

Material Safety Data Sheet

Tip Refresher : BS-2 1/4

Section 1 - Product and Company Identification

Identity: Tip Refresher: BS-2	Manufacturer's Name: TAIYO ELECTRIC IND. CO.,LTD.
Address: 2-16-8 Yamate Fukuyama Hiroshima	Telephone Number Fax Number for Information: Tel : 81-(84)-951-1512 Fax : 81-(84)-51-9531
Japan 720-0092	Data Prepared: 19 June, 2003

Section 2 - Composition / Information on Ingredients

Hazardous Component	CAS No.	OSHA PEL	ACGIH TLV	%
Ammonium Dihydrogen Phosphate ($\text{NH}_4\text{H}_2\text{PO}_4$)	7722-76-1		---	62~72
Tin (Sn)	7440-31-5		8hr TWA 2mg/m ³	25~35
Paraffin ($\text{C}_n\text{H}_{2n+2}$ (n=20~35))	8002-74-2		8hr TWA 2mg/m ³	2~4

Section 3 - Hazards Identification

Physical and Chemical Hazards:

Powder is explosive. Reacts to strong oxidizer (Especially chloric acid).

Adverse Human Health Effects:

Irritative to nose and throat if powder inhaled. Generates ammonium gas when heated above 190.5°C.
Inhalation of vapor causes headache, dizziness or vomiting.

Section 4 - First-aid Measures

Eye Contact:

Flush thoroughly with running clean water immediately and consult a physician.

Skin Contact:

Promptly remove contaminated clothing. Wash exposed skin thoroughly with plenty of water.
Get medical attention if rash persists.

Ingestion:

Give the person large amount of water or salt solution to dilute and get him to vomit. Seek medical help for treatment, observation and support after first aid.

Inhalation:

Remove the person from contaminated area to a place with the fresh air. Get the person to blow his nose and gargle. Keep the person quiet and warm with a blanket and contact a physician.

Section 5 - Fire-fighting Measures

Flash Point: ---	Flammable Limits:	LEL ---	LEL ---
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Extinguishing Media:

Not flammable, In case of fire remove the container to a safe place. If not removable, use water spray to cool and carbon dioxide, dry, sand, foam extinguishant

Specific Hazards with Regards to Fire Fighting Measures.

During a fire, irritating and toxic gas (NH_3 , NO_x , P_2 , O_5) may be generated by thermal decomposition or combustion, firefighters should wear self-contained breathing apparatus.



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Section 6 - Accidental Release Measures

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Steps to be Taken in Case Material is Release or Spilled:

Notify safety personnel. Provide ventilation. Collect the pill in an empty container and wash the places where the material was spilled with plenty of water.

Section 7 - Handling and Storage

Precautions to be Taken in Handling and Storing:

Store in a clean, cool dry and well-ventilated place. Keep tightly closed. Protect against physical damage.

Section 8 - Exposure Controls / Personal Protection

Respiratory Protection:

A self-contained breathing apparatus should be available for emergencies. Wear protection filter respiratory.

Ventilation:	Local Exhaust: Remove smoke from working area.	Special: Not required
	Mechanical: NA	Other: NA

Protective Gloves:

Use plastic or rubber gloves and aprons where necessary to avoid skin contact.

Eye Protection:

Safety glasses or goggles should be worn in areas where splashing may occur.

Other Protective Clothing or Equipment:

Provide eye bath near work site and sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below TLV's.

Work/Hygienic Practices:

None

Section 9 - Physical and Chemical Properties

Boiling Point	Tin :2270°C Other: resolve	Specific Gravity (H ₂ O=1)	3.42 (20 °)
Vapor Pressure (mm Hg)	NA	Melting Point (°)	Tin:231.9°C Ammonium Dihydrogen Phosphate: Resolve 190.5°C Paraffin:42~44°C
Vapor Density (AIR=1)	NA	Evaporation Rate (Butyl Acetate=1)	NA

Solubility in Water:

Tin and paraffin : Water insoluble Ammonium Dihydrogen Phosphate:27% (20°C)

Physical Condition and Odor:

Odorless gray powder

Section 10 - Stability and Reactivity

Stability:	Unstable	X	Conditions to Avoid: Keep away from heat, sparks and open flames.
	Stable		

Incompatibility:

Peroxides,

Hazardous Decomposition or Byproducts:

May release toxic gas (NH₃, NO_x, P₂, O₅). Powder composes the explosive mixture of gas. Produces toxic gas by thermal decomposition above 190.5°C.

Tin: Soluble in strong acid and strong alkaline.

Ammonium Dihydrogen Phosphate: Slightly soluble in alcohol.

Paraffin: Thermal alcohol, benzene, chloroform, turpentine oil.

Hazardous Polymerization	May Occur	X	Conditions to Avoid: NA
	Will Not Occur		

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Section 11 - Toxicological Information

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Route of Entry : Inhalation Skin Ingestion

Health Hazards:

Inhalation of dust or fumes may be irritating to the nose, throat, and lungs.

Prolonged or repeated contact with the skin may cause irritation, while contact with the eyes may cause irritation or burns. Ingestion causes irritation of the mouth and gastrointestinal tract.

Acute toxicity: Tin: Inhalation of dust or fumes may be irritating to the nose, throat and lungs.

Rat : TDLO 395g/kg

Mouse: TDLO 840g/kg

Paraffin : Inhalation of dust may cause dizziness or headache. In extreme case, vomiting, diarrhea, cold sweat, dullness may be caused.

Sub-chronic toxicity: Ammonium dihydrogen phosphate: when fed to rats, the most significant and peculiar toxicity of the excess feeding of phosphate is considered to be the deposit of lime, especially in a gastoral, kidney and aorta. Studies in rats shows that the calcify caution of kidney appears in several weeks to several months, according to the amount given. Estimated amount of phosphate is around 1% of the feed. It is an intensity of the calcification, but does not necessarily lead to kidney damage.

Carcinogenicity NTP IARC Monographs OSHA Regulated

Prolonged exposure or contact with paraffin may cause scrotum, prostate, lung or skin cancer.

Signs and Symptoms of Exposure:

Mild irritation of the eyes, nose, and throat.

Medical Conditions:

Generally aggravated by exposure.

Section 12 - Ecological Information

Biodegradability:

Tin : not biodegradable Other : NA

Bioaccumulation:

NA

Fish Toxicity:

Ammonium Dihydrogen Phosphate : Toxic to aquatic plants. Fathead minnow LD50 (96hr) 1000-100ppm

Other : NA

Section 13 - Disposal Considerations

Waste Disposal Method:

Contact supplier or a licensed chemical waste disposal contractor for treatment, packaging, and disposal requirements.

Section 14 - Transport Information

Avoid direct sunlight or high temperature places.

Section 15 - Regulatory Information

Follow all regulations in your country.



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The information herein is given in good faith, but not a warranty. Final determination of suitability any of material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards, which exist.

