



ELECTRICALLY CONDUCTIVE FOAM 5770

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

Product Detail : 5770 Electrically conductive foam
 Application of the substance / the preparation: Conductive Foam
 Manufacturer / supplier: Holland Shielding Systems B.V.
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2. HAZARDS IDENTIFICATION

Hazard-Risk Classification	Self-ignition solid : Category 1 Respiratory hypersensitiveness : Category 1 Skin hypersensitiveness : Category 1 Carcinogenicity : Category 2 Specific target organ toxicity(single exposure) : Category 2 Specific target organ toxicity(repeated exposure) : Category 1 Acute aquatic environment hazard : Category 1 Chronic aquatic environment hazard : Category 1
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Label elements including precautionary statements	
Symbol	
Signal word	Danger
Hazard-Risk statement	H250 Catches fire spontaneously if exposed to air. H317 May cause an allergic skin reaction. H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled. H351 Suspected of causing cancer. H371 May cause damage to organs(...). H372 Causes damage to organs(...) through prolonged or repeated exposure. H400 Very toxic to aquatic life. H410 Very toxic to aquatic life with long lasting effects.
Precautionary	Precautionary statement P201 Obtain special instructions before use. P202 Do not handle until all safety precautions have been read and understood. P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking. P222 Do not allow contact with air. P260 Do not breathe dust/fume/gas/mist/vapours/spray. P261 Avoid breathing dust/fume/gas/mist/vapours/spray. P264 Wash, thoroughly after handling. P270 Do not eat, drink or smoke when using this product. P272 Contaminated work clothing should not be allowed out of the workplace. P273 Avoid release to the environment. P280 Wear protective gloves/protective clothing/eye protection/face protection. P281 Wear appropriate personal protection. P285 In case of inadequate ventilation, wear respiratory protection. P302+P352 If on skin : Wash with plenty of water and a soap. P304+P341 If inhaled and hard to breathe : Remove person to fresh air and keep comfortable for breathing. P308+P313 If exposed or concerned : Get medical advice/attention. P309+P311 If exposed or concerned : Call a Poison Center/doctor. P314 Get medical advice/attention if you feel unwell. P321 Specific treatment (...) P333+P313 If skin irritation or rash occurs : Get medical advice/attention. P335+P334 Brush off loose particles from skin and immerse in cool water/wrap in wet bandages. P342+P311 If experiencing respiratory symptoms : Call a Poison Center/doctor. P363 Wash contaminated clothing before reuse. P370+P378 In case of fire : Use (...) to extinguish. P391 Collect spillage.
Storage	P405 Store locked up. P422 Store contents under...
Disuse	P501 Dispose of contents/container.(According to the specified regulations)
Other Hazard-Risk(NFPA) which are not included in the classification criteria	
Copper	
Health	No relevant data
Fire	No relevant data
Reactivity	No relevant data
Nickel	
Health	2
Fire	4
Reactivity	1

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Polyethylene Terephthalate	
Health	1
Fire	1
Reactivity	0
Polyurethane	
Health	No relevant data
Fire	No relevant data
Reactivity	No relevant data

3. COMPOSITION/INFORMATION ON INGREDIENTS

Material Name	Other name	CAS No.	Content(%)
Copper		7440-50-8	3.5 ~ 5.5
Nickel	NICKEL ELEMENT	7440-02-0	7.0 ~ 10.5
Polyethylene Terephthalate	POLY(Oxy-1,2-Ethandiyloxy-carbonyl-1,4-Phenylene-carbonyl)	25038-59-9	23 ~ 35
Polyurethane		9009-54-5	0.3 ~ 0.4
Acrylic adhesive		N/A	10 ~ 14
Release paper		N/A	37 ~ 55

4. FIRST AID MEASURES

Eye contact	Immediately call a Medical Center/doctor. If contact with material : Immediately rinse skin and eyes with running water for more than 20 minutes.
Skin contact	If skin irritation or rash occurs : Get medical advice/attention. Wash contaminated clothing before reuse. If hot materials on skin : Immerse in cool water or wash to remove the heat. Remove contaminated clothing and shoes and isolate contaminated area. If contact with material : Immediately rinse skin and eyes with running water for more than 20 minutes. If slight skin contact : Prevent the spread of contaminated area.
Inhalation	If inhaled and hard to breathe : Remove person to fresh air and keep comfortable for breathing. Call a Poison Center/doctor, if you are exposed or feel unwell. Move person to fresh air. Keep warm and comfortable.
Ingestion	Call a medical facilities(doctor) if you feel exposed or uncomfortable. If ingested or inhaled : Do not do artificial respiration, use proper respiration medical equipment.
Indication of immediate medical attention and notes for physician	If exposed : Call a Medical Center/doctor and take special emergency measures as trace research. Medical personnel are aware of the material and take protective action.

