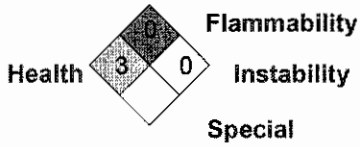
alpha

Material Safety Data Sheet

Material Safety Data Sheet

Emergency phone: US & Canada: 800 424-9300
Mexico: 01 800 022 1400, (55) 5559 1588



Health	3
Flammability	0
Physical hazards	0
Personal protection	

1 . Product and company identification

Product name : **ZN Chloride**
Product Code : 119653
Manufacturer : Cookson Electronics
109 Corporate Blvd.
South Plainfield, NJ 07080
Toll Free: (800) 367-5460
Main Phone: (908) 791-3000
Fax: (908) 791-3090
www.alphametals.com

Cookson Electronics Mexico, S.A. de C.V
Avenida Nafta No. 800,
Parque Industrial Stiva Aeropuerto
Apodaca, Nuevo León, C.P. 66600
Mexico
www.cooksonelectronics.com
Customer Service: (814) 946-1611

Validation date : **9/30/2008.** **Supersedes Date** : No previous validation.

Prepared by : T. Maturo
(203)-799-4917

2. Hazards identification

Physical state : Solid.

Odor : None.

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Emergency overview : DANGER !
Toxic if swallowed. Corrosive to the eyes and digestive tract. Causes burns. Severely irritating to the skin and respiratory system. Do not ingest. Do not get in eyes or on skin or clothing. Contains material that can cause target organ damage. Contains material which may cause heritable genetic effects, based on in vitro data. Use only with adequate ventilation. Keep container tightly closed and sealed until ready for use. Wash thoroughly after handling.

Routes of entry : Dermal contact. Eye contact. Inhalation. Ingestion.

Potential acute health effects

Inhalation : Severely irritating to the respiratory system. May cause severe irritation or burns.

Ingestion : Toxic if swallowed. Corrosive to the digestive tract. May cause burns to mouth, throat and stomach. Can cause target organ damage. Adverse symptoms may include the following: nausea or vomiting stomach pains Ingestion may cause gastrointestinal irritation and diarrhea.

Continued on next page

2. Hazards identification

Skin : Severely irritating to the skin. Adverse symptoms may include the following: pain or irritation redness blistering,

Eyes : Corrosive to eyes. Causes burns. Direct contact with the eyes can cause irreversible damage, including blindness.

Potential chronic health effects

Chronic effects : Adverse symptoms may include the following:

Petrolatum: Prolonged or repeated contact may cause dermatitis.
zinc chloride: dermatitis, ulcerations, metal fume fever, pulmonary edema, chemical pneumonitis, mental confusion or disorientation, drowsiness/fatigue, difficulty swallowing, elevated blood pressure, convulsions, circulatory collapse.

Target organs : Contains material which causes damage to the following organs: lungs, cardiovascular system, upper respiratory tract, skin, eye, lens or cornea.
Contains material which may cause damage to the following organs: kidneys, liver, pancreas.

Carcinogenicity : No conclusive data is available to indicate product or any component present at greater than 0.1% may cause cancer.

Mutagenicity : Contains material which may cause heritable genetic effects, based on in vitro data.

Developmental effects : No conclusive data is available to indicate product or any component present at greater than 0.1% may cause developmental abnormalities.

Fertility effects : No conclusive data is available to indicate product or any component present at greater than 0.1% may impair fertility.

California Prop. 65 : **WARNING:** This product contains a chemical known to the State of California to cause cancer and birth defects or other reproductive harm.

Medical conditions aggravated by over-exposure : Pre-existing digestive disorders and disorders involving any other target organs mentioned in this MSDS as being at risk may be aggravated by over-exposure to this product.

3. Composition/information on ingredients

Name	CAS number	% by weight
Petrolatum	8009-03-8	70-80
zinc chloride	7646-85-7	20-30

Any ingredient not listed in Section 3 is non-regulated or present in the product in concentrations below legal disclosure limits.

4 . First aid measures

Eye contact : Get medical attention immediately. Chemical burns must be treated promptly by a physician. Check for and remove any contact lenses. Immediately flush eyes with running water for at least 30 minutes, keeping eyelids open. Provide a readily-accessible eyewash facility and quick-drench safety shower.

