SHEET 0715011

Safety Data Sheet
Date of Issue: |Revision Date: 05/30/2016 |Revision Number:
Imperial Supplies Part Number: 0715011

SECTION 1: IDENTIFICATION

1.1. Product Identifier
Product Form:
Product Name: NYLON INSULATE COPPER TERMINALS SERIES
CAS No:
Synonyms: Not Available

1.2. Intended Use of the Product
Use of the substance/mixture: Electrical terminals

1.3. Name, Address, and Telephone of the Responsible Party
Company
K.STERMINALS INC.
No.8. Zhangbin E.3rd Road
Xianxi Township, Changhua County 507
Email: Huichen@ ksterminals.com.tw
Phone: +886-4-7580001-529

1.4. Emergency Telephone Number
Emergency | +886-4-7580001
number |

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the Substance or Mixture

Classification (GHS-US)

Not Applicable|

|

|

2.2. Label Elements

GHS-US Labeling

Hazard Pictograms (GHS-US)	
Signal Word (GHS-US)	
Hazard Statements (GHS-US)	Not Applicable
Precautionary Statements (GHS-US)	Not Applicable

2.3. Other Hazards

Other Hazards Not Contributing to the Classification: Not Available.

2.4. Unknown Acute Toxicity (GHS-US)

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substance

Name	Product identifier	%	Classification (GHS-US)

Full text of H-phrases: See Section 16

3.2. Mixture

Name	Product identifier	%	Classification (GHS-US)
Copper	7440-50-8	81.389574	
Poly(hexamethyleneadipamide)	32131-17-2	18.512658	
Tin	7440-31-5	0.081479	
Phosphorus	7723-14-0	0.016281	
Lead	7439-92-1	0.000008	

SECTION 4: FIRST AID MEASURES

4.1. Description of First Aid Measures

First-aid Measures General:

First-aid Measures After Inhalation: If fumes, aerosols or combustion products are inhaled remove from contaminated area.

Other measures are usually unnecessary.

First-aid Measures After Skin Contact: If skin or hair contact occurs:

Flush skin and hair with running water (and soap if available).

Seek medical attention in event of irritation. For thermal bums:

Decontaminate area around bum.

Consider the use of cold packs and topical antibiotics.

For first-degree burns (affecting top layer of skin)

Hold burned skin under cool (not cold) running water or immerse in cool water until pain subsides.

Use compresses if running water is not available.

Cover with sterile non-adhesive bandage or clean cloth.

Do NOT apply butter or ointments; this may cause infection.

Give over-the counter pain relievers if pain increases or swelling, redness, fever occur.

For second-degree bums (affecting top two layers of skin)

Cool the bum by immerse in cold running water for 10-15 minutes.

Use compresses if running water is not available.

Do NOT apply ice as this may tower body temperature and cause further damage.

Do NOT break blisters or apply butter or ointments; this may cause infection.

Protect bum by cover loosely with sterile, nonstick bandage and secure in place with gauze or tape.
To prevent shock: (unless the person has a head, neck, or leg injury or it would cause discomfort):
Lay the person flat.
Elevate feet about 12 inches.
Elevate bum area above heart level, if possible.
Cover the person with coat or blanket
Seek medical assistance.
For third-degree bums
Seek immediate medical or emergency assistance.
In the mean time:
Protect bum area cover loosely with sterile, nonstick bandage or, for large areas, a sheet or other material that will not leave lint in would.
Separate burned toes and fingers with dry sterile dressings.
Do not soak bum in water or apply ointments or butter this may cause infection.
To prevent shock see above.
For an airway bum, do not place pillow under the person's head when the person is lying down. This can dose the airway.
Have a person with a racial bum sit up.
Check pulse and breathing to monitor for shock until emergency help arrives.
First-aid Measures After Eye Contact: If this product comes in contact with eyes:
Wash out immediately with water.
If irritation continues, seek medical attention.
Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.
First-aid Measures After Ingestion: Immediately give a glass of water.
First aid is not generally required. If in doubt, contact a Poisons Information Centre or a doctor.