5. FIREFIGHTING MEASURES

Suitable(and unsuitable) extinguishing media	Suitable(and unsuitable) extinguishing media In case of fire : Use alcohol foam, carbon dioxide or water spray to extinguish. Extinguishment by smothering, use dry sand or soil.
Specific hazards from the chemical	Specific hazards from the chemical Catches fire spontaneously if exposed to air. Decomposes at high temperatures that can produce toxic gases. Unstable on room temperature. May casue a fire or explosion by intense polymerization. Container may explode if heated. Leakage may cause fire/explosion. It may be re-ignited after extinguishment. May ignite on contact with moisture. Flammable/Combustible material. Some materials may be burned rapidly with a flash. Some part can be burned, but not easy to ignite. Some part may be explosively decomposed in fire or heating. Nonflammability, material itself does not burn but heating may cause corrosive / oxix fumes.
Special protective equipment and precautions for fire-fighters	Special protective equipment and precautions for fire-fighters Rescuers wear appropriate protective equipment. Out of the area, fight fire remotely. Be careful it may be transported in melted condition. If it is not dangerous, move containers from fire area. If digestion is impossible, protect the area and ensure that extinguishing the fire itself.
Copper	



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Nickel
Polyethylene Terephthalate
Polyurethane

Rescuers wear appropriate protective equipment.
 Out of the area, fight fire remotely.
 Be careful some part may be transported in flammable liquid condition.
 If it is not dangerous, move containers from fire area.
 If extinguishment is impossible, protect the surrounding and keep the fire extinguishing itself.

If it is not dangerous, move containers from fire area.
 Some part may be transported in high temperature condition.
 Leaks may cause contamination.
 If contact : May cause skin and eye burns.
 Dig a ditch to dispose fire fighting water and keep material does not scatter.
 If it is not dangerous, move containers from fire area.
 In case of tank fire : Make cool containers with plenty of water after extinguishment.

In case of tank fire : Immediately evacuate if hearing a high note from pressure relief device or finding discoloration on the tank.
 In case of tank fire : Evacuate from the tank in flames.

If it is not dangerous, move containers from fire area.
 Some part may be transported in high temperature condition.
 Leaks may cause contamination.
 If contact : May cause skin and eye burns.
 Dig a ditch to dispose fire fighting water and keep material does not scatter.
 If it is not dangerous, move containers from fire area.
 In case of tank fire : Make cool containers with plenty of water after extinguishment.

In case of tank fire : Immediately evacuate if hearing a high note from pressure relief device or finding discoloration on the tank.
 In case of tank fire : Evacuate from the tank in flames.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures
Environmental precautions and protective procedures
Methods and materials for containment and cleaning up

Avoid breathing dust/fume/gas/mist/vapours/spray.
 Remove all sources of ignition because fine particles can cause a fire or explosion.
 Wipe immediately spillage and follow precaution in protection statement.
 Isolate contaminated area.
 Do not access people who do not need to enter or do not wear protective equipment.
 Eliminate all ignition sources.
 Stop leak if safe to do so.
 Don't touch broken container or spillage without appropriate protective clothing.
 Wear front protection type steam protection cloth when leaks without fire.
 Cover with plastic sheet to prevent a spread.
 Prevent dust formation.
 Be careful about materials and conditions to avoid.

Avoid release to the environment.
 Prevent of inflow into waterway, drain, basement and closed space.
 Collect spillage.

Build an embankment to extinguish and collect water.
 Absorb spillage with inert material(e.g. dried sand or soil) and put it in chemical waste container.
 Absorb spillage and wash the contaminated area with cleanser and water.
 Cover with non-combustible material such as dry sand/soil, ...etc, then cover with plastic sheet to avoid spread and contact with rain.
 In case of large spill, make a ditch with a long distance from liquid spillage.
 Collect leakage with clean explosion proof tool and put it in loosely closed plastic container.
 Put spillage into clean and dried container by clean shovel and close the container loosely, then move out from spill area.
 In case of powder spill, cover with plastic sheet to prevent a spread and keep dried condition.
 In case of small spill, absorb spillage with non-combustible material and place in container.