Skin contact : Provide a readily-accessible eyewash facility and quick-drench safety shower. Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Continue to rinse for at least 15 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Inhalation : Get medical attention immediately. Chemical burns must be treated promptly by a physician. Move exposed person to fresh air. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Continued on next page

4 . First aid measures

Ingestion : Get medical attention immediately. Chemical burns must be treated promptly by a physician. Wash out mouth with water. Remove dentures if any. Move exposed person to fresh air. Keep person warm and at rest. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wear suitable protective clothing, gloves and eye/face protection. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. Wash contaminated clothing thoroughly with water before removing or wear gloves.

5 . Fire-fighting measures

Flammability of the product : No specific fire or explosion hazard.

Extinguishing media

Suitable : Use an extinguishing agent suitable for the surrounding fire.

Not suitable : None known.

Special exposure hazards : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Hazardous combustion products: : halogenated compounds
metal oxide/oxides

Special remarks on fire hazards : Slightly flammable in the presence of the following materials or conditions: open flames, sparks and static discharge and heat.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

6 . Accidental release measures

Personal precautions : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see section 8).

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Large spill : Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Vacuum or sweep up material and place in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor. Note: see section 1 for emergency contact information and section 13 for waste disposal.

Small spill : Move containers from spill area. Vacuum or sweep up material and place in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor.

Continued on next page

7 . Handling and storage

Handling : Put on appropriate personal protective equipment (see section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Do not get in eyes or on skin or clothing. Provide a readily-accessible eyewash facility and quick-drench safety shower. Do not ingest. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or approved alternative container. Containers should be kept closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

Storage : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. Provide a readily-accessible eyewash facility and quick-drench safety shower.

Keep container tightly closed. Keep container in a cool, well-ventilated area.

8 . Exposure controls/personal protection

Product name	CAS number	Exposure limits
Petrolatum	8009-03-8	**ACGIH TLV (United States, 6/2007).** TWA: 5 mg/m³ STEL: 10 mg/m³ **OSHA PEL (United States, 6/2007).** TWA: 5 mg/m³
zinc chloride	7646-85-7	**ACGIH TLV (United States, 1/2006).** STEL: 2 mg/m³ 15 minute(s). Form: Fume TWA: 1 mg/m³ 8 hour(s). Form: Fume **NIOSH REL (United States, 12/2001).** STEL: 2 mg/m³ 15 minute(s). Form: Fume TWA: 1 mg/m³ 10 hour(s). Form: Fume **OSHA PEL (United States, 11/2006).** TWA: 1 mg/m³ 8 hour(s). Form: Fume **OSHA PEL 1989 (United States, 3/1989).** STEL: 2 mg/m³ 15 minute(s). Form: Fume TWA: 1 mg/m³ 8 hour(s). Form: Fume

Consult local authorities for acceptable exposure limits.

Recommended monitoring procedures : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment.

Engineering measures : Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. Provide a readily-accessible eyewash facility and quick-drench safety shower. Processes should be designed to minimize airborne and skin exposure to hazardous substances.

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location. Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Remove/Take off immediately all contaminated clothing. Contaminated work clothing should not be allowed out of the workplace.

Personal protection

Continued on next page

8 . Exposure controls/personal protection

Respiratory	:	Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.
Hands	:	Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. The user must check that the final choice of type of glove selected for handling this product is the most appropriate and takes into account the particular conditions of use, as included in the user's risk assessment.
Eyes	:	Avoid contact with eyes. Safety eyewear should be used when there is a likelihood of exposure. Direct contact with the eyes can cause irreversible damage, including blindness.
Skin	:	Avoid contact with skin and clothing. Wear protective clothing. Body garments used should be based upon the task being performed (e.g., lab coat, chemical resistant protective suit, sleevelets, synthetic apron, gauntlets) to avoid exposed skin surfaces. Wash contaminated clothing thoroughly with water before removing or wear gloves.
Environmental exposure controls	:	Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

9 . Physical and chemical properties

Physical state	:	Solid.
Flash point	:	Not available.
Auto-ignition temperature	:	Not available.
Flammable limits	:	Not available.
Color	:	Gray.
Odor	:	None.
pH	:	Not available.
Boiling/condensation point	:	Not available.
Melting/freezing point	:	Not available.
Vapor pressure	:	Not available.
Vapor density	:	Not available.
Odor threshold	:	Not available.
Evaporation rate	:	Not available.
VOC	:	0.2 %
Solubility	:	Easily soluble in the following materials: cold water and hot water.

10 . Stability and reactivity

Stability	:	The product is stable. Under normal conditions of storage and use, hazardous polymerization will not occur.
Conditions to avoid	:	No specific data.
Incompatibility with various substances:	:	Reactive with oxidizing agents, reducing agents, metals, acids, alkalis. Chlorine, peroxides
Hazardous decomposition products	:	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
Other Hazardous decomposition products	:	Toxic fumes
Hazardous polymerization	:	Not available.

