SHEET 0718920

Safety Data Sheet
Date of Issue: |Revision Date: Apr 01, 2016|Revision Number:
Imperial Supplies Part Number: 0718920

SECTION 1: IDENTIFICATION

1.1. Product Identifier
Product Form:
Product Name: HEAT SHRINKABLE - BUTT SPLICE CONNECTORS
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.S.TERMINALS INC.
No.8, Zhangbin E.3rd Road.Xianxi Township.Ch.
Phone: 008864-7580001

1.4. Emergency Telephone Number
Emergency number |008864-7580001

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)	NOT APPLICABLE
Hazard Statements (GHS-US)	Not Applicable.
Precautionary Statements (GHS-US)	Prevention: Not Applicable. Response: Not Applicable. Storage: Not Applicable.

2.3. Other Hazards

Other Hazards Not Contributing to the Classification:

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)
Poly(hexamethyleneadipamide)	32131-17-2	33.4	
Copper	7440-50-8	33.297	
Tin	7440-31-5	33.297	
Phosphorus	7723-14-0	0.003	
Lead	7439-92-1	0.003	

SECTION 4: FIRST AID MEASURES

4.1. Description of First Aid Measures

First-aid Measures General:

First-aid Measures After Inhalation: If fumes or combustion products are inhaled remove from contaminated area. Lay patient down. Keep warm and rested. Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures. Apply artificial respiration if not breathing, preferably with a demand valve resuscitator, bag-valve mask device, or pocket mask as trained. Perform CPR if necessary. Transport to hospital, or doctor.

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. In case of bums: Immediately apply cold water to bum either by immersion or wrapping with saturated clean cloth. DO NOT remove or cut away clothing over burnt areas. DO NOT pull away clothing which has adhered to the skin as this can cause further injury. DO NOT break blister or remove solidified material. Quickly cover wound with dressing or clean cloth to help prevent infection and to ease pain. For large bums, sheets, towels or pillow slips are ideal: leave holes for eyes, nose and mouth. DO NOT apply ointments, oils, butter, etc. to a bum under any circumstances. Water may be given in small quantities if the person is conscious. Alcohol is not to be given under any circumstances. Reassure. Treat for shock by keeping the person warm and in a lying position. Seek medical aid and advise medical personnel in advance of the cause and extent of the injury and the estimated time of arrival of the patient For thermal bums: Decontaminate area around bum. Consider the use of cold packs and topical antibiotics. For first-degree bums (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 lower body temperature and cause further damage. Do NOT break blisters or apply butte r 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 a 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 wound. 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 close the airway. Have a person with a facial 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 the eyes: Wash out immediately with fresh running water. Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids. Seek medical attention without delay: if pain persists or recurs seek medical attention. Removal of contact lenses after an eye injury should only be undertaken by skilled personnel. DO NOT attempt to remove particles attached to or embedded in eye. Lay victim down, on stretcher if available and pad BOTH eyes, make sure dressing does not press on the injured eye by placing thick pads under dressing, above and below the eye. Seek urgent medical assistance, or transport to hospital.
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: Onset occurs in 4-6 hours generally on the evening following

exposure. Tolerance develops in workers but may be lost over the weekend. (Monday Morning Fever). Pulmonary function tests may indicate reduced lung volumes, small airway obstruction and decreased carbon monoxide diffusing capacity but these abnormalities resolve after several months. Although mildly elevated urinary levels of heavy metal may occur they do not correlate with clinical effects. The general approach to treatment is recognition of the disease, supportive care and prevention of exposure. Seriously symptomatic patients should receive chest x-rays, have arterial blood gases determined and be observed for the development of tracheobronchitis and pulmonary edema.
Symptoms/Injuries After Inhalation: Copper, magnesium, aluminium, antimony, iron, manganese, nickel, zinc (and their compounds) in welding, brazing, galvanising or smelting operations all give rise to thermally produced particulates of smaller dimension than may be produced if the metals are divided mechanically. Where insufficient ventilation or respiratory protection is available these particulates may produce 'metal fume fever' in workers from an acute or long term exposure.
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: Do NOT direct a solid stream of water or foam into burning molten material; this may cause spattering and spread the fire. DO NOT use halogenated fire extinguishing agents. Metal dust fires need to be smothered with sand, inert dry powders. DO NOT USE WATER, CO2 or FOAM. Use DRY sand, graphite powder, dry sodium chloride based extinguishers, G-1 or Met L-X to smother fire. Confining or smothering material is preferable to applying water as chemical reaction may produce flammable and explosive hydrogen gas.
Unsuitable Extinguishing Media:

5.2. Special Hazards Arising From the Substance or Mixture

Fire Hazard: Fire Incompatibility: Reacts with acids producing flammable / explosive hydrogen (H2) gas. Avoid contamination with oxidising agents i.e. nitrates, oxidising adds, chlorine bleaches, pool chlorine etc. as ignition may result.