7. HANDLING AND STORAGE

Precautions for safe handling

Do not handle until all safety precautions have been read and understood.
 Do not allow contact with air.
 Avoid breathing dust/fume/gas/mist/vapours/spray.
 Wash the specific parts of the body thoroughly after handling.
 Do not eat, drink, or smoke when using this product.
 Contaminated work clothing should not be allowed out of the workplace.
 Do not put pressure, cut, weld, solder, bond, drill, grind or expose to heat, flame, spark, static, other ignition sources.
 Use only outdoors or in a well-ventilated area.
 Product residue may remain after container is emptied, so follow MSDS/Label precautions.
 Use in handling/storage with caution.
 Turn a tap on carefully before opening.
 Prevent long-term or continuous skin contact.
 If you do not have proper ventilation, do not enter the storage area.
 Be careful about materials and conditions to avoid.
 Be careful to high temperature.

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Conditions for safe storage	<p>Keep away from heat/sparks/open flames/hot surfaces. No smoking. Store in a well-ventilated place and keep container tightly closed. Keep below optimal temperature : May be self-ignited when exposed to room or slightly higher temperature air. Drain completely empty drum and close properly, then immediately return to drum regulator or arrange properly. Store away from food and drink.</p>
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8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Chemical exposure limit values, biological limit values, etc.	
Internal regulations	
Copper	TWA- 1mg/m ³ STEL- 2mg/m ³ Copper(Dust & mist) TWA- 0.1mg/m ³ Copper(Fume)
Nickel	TWA- 0.1mg/m ³ Nickel(Soluble compounds) TWA- 1mg/m ³ Nickel(Metal) TWA- 0.5mg/m ³ (Nickel(Insoluble inorganic compound), limit)
Polyethylene Terephthalate	No relevant data
Polyurethane	No relevant data
ACGIH regulation	
Copper	Copper(Fume), Copper(Dusts and mists, as Cu)
Copper	TWA 0.2 mg/m ³ , 1 mg/m ³
Nickel	TWA 0.1 mg/m ³ (soluble inorganic compounds), TWA 0.2mg/m ³ (insoluble inorganic compounds)
Nickel	TWA 1.5 mg/m ³
Polyethylene Terephthalate	No relevant data
Polyurethane	No relevant data
Biological limit values	
Copper	No relevant data
Nickel	No relevant data
Polyethylene Terephthalate	No relevant data
Polyurethane	No relevant data
Appropriate engineering controls	<p>Use process isolation, local ventilation or other engineering management which can control air level below exposure limit. If produce dust, fume or mist while driving, ventilate to maintain air pollution below exposure limit. Set up wash equipment and safe shower booth on facilities which store or use this material.</p>
Personal Protectors	
Respiratory Protection	
Copper	Copper (dusts and mists) Copper (Fume)
Nickel	Nickel (Soluble Compounds) Nickel (Metal) Nickel (Insoluble compounds)
Polyethylene Terephthalate	Wear respiratory protectors certified which meet the physical and chemical properties of particulate matter exposure.
Polyurethane	Wear respiratory protectors certified which meet the physical and chemical properties of particulate matter exposure.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	No relevant data	Solubility	No relevant data
Physical state	No relevant data	Vapor density	No relevant data
Color	No relevant data	Relative density	No relevant data
Odor	No relevant data	Partition coefficient : n-octanol/water	No relevant data
Odor threshold	No relevant data	Auto-ignition temperature	No relevant data
pH	No relevant data	Decomposition temperature	No relevant data
Melting point/freezing point	No relevant data	Viscosity	No relevant data
Initial boiling point and boiling range	No relevant data	Formula mass	No relevant data
Flashing point	No relevant data	Copper	
Evaporation rate	No relevant data	Appearance	
Flammability (solid, gas)	No relevant data	Physical state	Solid
Upper/lower flammability or explosive	No relevant data	Color	Red
Vapor density	No relevant data	Odor	Odorless