Continued on next page

11 . Toxicological information

Acute toxicity

Product/ingredient name	CAS number	Result	Species	Dose	Exposure
zinc chloride	7646-85-7	LD50 Oral	Guinea pig	200 mg/kg	-
		LD50 Oral	Rat	350 mg/kg	-
		LD50 Oral	Mouse	329 mg/kg	-

Mutagenicity

Product/ingredient name	CAS number	Test	Experiment	Result
zinc chloride	7646-85-7	-	Mammalian-Animal	Positive
		-	Bacteria	Positive

Alpha has not conducted specific studies on the toxicity of this product.

12 . Ecological information

Aquatic ecotoxicity

Product/ingredient name	CAS number	Test	Result	Species	Exposure
zinc chloride	7646-85-7	Intoxication	Acute EC50 93.8 mg/L	Daphnia	48 hours
		Intoxication	Acute EC50 2.8 mg/L	Daphnia	48 hours
		Mortality	Acute LC50 0.095 mg/L	Fish	96 hours
		Mortality	Acute LC50 0.093 mg/L	Fish	96 hours
		Mortality	Acute LC50 0.06791 mg/L	Daphnia	96 hours
		Mortality	Acute LC50 0.066 mg/L	Fish	96 hours

13 . Disposal considerations

Waste disposal : The generation of waste should be avoided or minimized wherever possible. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees.

14 . Transport information

Regulatory information	UN number	Proper shipping name	Classes	PG*	Label	Additional information
DOT Classification	Not regulated.	-	-	-		

PG* : Packing group

Continued on next page

15 . Regulatory information

United States

HCS Classification : Toxic material
Corrosive material
Target organ effects

U.S. Federal regulations : All ingredients comply with applicable rules or orders under United States TSCA.
United States inventory (TSCA 8b): All components are listed or exempted.
TSCA 5(a)2 proposed significant rules: No products were found.
TSCA 5(a)2 final significant rules: No products were found.

SARA 313

	Product name	CAS number	Concentration
Form R - Reporting requirements :	zinc chloride	7646-85-7	20-30
Supplier notification :	zinc chloride	7646-85-7	20-30

California Prop. 65

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

Canada

WHMIS (Canada) : Class D-1B: Material causing immediate and serious toxic effects (Toxic).
Class E: Corrosive material

Canada inventory : **Canada inventory:** All components are listed or exempted.

International lists

China inventory (IECSC) : **China inventory (IECSC):** All components are listed or exempted.

Europe inventory : **Europe inventory:** Not determined.

Australia inventory (AICS) : **Australia inventory (AICS):** All components are listed or exempted.

Japan inventory (ENCS) : **Japan inventory (ENCS):** Not determined.
Japan inventory (ISHL): Not determined.

Korea inventory (KECI) : **Korea inventory (KECI):** All components are listed or exempted.

Philippines inventory (PICCS) : **Philippines inventory (PICCS):** All components are listed or exempted.

16 . Other information

Definition of Terms

ACGIH	American Conference of Governmental Industrial Hygienists
Ceiling	Maximum exposure limit defined by OSHA
CAS	Chemical Abstract Service
IARC	International Agency for Research on Cancer
NIOSH	National Institute for Occupational Safety and Health
NTP	National Toxicology Program
OSHA	Occupational Safety and Health Administration
PEL	Permissible Exposure Limit
REL	Recommended Exposure Limit
RTK	Right to Know
SARA	Superfund Amendments and Reauthorization Act
STEL	Short Term Exposure Limit
TLV	ACGIH Threshold Limit Value
TLV-C	ACGIH Threshold Limit Value, Ceiling
TRADE SECRET	Claimed as allowed under 29CFR§1910.1200
TSCA	Toxic Substances Control Act
PPE	Personal Protection Equipment
CEPA	Canadian Environmental Protection Act
DSL	Domestic Substance List
NDSL	Non-Domestic Substance List
NSN	New Substance Notification Rules

Continued on next page

16 . Other information

Disclaimer

The information contained herein is based on data considered accurate. However, no warranty is expressed of implied regarding the accuracy of these data or the results to be obtained from the use thereof. Additionally, Cookson Electronics assumes no responsibility for injury to the vendee or third persons proximately caused by the material even if reasonable safety procedures are followed. Furthermore, vendee assumes the risk in his use of the material.

Cookson Electronics