Explosion Hazard: DO NOT disturb burning dust. Explosion may result if dust is stirred into a cloud, by providing oxygen to a large surface of hot metal. DO NOT use water or foam as generation of explosive hydrogen may result. With the exception of the metals that bum in contact with air or water (for example, sodium), masses of combustible metals do not represent unusual fire risks because they have the ability to conduct heat away from hot spots so efficiently that the heat of combustion cannot be maintained - this means that it will require a lot of heat to ignite a mass of combustible metal. Combustion products include; carbon monoxide (CO) carbon dioxide (CO2) nitrogen oxides (NOx) other pyrolysis products typical of burning organic material May emit poisonous fumes. May emit corrosive fumes. Nylon fines in air possess electrostatic properties which assist sparking small fires flame retardant grades of nylon should cease flaming once source of ignition is removed ln large fires burning will be sustained if sufficient oxygen is available. Decomposes on heating and produces toxic fumes of ammonia, nitrogen oxides (NOx), minor amounts of hydrogen cyanide and in case of flame retardant grades, halogenated gases. CARE: Contamination of heated / molten liquid with water may cause violent steam explosion, with scattering of hot contents.

Reactivity:

5.3. Advice for Firefighters

Precautionary Measures Fire:

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: Remove all ignition sources. Clean up all spills immediately. Avoid contact with skin and eyes. Control personal contact with the substance, by using protective equipment.
Major Spills: If molten: Contain the flow using dry sand or salt flux as a dam. All tooling (e.g., shovels or hand tools) and containers which come in contact with molten metal must be preheated or specially coated, rust free and approved for such use. Allow the spill to cool before remelting scrap. Moderate hazard.
CAUTION: Advise personnel in area. Alert Emergency Services and tell them location and nature of hazard. Control personal contact by wearing protective clothing.

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: For molten metals: Molten metal and water can be an explosive combination. The riskis greatest when there is sufficient molten metal to entrap or seal off water. Water and other forms of contamination on or contained in scrap or re melt ingotare known to have caused explosions in melting operations. While the products may have minimal surface roughness and internal voids, there remains the possibility of moisture contamination or entrapment. The greatest potential for injury caused by molten materials occurs during purging of machinery (moulders, extruders etc.). It is essential that workers in the immediate area of the machinery wear eye and skin protection (such as full face, safety glasses, heat resistant gloves, overalls and safety boots) as protection from thermal bums. Fumes or vapours emitted from hot melted materials, during converting operations, may condense on overhead metal surfaces or exhaust ducts. The condensate may contain substances which are irritating or toxic. Avoid contact of that material with the skin. Avoid all personal contact, including inhalation. Wear protective clothing when risk of exposure occurs. Use in a well-ventilated area. Prevent concentration in hollows and sumps. 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). 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.
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.
Hygiene Measures:

7.2. Conditions for Safe Storage, Including Any Incompatibilities
Technical Measures:
Suitable container: Inner: Polyethylene plastic bag/Outer package: Carton. Bulk bags: Reinforced bags required for dense materials. CARE: Packing of high density product in light weight metal or plastic packages may result in container collapse with product release. Heavy gauge metal packages / Heavy gauge metal drums.
Storage Conditions: Many metals may incandesce, react violently, ignite or react explosively upon addition of concentrated nitric acid. Nylon, nitrosated with dinitrogen trioxide and stored cold, exploded on warming to ambient temperature.

The N-nitroso-nylon is similar structurally to N-nitroso-N-alkylamides, some of which are thermally unstable. Nylon components should be excluded from contact 'with nitrosating agents. BRETHERICKL: Handbook of Reactive Chemical Hazards. Metals exhibit varying degrees of activity. Reaction is reduced in the massive form (sheet rod, or drop), compared with finely divided forms. The less active metals will not bum in air but: Can react exothermically with oxidising acids to form noxious gases. Catalyse polymerization and other reactions, particularly when finery divided. React with halogenated hydrocarbons (for example, copper dissolves when heated in carbon tetrachloride), sometimes forming explosive compounds. Finery divided metal powders develop pyrophoricity when a critical specific surface area is exceeded; this is ascribed to high heat of oxide formation on exposure to air. Safe handling is possible in relatively tow concentrations of oxygen in an inert gas. Several pyrophoric metals, stored in glass bottles have ignited when the container is broken on impact. Storage of these materials moist and in metal containers is recommended. Many metals in elemental form react exothermically with compounds having active hydrogen atoms (such as acids and water) to form flammable hydrogen gas and caustic products. Elemental metals may react with azo/diazo compounds to form explosive products. Some elemental metals from explosive products with halogenated hydrocarbons.