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Odor threshold	No relevant data
pH	No relevant data
Melting point/freezing point	1083 °C
Initial boiling point and boiling range	2595 °C
Flashing point	No relevant data
Evaporation rate	No relevant data
Flammability (solid, gas)	No relevant data
Upper/lower flammability or explosive	- / -
Vapor density	No relevant data
Solubility	(Insoluble)
Vapor density	No relevant data.
Relative density	8.9 (Water=1)
Partition coefficient : n-octanol/water	-0.57 (Estimation)
Auto-ignition temperature	No relevant data
Decomposition temperature	No relevant data
Viscosity	No relevant data
Formula mass	63.55
Nickel	
Appearance	Solid metal
Physical state	Silver
Color	
Odor	No relevant data
Odor threshold	No relevant data
pH	No relevant data
Melting point/freezing point	1455 °C
Initial boiling point and boiling range	2730 °C
Flashing point	No relevant data
Evaporation rate	No relevant data
Flammability (solid, gas)	No relevant data
Upper/lower flammability or explosive	- / -
Vapor density	1 mm Hg (1810 DEG C)
Solubility	(Insoluble)
Vapor density	No relevant data
Relative density	8.908
Partition coefficient : n-octanol/water	No relevant data
Auto-ignition temperature	No relevant data
Decomposition temperature	No relevant data
Viscosity	No relevant data
Formula mass	58.7
Polyethylene Terephthalate	
Appearance	Solid, Fiber, Film
Physical state	Colorless
Color	
Odor	No odor
Odor threshold	(No relevant data)
pH	(Not applicable)
Melting point/freezing point	254 ~ 284 °C
F. Initial boiling point and boiling range	(Not applicable)
Flashing point	(No relevant data)
Evaporation rate	(Not applicable)
Flammability (solid, gas)	(No relevant data)
Upper/lower flammability or explosive	- / - (No relevant data)

Vapor density	(Not applicable)
Solubility	(Solubility in water: Insoluble)
Vapor density	(Not applicable)
Relative density	(1.33-1.45 (Water=1))
Partition coefficient : n-octanol/water	(Not applicable)
Auto-ignition temperature	500 °C ((Cloud))
Decomposition temperature	(No relevant data)
Viscosity	(No relevant data)
Formula mass	(No relevant data)
Polyurethane	
Appearance	No relevant data
Physical state	No relevant data
Color	
Odor	No relevant data
Odor threshold	No relevant data
pH	No relevant data
Melting point/freezing point	No relevant data
Initial boiling point and boiling range	No relevant data
Flashing point	No relevant data
Evaporation rate	No relevant data
Flammability (solid, gas)	No relevant data
Upper/lower flammability or explosive	- / -
Vapor density	No relevant data
Solubility	No relevant data
Vapor density	No relevant data
Relative density	No relevant data
Partition coefficient : n-octanol/water	No relevant data
Auto-ignition temperature	No relevant data
Decomposition temperature	No relevant data
Viscosity	No relevant data
Formula mass	No relevant data

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10. STABILITY AND REACTIVITY

Chemical stability and possibility of hazardous reactions	
Copper	Flammable solid. Decompose at high temperature and may cause toxic gas. May casue a fire or explosion by intense polymerization. Container may explode if heated. Catches fire spontaneously by friction/heat/sparks/open flames. It may be re-ignited after extinguishment. Intensely and explosively react with water. Some materials is burned with intense heat. Dust and fume can make explosive mixture with air. If inhaled or contacted of steam, materials and decomposition products, it may cause serious injury or death. In case of metal fire, oxide cause serious harmful to health.
Nickel	Decompose at high temperature and may cause toxic gas. Container may explode if heated. Catches fire spontaneously by friction/heat/sparks/open flames. It may be re-ignited after extinguishment. Intensely and explosively react with water. Some materials is burned with intense heat. Dust and fume can make explosive mixture with air. If inhaled or contacted of steam, materials and decomposition products, it may cause serious injury or death. In case of metal fire, oxide cause serious harmful to health.
Polyethylene Terephthalate	Stable at normal temperature and pressure condition. Container may explode if heated. Some part can be burned, but not easy to ignite. In case of fire, may produce stimulating and toxic gas. Harmful if inhaled the material. Some liquid may release steam which cause dizziness and suffocation.
Polyurethane	Stable at normal temperature and pressure condition. Container may explode if heated. Some part can be burned, but not easy to ignite. In case of fire, may produce stimulating and toxic gas. Harmful if inhaled the material. Some liquid may release steam which cause dizziness and suffocation.
Conditions to avoid	
Copper	Keep away from heat/sparks/open flames/hot surfaces. No smoking. Friction/heat/sparks/open flames.
Nickel	Friction/heat/sparks/open flames. Heat.
Polyethylene Terephthalate	Ignition source as heat/sparks/open flames/etc.
Polyurethane	Ignition source as heat/sparks/open flames/etc.
Incompatible materials	
Copper	Water
Nickel	Water
Polyethylene Terephthalate	Combustible material.
Polyethylene Terephthalate	Stimulation, toxic gas.
Polyurethane	Combustible material.
Polyurethane	Stimulation, toxic gas.
Hazardous decomposition products	
Copper	Stimulation, corrosiveness, toxic gas.
Nickel	Stimulation, corrosiveness, toxic gas.
Polyethylene Terephthalate	No relevant data
Polyurethane	No relevant data