4.2. Most important symptoms and effects, both acute and delayed
Symptoms/Injuries:
Symptoms/Injuries After Inhalation:
Symptoms/Injuries After Skin Contact:
Symptoms/Injuries After Eye Contact:
Symptoms/Injuries After Ingestion:
Chronic Symptoms:

4.3. Indication of Any Immediate Medical Attention and Special Treatment Needed
Treat symptomatically.

SECTION 5: FIRE-FIGHTING MEASURES

5.1. Extinguishing Media
Suitable Extinguishing Media: Foam.
Dry chemical powder.
BCF (where regulations permit).
Carbon dioxide.
Unsuitable Extinguishing Media:

5.2. Special Hazards Arising From the Substance or Mixture
Fire Hazard:
Explosion Hazard: Combustible solid which bums but propagates flame with difficulty; it is estimated that most organic dusts are combustible (area 70%) - according to the circumstances under which the combustion process occurs, such materials may cause fires and / or dust explosions
Organic powders when finely divided over a range of concentrations regardless of particulate size or shape and suspended in air or some other oxidizing medium may form explosive dust-air mixtures and result in a fire or dust explosion (including secondary explosions).
Avoid generating dust, particularly clouds of dust in a confined or unventilated space as dusts may form an explosive mixture with air, and any source of ignition, i.e. flame or spark, will cause fire or explosion. Dust clouds generated by the fine grinding of the solid are a particular hazard; accumulations of fine dust (420 micron or less) may bum rapidly and fiercely if ignited - particles exceeding this limit will generally not form flammable dust clouds; once initiated, however, larger particles up to 1400 microns diameter will contribute to the propagation of an explosion.
Combustion products include; carbon monoxide (CO) carbon dioxide (C02) nitrogen oxides (NOx) other pyrolysis products typical of burning organic material.
Reactivity:

5.3. Advice for Firefighters
Precautionary Measures Fire: Avoid contamination with oxidising agents i.e. nitrates, oxidising acids, chlorine bleaches, pool chlorine etc. as ignition may result.

Avoid contamination with oxidising agents i.e. nitrates, oxidising acids, chlorine bleaches, pool chlorine etc. as ignition may result.
Firefighting Instructions: Alert Fire Brigade and tell them location and nature of hazard.
Wear breathing apparatus plus protective gloves.
Prevent, by any means available, spillage from entering drains or water courses.
Use water delivered as a fine spray to control fire and cool adjacent area.
Protection During Firefighting:

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal Precautions, Protective Equipment and Emergency Procedures
General Measures:

6.1.1. For Non-emergency Personnel
Protective Equipment:
Emergency Procedures:

6.1.2. For Emergency Responders
Protective Equipment:
Emergency Procedures:

6.2. Environmental Precautions

6.3. Methods and Material for Containment and Cleaning Up
For Containment:

Methods for Cleaning Up:
Minor Spills: Clean up all spills immediately.
Avoid contact with skin and eyes.
Wear impervious gloves and safety glasses.
Use dry clean up procedures and avoid generating dust

Major Spills: Clear area of personnel and move upwind.
Alert Fire Brigade and tell them location and nature of hazard.
Control personal contact 'with the substance, by using protective equipment and dust respirator.
Prevent spillage from entering drains, sewers or water courses.

6.4. Reference to Other Sections
See heading 8, Exposure Controls and Personal Protection.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for Safe Handling
Additional Hazards When Processed: Limit all unnecessary personal contact.
Wear protective doming when risk of exposure occurs.
Use in a well-ventilated area.
Avoid contact with incompatible materials.
Organic powders when finery divided over a range of concentrations regardless of particulate size or shape and suspended in air or some other oxidizing medium may form explosive dust-air mixtures and result in a fire or dust explosion (including secondary explosions).
Minimise airborne dust and eliminate all ignition sources. Keep away from heat, hot surfaces, sparks, and flame.
Establish good housekeeping practices.
Remove dust accumulations on a regular basis by vacuuming or gentle sweeping to avoid creating dust clouds.
Hygiene Measures:

7.2. Conditions for Safe Storage, Including Any Incompatibilities

Technical Measures: PE bag.
Lined metal can. lined metal pail' can.
Plastic pail.
Poryliner drum.
Storage Conditions: Avoid contamination of water, foodstuffs, feed or seed.
Avoid reaction with oxidising agents.