7.3. Specific End Use(s)

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control Parameters
OCCUPATIONAL EXPOSURE LIMITS (OEL):
Source
Ingredient
Material name
TWA
STEL
Peak
Notes

US OSHA Permissible

Exposure Levels (PELs) -
Table Z1
copper
Selenium
compounds
0.2 mg/m3
Not Available
Not Available
(as Se)

US OSHA Permissible
Exposure Levels (PELs) -
Table Z1
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/
15mg/m3/
15mppcf/
50mppcf
Not Available
Not Available
Respirable fraction;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. / 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 ACGIH Threshold Limit Values (TLV)
copper
Copper - Fume, as Cu / Copper - Dusts and mists, as Cu
0.2 mg/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 Permissible

Exposure Levels (PELs) -
Table Z1
tin
Tin, inorganic
compounds
2mg/m3
Not Available
Not Available
(as Sn);(except oxides)

US ACGIH Threshold Limit
Values (TLV)
tin
Silver, and
compounds -
Metal, dust and fume
0.1 mg/m3
Not Available
Not Available
TLV® Basis: Argyria

US NIOSH Recommended
Exposure Limits (RELs)
tin
Metallic tin. Tin
flake. Tin metal, Tin powder
2mg/m3
Not Available
Not Available
[*Note: The REL also applies to other inorganic tin compounds (as Sn) except tin
oxides.]

US OSHA Permissible
Exposure Levels (PELs)-
Tabte Z3
phosphorus
Inert or Nuisance Dust
5mg/m3/

15mg/m3/
15mppcf/
50mppcf
Not Available
Not Available
Respirable fraction;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. / 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 NIOSH Recommended
Exposure Limits (RELs)
phosphorus
Elemental
phosphorus,
White phosphorus
0.1 mg/m3
Not Available
Not Available
Not Available

US OSHA Permissible
Exposure Levels (PELs)-
Table Z1
lead
Lead, inorganic
0.05 mg/m3
Not Available
Not Available
(as Pb);see 1910.1025; lf 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: Maximium permissible limit (in ug/m3)=400^hours worked in the day.

US OSHA Permissible

Exposure Levels (PELs)-
TableZ2
lead
Cadmium fume / Cadmium dust
0.1 mg/m3
/0.2 mg/m3
Not Available
0.3 mg/m3
/0.6 mg/m3
(Z37.5-1970);This standard applies to any operations or sectors for which the
Cadmium standard, 1910.1027, is stayed or otherwise not in effect

US ACGIH Threshold Limit
Values (TLV)
lead
Lead and
inorganic
compounds, as
Pb
0.05 mg/m3
Not Available
Not Available
TLV® Basis: CNS & PNS impair; hematologic eff; BEI

US ACGIH Threshold Limit
Values (TLV)
lead
Cadmium and
compounds, as
Cd
0.002 mg/m3
Not Available
Not Available
TLV® Basis: Kidney dam; 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]

EMERGENCY LIMITS:
Ingredient
Material name
TEEL-1
TEEL-2
TEEL-3

copper
Copper
1 mg/m3
1 mg/m3
45 mg/m3

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

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

lead
Lead
0.15 mg/m3
120 mg/m3

700 mg/m3

Ingredient
Original IDLH
Revised IDLH

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

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

lead
700 mg/m3
100 mg/m3

8.2. Exposure Controls

Appropriate Engineering Controls	For molten materials: Provide mechanical ventilation; in general such ventilation should be provided at compounding/ converting areas and at fabricating/ filling work stations where the material is heated. Local exhaust ventilation should be used over and in the vicinity of machinery involved in handling the molten material. Keep dry!! Processing temperatures may be well above boiling point of water, so wet or damp material may cause a serious steam explosion if used in unvented equipment. Metal dusts must be collected at the source of generation as they are potentially explosive. Avoid ignition sources. Good housekeeping practices must be maintained. Dust accumulation on the floor, ledges and beams can present a risk of ignition, flame propagation and secondary

	explosions.
Personal Protective Equipment	Other Protection: When handling hot or molten liquids, wear trousers or overalls outside of boots, to avoid spills entering boots. Usually handled as molten liquid which requires worker thermal protection and increases hazard of vapour exposure. CAUTION: Vapours may be irritating. Overalls. P.V.C apron. Barrier cream.
Materials for Protective Clothing	
Hand Protection	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 breakthrough time for substances has to be obtained from the manufacturer of the protective gloves and has to be observed when making a final choice. Suitability and durability of glove type is dependent on usage. Protective gloves eg. Leather gloves or gloves with Leather facing. When handling hot materials wear heat resistant, elbow length gloves. Rubber gloves are not recommended when handling hot objects, materials. Experience indicates that the following polymers are suitable as glove materials for protection against undissolved, dry solids, where abrasive particles are not present. Polychloroprene. 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.
Skin and Body Protection	