11. TOXICOLOGICAL INFORMATION

Information on the likely routes of exposure	
Copper	No relevant data
Nickel	No relevant data
Polyethylene Terephthalate	No relevant data. Short-term exposure, may cause stimulation.
Polyurethane	No relevant data
Health hazards information	
Acute toxic	
Oral	
Copper	No relevant data
Nickel	No relevant data
Polyethylene Terephthalate	LD50 > 3200 mg / kg Rat
Polyurethane	No relevant data
Percutaneous	
Copper	No relevant data
Nickel	No relevant data
Polyethylene Terephthalate	LD50 > 1000 mg / kg Guinea pig
Polyurethane	No relevant data
Inhalation	
Copper	No relevant data
Nickel	No relevant data
Polyethylene Terephthalate	No relevant data
Polyurethane	No relevant data
Skin corrosive/irritant	
Copper	No relevant data
Nickel	No relevant data
Polyethylene Terephthalate	No relevant data
Polyurethane	No relevant data
Serious eye damage/eye irritation	
Copper	No relevant data
Nickel	No relevant data
Polyethylene Terephthalate	No relevant data
Polyurethane	No relevant data
Respiratory sensitization	
Copper	No relevant data
Nickel	Cause asthma.
Polyethylene Terephthalate	No relevant data
Polyurethane	No relevant data
Skin sensitization	
Copper	No relevant data
Nickel	Skin sensitization.
Polyethylene Terephthalate	No relevant data
Polyurethane	No relevant data
Carcinogenicity	
Occupational Health and Safety Act	
Copper	No relevant data
Nickel	Carcinogenic (Special administrative substances)
Polyethylene Terephthalate	No relevant data
Polyurethane	No relevant data
Ministry of Employment and Labor	
Copper	No relevant data
Nickel	2
Polyethylene Terephthalate	No relevant data
Polyurethane	No relevant data



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IARC	
Copper	No relevant data
Nickel	Group 2B (Nickel, metallic and alloys)
Polyethylene Terephthalate	No relevant data
Polyurethane	Group 3
OSHA	
Copper	No relevant data
Nickel	No relevant data
Polyethylene Terephthalate	No relevant data
Polyurethane	No relevant data
ACGIH	
Copper	No relevant data
Nickel	A5
Polyethylene Terephthalate	No relevant data
Polyurethane	No relevant data
NTP	
Copper	No relevant data
Nickel	R
Polyethylene Terephthalate	No relevant data
Polyurethane	No relevant data
EU CLP	
Copper	No relevant data
Nickel	Carc. 2
Polyethylene Terephthalate	No relevant data
Polyurethane	No relevant data
Germ Cell Mutagenicity	
Copper	No relevant data
Nickel	No relevant data
Polyethylene Terephthalate	No relevant data
Polyurethane	No relevant data
Reproductive toxicity	
Copper	No relevant data
Nickel	No relevant data
Polyethylene Terephthalate	No relevant data
Polyurethane	No relevant data
Specific target organ toxicity(single exposure)	
Copper	Fume stimulates upper respiratory tract.
Nickel	Respiratory and kidney. (pneumonia, pulmonary edema and problem with kidney)
Polyethylene Terephthalate	No relevant data
Polyurethane	No relevant data
Specific target organ toxicity(repeated exposure)	
Copper	Appear liver damage. (human)
Nickel	Respiratory. (asthma, pulmonary fibrosis)
Polyethylene Terephthalate	No relevant data
Polyurethane	No relevant data
Aspiration hazard	
Copper	No relevant data
Nickel	No relevant data
Polyethylene Terephthalate	No relevant data
Polyurethane	No relevant data

