NEW ENGLAND ELECTRIC WIRE CORPORATION
LISBON, NEW HAMPSHIRE 03585 • TEL 603-838-6625

MATERIAL SAFETY DATA SHEET

MSDS # 4

MANUFACTURER'S NAME: New England Electric Wire Corporation
ADDRESS: 365 Main Street, Lisbon, N.H. 03585
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^3	0.2 mg/M^3	2.0 mg/M^3
Dust			1.0 mg/M^3	1.0 mg/M^3	
Cadmium*	0.7-1.2	7440-43-9			
Fume				0.1 mg/M^3	
Dust				0.2 mg/M^3	
Oxide					.05 mg/M^3

* 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, $Cu(NO_3)$, H_2O_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 C_2H_2, NH_4NO_3, bromates, chlorates, iodates, Cl_2, Br_2, ClF_2, ClF_3, BrF_3 ($Cl_2 + OF_2$), ethylene oxide, F_2, H_2O_2, hyrazine mononitrate, hydrazoic acid, H_2S, $Pb(N_3)_2$, K_2O_2, NaN_3, Na_2O_2, $Cu(NO_3)$ and S.

REACTIVITY HAZARD DATA

Stability: Stable
Conditions to Avoid: High temperatures may release toxic metal fumes.
Materials to Avoid: 1-Bromo-2-propyne, 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 Monagraph.
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.

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

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MATERIAL SAFETY DATA SHEET

MSDS # 8

MANUFACTURER'S NAME: New England Electric Wire Corporation
ADDRESS: 365 Main Street
TELEPHONE: (603) 838-6625
PREPARATION DATE: August 5, 1993

CHEMICAL NAME AND SYNONYMS: Poly(vinyl chloride), PVC, vinyl, copolymer.

PRODUCT TYPE: Wire and cable products insulated with natural or colored PVC compounds.

CAS REGISTRY NUMBER: N/A

HAZARDOUS INGREDIENTS

INGREDIENT	%	CAS#	OSHA PEL	OSHA STEL
Lead Stabilizer	0 - 5%	N/A	0.05 mg/m^3	0.15 mg/m^3
Organic Tin Compounds	0 - 10%	N/A	0.5 mg/m^3	0.1 mg/m^3
Vinyl Chloride	< 0.001%	75-01-4	1 ppm	5 ppm
Monomeric Phthalate and Adipate Plasticizers--				
--DEHP	5 - 50%	117-81-7	5 mg/m^3	10 mg/m^3
--DEHA	5 - 15%	103-23-1	N/A	N/A
*Antimony Compounds	2% max	N/A	N/A	N/A
*Barium Compounds	2% max	N/A	N/A	N/A
*Cadmium Compounds	2% max	N/A	N/A	N/A
*Chromium Compounds	7% max	N/A	N/A	N/A
*Lead	5% max	N/A	N/A	N/A

*Subject to SARA Title III Section 313 reporting.

PHYSICAL DATA

Volatile Content: Non-volatile
Specific Gravity: 1.30 - 1.85
Vapor Pressure: N/A
Evaporation Rate: N/A
Odor: Odorless or bland

Boiling Point: N/A
Melting Point: N/A
Vapor Density: N/A
Solubility in Water: Slight

FIRE AND EXPLOSION HAZARD DATA

Flash Ignition Temperature: 391° C Method: ASTM D-1929
Self-Ignition Temperature 454° C Method: ASTM D-1929
Flammability Limits in Air % by Volume-LEL: N/A UEL: N/A

Unusual Fire and Explosion Hazards: PVC evolves hydrogen chloride, carbon monoxide and other toxic gases when burned. Exposure to combustion products may be fatal and should be avoided. Control or eliminate likely ignition sources.
Extinguishing Media: Water spray, carbon dioxide, dry chemical-ABC dry powder, protein-type air foams. Water is most effective. Carbon dioxide may be an ineffective medium due to a lack of cooling capacity which could result in re-ignition.
Special Fire Fighting Instructions/Procedures: Cool exposed equipment with water spray. Use self-contained breathing apparatus if fighting fire in contained spaces, to prevent inhaling combustion gases. Personnel not having suitable respiratory protection must leave the area immediately to prevent significant exposure to toxic combustion gases from any source.

HAZARDOUS REACTIVITY DATA

Stability: Stable
Conditions to Avoid: Avoid heating above 570° F.
Materials to Avoid: Acetal, acetal copolymers
Hazardous Decomposition Products: Hydrogen chloride, carbon monoxide, carbon dioxide, small amounts of benzene and aromatic and aliphatic hydrocarbons.
Hazardous Polymerization: Will not occur.

HEALTH HAZARD DATA

Primary Routes of Entry: Ingestion-Obstructive if swallowed.
Skin-Not a probable route of entry (topically).
Eye-Irritation could occur on contact through inhalation.
Inhalation-Inhalation of lead may result in lead poisoning (see below).
Chronic Health Hazards: Lead poisoning, with symptoms such as tiredness, decreased appetite, metallic taste, abdominal cramps, muscle weakness (wrist and foot drop), headaches, and convulsions.
Medical Conditions Aggravated by Exposure: No adverse health effects expected, however, individuals with bronchial asthma and other types of chronic obstructive respiratory diseases may develop bronchiospasm if exposure is prolonged (see below).
Effects of Overexposure: Depending on the severity of exposure, physiological response will be coughing, pain, and inflammation