Other information
Store in original containers.
Keep containers securely sealed
Store in a cool, dry area protected from environmental extremes.
Store away from incompatible materials and foodstuff containers.

7.3. Specific End Use(s)

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1.Control Parameters
OCCUPATIONAL EXPOSURE LIMITS (OEL)
INGREDIENT DATA

Source	Ingredient	Material name	TWA	STEL	Peak	Notes
US OSHA Permosible Exposure Levels (PELs)-Table ZI	copper	copper - Fume / copper	0.1 mg/m3 /1 mg/m3	Not Available	Not Available	(as Cu) / (as Cu); Dusts and mists
US OSHA Permissible Exposure Levels (PELs) -Table Z3	copper	Inert or Nuisance Dust	5mg/m3/ 15mo/m3/ 15 mppcf/ 50 mppcf	Not Available	Not Available	Respirable fraction;AII inert or nuisance dusts, whether mineral, inorganic, or organic, not listed spedficalhy by substance name are

						covered by this limit, which is the same as the Particulates Not Otherwise Regulated (PNOR) limit in Table Z-1. / Total dust; AII inert or nuisance dusts, whether mineral, inorganic, or organic, not listed specifically by substance name are covered by this limit, which is the same as the Particulates Not Otherwise Regulated (PNOR) limit in Table Z-1
US ACG1H Threshold Limit Values (TLV)	copper	Copper - Fume, as Cu / Copper -Dusts and mists. asCu	0.2mg/m3 /1 mg/m3	Not Available	Not Available	TLV® Basis: Irr, Gl; metal fume fever, BEI
US NIOSH Recommended Exposure Limits (RELs)	copper	Copper metal dusts, Copper metal fumes	1 mg/m3	Not Available	Not Available	['Note: The REL also applies to other copper compounds (as Cu) except Copper fume]
US OSHA Permissible Exposure Levels (PELs) -Table Z1	tin	Tin, organic compounds	0.1 mg/m3	Not Available	Not Available	(as Sn)
US OSHA	tin	Tin,	2mg/m3	Not	Not	(as Sn);(except

Permissibl		organic		Availab	Availab	oxides)
e Exposure		compounds		le	le	
Levels						
(PELs)						
-Table Z1						
US NIOSH	tin	Metallic	2mg/m3	Not	Not	['Note: The REL also
Recommende		tin, Tin		Availab	Availab	applies to other
d Exposure		flake. Tin		le	le	inorganic tin
Limits		metal, Tin				compounds (as Sn)
(RELs)		powder				except tin oxides]
US OSHA	phosphoru	Inert or	5mg/m3/	Not	Not	Respirable fraction;
Permissibl	s	Nuisance	15mg/m3/	Availab	Availab	A11 inert or nuisance
e Exposure		Dust	15mppcf/	le	le	dusts, whether
Levels			50 mppcf			mineral, inorganic, or
(PELs)						organic, not listed
-Table Z3						specifically by
						substance name are
						covered by this limit,
						which is the same as
						the Particulates Not
						Otherwise Regulated
						(PNOR) limit in Table
						Z-1. / Total dust; All
						inert or nuisance
						dusts, whether
						mineral, inorganic, or
						organic, not listed
						specifically by
						substance name are
						covered by this limit,
						which is the same as
						the Particulates Not
						Otherwise Regulated
						(PNOR) limit in Table
						Z-1.
US NIOSH	phosphoru	Elemental	0.1 mg/m3	Not	Not	Not Available
Recommende	s	phosphorus		Availab	Availab	
d Exposure		White		le	le	

Limits (RELs)		phosphorus				
US OSHA Permissible Exposure Levels (PELs) -Table Z1	lead	Lead, inorganic	0.05 mg/m3	Not Available	Not Available	(as Pb);see 1910.1025;If an employee is exposed to lead for more than 8 hours in any work day, the permissible exposure limit as a time weighted average (TWA) for that day, shall be reduced according to the following formula: Maximum permissible limit (in ?g/m3)=400%&#65533;hours worked in the day.
US ACGIH Threshold Limrt Values (TLV)	lead	Lead and inorganic compounds, as Pb	0.05 mg/m3	Not Available	Not Available	TLV&#65533; Basis: CNS & PNS impair hematologic eff: BEI
US NIOSH Recommended Exposure Limits (RELs)	lead	Lead metal. Plumbum	0.050 mg/m3	Not Available	Not Available	See Appendix C [*Note: The REL also applies to other lead compounds (as Pb) - see Appendix C.].

