove contaminated clothing and wash before reuse.

Inhalation: Remove to fresh air. Administer CPR if breathing has stopped.

Ingestion: May be moderately irritating to stomach lining. Induce vomiting if conscious.

\* Seek medical attention for further treatment and assistance.

#### CONTROL AND PROTECTIVE MEASURES

Respiratory Protection: NIOSH/MSHA approved respirator when toxic dust and/or fumes are present.  
Protective Gloves: None required.  
Eye Protection: Safety glasses if particles become airborne.  
Ventilation: Local exhaust if toxic fumes are present.  
Hygienic Work Practices: Practice good housekeeping and personal hygiene procedures.

#### SAFE HANDLING AND LEAK PROCEDURES

Allow molten metal to cool and solidify before handling. Use methods that minimize the generation of toxic copper and cadmium dust when cleaning up.

Recycle or dispose of scrap in accordance with federal, state and local regulations.

Avoid storage near incompatible materials listed under Fire and Explosion Data and Reactivity Data. Avoid conditions which create toxic metal fumes or dust.

Wash exposed skin after handling material.

NEPA RATING Health 1 Flammability 0 Reactivity 0 Special  
HMIS RATING Health 1 Flammability 0 Reactivity 0 Personal  
Protection A

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