12. ECOLOGICAL INFORMATION

Aquatic and terrestrial ecotoxicity	
Fish	
Copper	LC50 0.37 mg /ℓ 96 hr
Nickel	No relevant data
Polyethylene Terephthalate	(No relevant data)
Polyurethane	No relevant data
Crustacean	
Copper	EC50 0.0318 mg /ℓ 48 hr
Nickel	No relevant data
Polyethylene Terephthalate	(No relevant data)
Polyurethane	No relevant data
Bird	
Copper	LC50 0.092 mg /ℓ 15 hr
Nickel	No relevant data
Polyethylene Terephthalate	(No relevant data)
Polyurethane	No relevant data
Persistence and degradability	
Persistence	
Copper	log Kow-0.57 (Estimation)
Nickel	No relevant data
Polyethylene Terephthalate	(Not applicable)
Polyurethane	No relevant data
Degradability	
Copper	No relevant data
Nickel	No relevant data
Polyethylene Terephthalate	No relevant data
Polyurethane	No relevant data
Bioaccumulative potential	
Condensability	
Copper	BCF 5830
Nickel	No relevant data
Polyethylene Terephthalate	No relevant data
Polyurethane	No relevant data
Biodegradability	
Copper	No relevant data
Nickel	No relevant data
Polyethylene Terephthalate	No relevant data
Polyurethane	No relevant data
Mobility in soil	
Copper	No relevant data
Nickel	No relevant data
Polyethylene Terephthalate	No relevant data
Polyurethane	No relevant data
Other adverse effects	
Copper	No relevant data
Nickel	No relevant data
Polyethylene Terephthalate	No relevant data
Polyurethane	No relevant data

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13. DISPOSAL CONSIDERATIONS

Disposal method	
Copper	If specified in Waste Control Act, dispose of contents/container to in accordance with the regulation.
Nickel	If specified in Waste Control Act, dispose of contents/container to in accordance with the regulation.
Polyethylene Terephthalate	If specified in Waste Control Act, dispose of contents/container to in accordance with the regulation.
Polyurethane	1) Incinerate. 2) If it is difficult to incinerate, reclaim in managed reclamation facility after crushing, cutting or melting under maximum diameter of 15 cm or less in size.

Disposal considerations	
Copper	Dispose of contents/container. (In accordance with the relevant regulations)
Nickel	Dispose of contents/container. (In accordance with the relevant regulations)
Polyethylene Terephthalate	Dispose of contents/container. (In accordance with the relevant regulations)
Polyurethane	Dispose of contents/container. (In accordance with the relevant regulations)

14. TRANSPORT INFORMATION

UN No.	
Copper	3089
Nickel	3089
Polyethylene Terephthalate	No classified information of UN danger transportation material.
Polyurethane	No classified information of UN danger transportation material.

UN proper shipping name	
Copper	(METAL POWDER, FLAMMABLE, N.O.S.)
Nickel	(METAL POWDER, FLAMMABLE, N.O.S.)
Polyethylene Terephthalate	Not applicable
Polyurethane	Not applicable

Transport hazard class	
Copper	4.1
Nickel	4.1
Polyethylene Terephthalate	Not applicable
Polyurethane	Not applicable

Packing group	
Copper	2
Nickel	II
Polyethylene Terephthalate	Not applicable
Polyurethane	Not applicable

Marin pollution	
Copper	Applicable
Nickel	No relevant data
Polyethylene Terephthalate	No relevant data
Polyurethane	No relevant data

Special precaution which a user to be aware of or needs to comply with in connection with transport or conveyance either within or outside their premises

Emergency action for fire	
Copper	F-G
Nickel	F-G
Polyethylene Terephthalate	Not applicable
Polyurethane	Not applicable

Emergency action for spill	
Copper	S-G
Nickel	S-G
Polyethylene Terephthalate	Not applicable
Polyurethane	Not applicable