Ingredient
Material name
TEEL-1
TEEL-2
TEEL-3

copper
Copper

1 mg/m3
1 mg/m3
45 mgym3

tin
Tin
6mg/m3
67mg/m3
400 mg/m3

phosphorus
Phosphorus (red)
0.27 mg/m3
3mg/m3
3mg/m3

lead
Lead
0.15mg/m3
120mg/m3
700mg/m3

Ingredient
Original DLH
Revised IDLH

copper
N.E. mo/m3/N.E. ppm
100mg/m3

tin
Unknown mg/m3 / 400 mg/m3 / Unknown ppm
25mg/m3/100mg/m3

lead
700mg/m3
100mg/m3

8.2. Exposure Controls

Appropriate Engineering Controls	Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard. Well-designed engineering controls can be high effective in protecting workers and will typically be independent of worker interactions to provide this high level of protection. The basic types of engineering controls are: Process controls which involve changing the way a job activity or process is done to reduce the risk. Enclosure and/or isolation of emission source which keeps a selected hazard 'physically away from the worker and ventilation that strategically "adds" and 'removes' air m the work environment.
Personal Protective Equipment	
Materials for Protective Clothing	
Hand Protection	See Hand protection below The selection of suitable gloves does not only depend on the material, but also on further marks of quality which vary from manufacturer to manufacturer. Where the chemical is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application. The exact break through time for substances has to be obtained from the manufacturer of the protective gloves 3nd.has to be observed when making a final choice. Suitability and durability of glove type is dependent on usage. Experience indicates that the following polymers are suitable as glove materials for protection against undissolved, dry solids, where abrasive particles are not present

	porychloroprene. nitrile rubber. butyl rubber.
Eye Protection	Safety glasses with side shields. Chemical goggles. Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lenses or restrictions on use, should be created for each workplace or task. The should include a review of lens absorption and adsorption for the class of chemicals in use and an account of injury experience.
Skin and Body Protection	See Other protection below No special equipment needed when handling small quantities. OTHERWISE: Other Protection: Overalls. Bamer cream. Eyewash unit.
Respiratory Protection	Particulate. (AS/NZS 1716 & 1715, EN 143:000 & 149:001, ANSI Z88 or national equivalent).
Thermal Hazard Protection	Not Available.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on Basic Physical and Chemical Properties

Physical State	Solid
Appearance	Silvery solid
Odor	Not Available
Odor Threshold	Not Available
pH	Not Available
Relative Evaporation Rate (butyl acetate=1)	Not Available
Melting Point	Not Available
Freezing Point	Not Available

Boiling Point	Not Available
Flash Point	Not Available
Auto-ignition Temperature	Not Available
Decomposition Temperature	Not Available
Flammability (solid, gas)	Not Available
Vapor Pressure	Not Available
Relative Vapor Density at 20 °C	Not Available
Relative Density	Not Available
Specific Gravity	Not Available
Solubility	Not Available
Partition coefficient:	Not Available
n-octanol/water	
Viscosity	Not Available
Lower Flammable Limit	Not Available
Upper Flammable Limit	Not Available

9.2. Other Information

VOC: Not Available

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity

See section 7

10.2 Chemical Stability

Product is considered stable and hazardous polymerization will not occur.