Respiratory Protection	Type A-P Filter of sufficient capacity. (AS/NZS 1716 & 1715, EN 143:2000 & 149:2001, ANSI 288 or national equivalent).
Thermal Hazard Protection	

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 (butylacetate=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 flammable
Vapor Pressure	Not Available
Relative Vapor Density at 20 °C	Not Available
Relative Density	Not Available
Specific Gravity	
Solubility	Not Available
Partition coefficient: n-octanol/water	Not Available
Viscosity	Not Available
Lower Flammable Limit	Not Available
Upper Flammable Limit	Not Available

9.2. Other Information

VOC g/L: Not Available.

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity

See section 7.

10.2 Chemical Stability

Unstable in the presence of incompatible materials. Product is considered stable.
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: Inhalation of dusts, generated by the material during the course of normal handling, may be damaging to the health of the individual. There is some evidence to suggest that the material can cause respiratory irritation in some persons. The body's response to such irritation can cause further lung damage. The inhalation of small particles of metal oxide results in sudden thirst, a sweet, metallic foul taste, throat irritation, cough, dry mucous membranes, tiredness and general unwellness. Headache, nausea and vomiting, fever or chills, restlessness, sweating, diarrhoea, excessive urination and prostration may also occur.
Usually handled as molten liquid which requires worker thermal protection and increases hazard of vapour exposure.
CAUTION: Vapours may be irritating.
Symptoms/Injuries After Skin Contact: The material is not thought to produce adverse health 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. Open cuts, abraded or irritated skin should not be exposed to this material. Entry into the blood-stream, through, for example, cuts, abrasions or lesions, may produce systemic injury with harmful effects. Examine the skin prior to the use of the material and ensure that any external damage is suitably protected.
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 windbum). 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. Tin salts are not very toxic. However, at high concentration, nausea, vomiting and diarrhoea can occur.
Chronic Symptoms: Substance accumulation, in the human body, may occur and may cause some concern following repeated or long-term occupational exposure. Workers exposed to nylon dusts for 20 years have, on occasion, shown respiratory tract lesions, including sarcoid-like lung granulomas. Occupational exposure to nylon dusts may result in pathologic lung changes. Metallic dusts generated by the

industrial process give rise to a number of potential health problems. The larger particles, above 5 micron, are nose and throat irritants.

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity

Atmospheric Fate -Metal-containing inorganic substances generally have negligible vapour pressure and are not expected to partition to air.

Environmental Fate: Environmental processes, such as oxidation, the presence of acids or bases and microbiological processes, may transform insoluble metals to more soluble ionic forms.

Environmental processes may enhance bio-availability and may also be important in changing solubilities.

Aquatic/Terrestrial Fate: When released to dry soil, most metals will exhibit limited mobility and remain in the upper layer; some will leach locally into ground water and/ or surface water ecosystems . when soaked by rain or melt ice. A metal ion s considered infinitely persistent because it cannot degrade further.

Tin may exist as either divalent(Tin II) or tetravalent (Tin IV) cations under environmental conditions. Tin ll prevails in oxygen-poor water and will readily precipitate as a sulfide or as ahydroxide in alkaline water. Tmf IV) readily breaks down in water through hydrolysts. and can precipitate as a hydroxide. In general, tin(IV) would be expected to be the only stable ionic species in the weathering cycle. DO NOT discharge into sewer or waterways.

12.2. Persistence and Degradability

No Data available for all ingredients.

12.3. Bioaccumulative Potential

phosphorus HIGH (BCF = 2310000)

12.4. Mobility in Soil

No Data available for all ingredients.

12.5. Other Adverse Effects

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Waste Disposal Recommendations: DO NOT allow wash water from cleaning or process equipment to enter drains. It may be necessary to collect all wash water for treatment before disposal. In all cases disposal to sewer may be subject to local laws and regulations and these should be considered first. Where in doubt contact the responsible authority.

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
<COMPONENT>
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 |Immediate (acute) health hazard: NO
|Delayed (chronic) health hazard: NO
|Fire hazard: NO
|Pressure hazard: NO
|Reactivity hazard: NO
Toxic Substances Control Act (TSCA) |TSCA: Y
|Y = All ingredients are on the inventory

15.2 US State Regulations
<COMPONENT>
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	Apr 01, 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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Grainger disclaimer.

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