15. REGULATORY INFORMATION

Industrial Safety and Health Act	
Copper	Management-object-harmful material. Working-environment-measurement-object material. (Measurement cycle : 6 months) Special-health-check-object material. (Diagnosis cycle : 12 months) Exposure-standard-set material.
Nickel	Management-object-harmful material. Working-environment-measurement-object material. (Measurement cycle : 6 months) Special-health-check-object material. (Diagnosis cycle : 12 months) Exposure-standard-set material. Acceptable-standard-set material.
Polyethylene Terephthalate	No relevant data
Polyurethane	No relevant data

Toxic Chemical Control Act	
Copper	No relevant data
Nickel	No relevant data
Polyethylene Terephthalate	No relevant data
Polyurethane	No relevant data

Dangerous Material Safety Control Act	
Copper	No relevant data
Nickel	No relevant data
Polyethylene Terephthalate	No relevant data
Polyurethane	No relevant data

Wastes Management Act	
Copper	Designated waste
Nickel	No relevant data
Polyethylene Terephthalate	Designated waste
Polyurethane	Designated waste

Other requirements in domestic and other countries	
Domestic	
Persistent Organic Pollutants Control Act	
Copper	Not applicable
Nickel	Not applicable
Polyethylene Terephthalate	Not applicable
Polyurethane	Not applicable

Other countries	
American Management Information(OSHA)	
Copper	Not applicable
Nickel	Not applicable
Polyethylene Terephthalate	Not applicable
Polyurethane	Not applicable

American Management Information(CERCLA)	
Copper	2267.995 kg 5000 lb
Nickel	45.3599 kg 100 lb
Polyethylene Terephthalate	Not applicable
Polyurethane	Not applicable

American Management Information(EPCRA 302)	
Copper	Not applicable
Nickel	Not applicable
Polyethylene Terephthalate	Not applicable

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Polyurethane	Not applicable
American Management Information(EPCRA 304)	
Copper	Not applicable
Nickel	Not applicable
Polyethylene Terephthalate	Not applicable
Polyurethane	Not applicable
American Management Information(EPCRA 313)	
Copper	Applicable
Nickel	Applicable
Polyethylene Terephthalate	Not applicable
Polyurethane	Not applicable
American Management Information(Material in Rotterdam Convention)	
Copper	Not applicable
Nickel	Not applicable
Polyethylene Terephthalate	Not applicable
Polyurethane	Not applicable
American Management Information(Material in Stockholm convention)	
Copper	Not applicable
Nickel	Not applicable
Polyethylene Terephthalate	Not applicable
Polyurethane	Not applicable
American Management Information(Material in Montreal Protocol)	
Copper	Not applicable
Nickel	Not applicable
Polyethylene Terephthalate	Not applicable
Polyurethane	Not applicable
EU classification information (Confirmed classification result)	
Copper	Not applicable
Nickel	Carc. Cat. 3; R40R43
Polyethylene Terephthalate	Not applicable
Polyurethane	Not applicable
EU classification information (Risk statement)	
Copper	Not applicable
Nickel	R40, R43
Polyethylene Terephthalate	Not applicable
Polyurethane	Not applicable
EU classification information (Safe statement)	
Copper	Not applicable
Nickel	S2, S22, S36
Polyethylene Terephthalate	Not applicable
Polyurethane	Not applicable

16. OTHER INFORMATION

	Information source and references
Copper	(1) ICSC (1993)(2) HSDB (2003)(3) IUCLID (2000)(4) SRC(5) ACGIH (7th; 2001)(6) EHC 200 (1998)
	ICSC2001(Physical state) ICSC2001(Color) ICSC2001(E. Melting point/freezing point) ICSC2001(F. Initial boiling point and boiling range) HSDB(K. Vapor pressure) OHM/TADS(L. Solubility) HSDB(N. Relative density) HSDB(S. Formula mass)
Nickel	HSDB(Respiratory hypersensitiveness) HSDB(Skin hypersensitiveness) ATSDR (2005)(Specific target organ toxicity(single exposure)) ICSC2001(Specific target organ toxicity(single exposure)) ECETOC TR33 (1989)(Specific target organ toxicity(repeated exposure)) ICSC2001(Specific target organ toxicity(repeated exposure))
Polyethylene Terephthalate	-
Polyurethane	-