10.3 Possibility of Hazardous Reactions

See section 7

10.4 Conditions to Avoid

See section 7

10.5 Incompatible Materials
See section 7

10.6 Hazardous Decomposition Products
See section 5

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on Toxicological Effects
Acute Toxicity:
Skin Corrosion/Irritation:
Serious Eye Damage/Irritation:
Respiratory or Skin Sensitization:
Germ Cell Mutagenicity:
Carcinogenicity:
Reproductive Toxicity:
Specific Target Organ Toxicity (Single Exposure):
Specific Target Organ Toxicity (Repeated Exposure):
Aspiration Hazard:
Symptoms/Injuries After Inhalation: The material is not thought to produce adverse hearth effects or irritation of the respiratory tract (as classified by EC Directives using animal models). Nevertheless, good hygiene practice requires that exposure be kept to a minimum and that suitable control measures be used in an occupational setting.
Symptoms/Injuries After Skin Contact: The material is not thought to produce adverse hearth effects or skin irritation following contact (as classified by EC Directives using animal models) Nevertheless, good hygiene practice requires that exposure be kept to a minimum and that suitable gloves be used in an occupational setting.
Symptoms/Injuries After Eye Contact: Although the material is not thought to be an irritant (as classified by EC Directives), direct contact with the eye may cause transient discomfort characterised by tearing or conjunctival redness (as with windburn). Slight abrasive damage may also result.
Symptoms/Injuries After Ingestion: The material has NOT been classified by EC Directives or other classification systems as harmful by ingestion'. This is

because of the lack of corroborating animal or human evidence.
Chronic Symptoms: Long-term exposure to the product is not thought to produce chronic effects adverse to the health (as classified by EC Directives using animal models); nevertheless exposure by all routes should be minimised as a matter of course.

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity

12.2. Persistence and Degradability
Ingredient
Persistence: Water/Soil
Persistence: Air

No Data available for all ingredients
No Data available for all ingredients

12.3. Bioaccumulative Potential
Ingredient
Bioaccumulation

Phosphorus
HIGH (BCF - 2310000)

12.4. Mobility in Soil
Ingredient
Mobility

No Data available for all ingredients

12.5. Other Adverse Effects

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Waste Disposal Recommendations: Recycle wherever possible.

Consult manufacturer for recycling options or consult local or regional waste management authority for disposal if no suitable treatment or disposal facility can be identified.

Dispose of by: burial in a land-fill specifically licenced to accept chemical and / or pharmaceutical wastes or Incineration in a licenced apparatus (after admixture with suitable combustible material).

Decontaminate empty containers. Observe all label safeguards until containers are cleaned and destroyed.

Additional Information:

SECTION 14: TRANSPORT INFORMATION

14.1 In Accordance with DOT

Proper Shipping Name	NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS	
Hazard Class		<PICTOGRAM PHRASE>
Identification Number		
Label Codes		
ERG Number		

14.2 In Accordance with IMDG

Proper Shipping Name	NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS	
Hazard Class		
Identification Number		
Label Codes		<PICTOGRAM PHRASE>
ntification Of The		
Substance/m		

EmS-No. (Fire) |
EmS-No. (Spillage) |

14.3 In Accordance with IATA

Proper Shipping Name	NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS
Identification Number	<PICTOGRAM PHRASE>
Hazard Class	
Label Codes	
ntification Of The	
Substance/m	
ERG Code (IATA)	

SECTION 15: REGULATORY INFORMATION

15.1 US Federal Regulations

US. EPA CERCLA HAZARDOUS SUBSTANCES AND REPORTABLE QUANTITIES (40 CFR 302.4)

Name	Reportable Quantity in Pounds (lb)	Reportable Quantity in kg
Copper	5000	2270
Lead	10	4.54

SARA Section 311/312 Hazard Classes	Superfund Amendments and Reauthorization Act of 1986 (SARA)
	Immediate (acute) health hazard NO
	Delayed (chronic) health hazard NO
	Fire hazard
	NO
	Pressure hazard
	NO

|Reactivity hazard
|NO
Toxic Substances Control Act (TSCA) |

15.2 US State Regulations

US. CALIFORNIA PROPOSITION 65

WARNING: This product contains a chemical known to the State of California to cause cancer and birth defects or other reproductive harm.

US - CALIFORNIA PREPOSITION 65 - CARCINOGENS & REPRODUCTIVE TOXICITY (CRT): LISTED SUBSTANCE

Lead and lead compounds: Lead Listed

SECTION 16: OTHER INFORMATION, INCLUDING DATE OF PREPARATION OR LAST REVISION

Revision date	05/30/2016
Other Information	This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200.

GHS Full Text Phrases:

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