



SAFETY DATA SHEET ROLLER TIN COVER SALTS

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier

Product name ROLLER TIN COVER SALTS
Product No. 14-15051(-1)

1.2. Relevant identified uses of the substance or mixture and uses advised against

Identified uses Printed circuit board manufacture

1.3. Details of the supplier of the safety data sheet

Supplier Mega Electronics
 The Grip Ind Est
 Linton
 Cambridge
 CB21 4XN

1.4. Emergency telephone number

01223 893900 (Mon-Fri 8.30-17.00)

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

Classification (EC 1272/2008)

Physical and Chemical Not classified.
Hazards
Human health Acute Tox. 4 - H302;Skin Corr. 1B - H314;STOT SE 3 - H335
Environment Aquatic Acute 1 - H400;Aquatic Chronic 1 -H410

Classification (1999/45/EEC)

Xn;R22. C;R34. Xi;R37. N;R50/53.

The Full Text for all R-Phrases and Hazard Statements are Displayed in Section 16.

Human health

Corrosive to skin and eyes.

Environment

The product contains a substance which is toxic to aquatic organisms.

2.2. Label elements

Contains AMMONIUM CHLORIDE
 ZINC CHLORIDE

Label In Accordance With (EC) No. 1272/2008



Signal Word

Danger

Hazard Statements

H302
H314

Harmful if swallowed.
Causes severe skin burns and eye damage.

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Precautionary Statements	H335	May cause respiratory irritation.
	H410	Very toxic to aquatic life with long lasting effects.
	P273	Avoid release to the environment.
	P280	Wear protective gloves/protective clothing/eye protection/face protection.
	P264	Wash contaminated skin thoroughly after handling.
	P303+361+353	IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
Supplementary Precautionary Statements	P305+351+338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician.
	P310	P501d Dispose of contents/container in accordance with local, regional and national regulations
	P270	Do not eat, drink or smoke when using this product.
	P260	Do not breathe vapour/spray.
	P301+330+331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
	P304+340	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P363	Wash contaminated clothing before reuse.	
P391	Collect spillage.	

2.3. Other hazards

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.2. Mixtures

AMMONIUM CHLORIDE	30-60%	
CAS-No.: 12125-02-9	EC No.: 235-186-4	Registration Number: 01-2119487950-27
Classification (EC 1272/2008) Acute Tox. 4 - H302 Eye Irrit. 2 - H319	Classification (67/548/EEC) Xn;R22 Xi;R36	
ZINC CHLORIDE	30-60%	
CAS-No.: 7646-85-7	EC No.: 231-592-0	
Classification (EC 1272/2008) Acute Tox. 4 - H302 Skin Corr. 1B - H314 STOT SE 3 - H335 Aquatic Acute 1 - H400 Aquatic Chronic 1 - H410	Classification (67/548/EEC) C;R34 Xn;R22 N;R50/53	
ZINC OXIDE	10-30%	
CAS-No.: 1314-13-2	EC No.: 215-222-5	Registration Number: 01-2119463881-32
Classification (EC 1272/2008) Aquatic Acute 1 - H400 Aquatic Chronic 1 - H410	Classification (67/548/EEC) N;R50/53	

The Full Text for all R-Phrases and Hazard Statements are Displayed in Section 16.

SECTION 4: FIRST AID MEASURES

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4.1. Description of first aid measures

General information

Remove affected person from source of contamination. Get medical attention.

Inhalation

Move the exposed person to fresh air at once. Get medical attention. Provide rest, warmth and fresh air.

Ingestion

DO NOT INDUCE VOMITING! NEVER MAKE AN UNCONSCIOUS PERSON VOMIT OR DRINK FLUIDS! Rinse mouth thoroughly. Drink plenty of water. Get medical attention immediately! Provide rest, warmth and fresh air.

Skin contact

Remove affected person from source of contamination. Wash off promptly and flush contaminated skin with water. Promptly remove clothing if soaked through and flush skin with water. Get medical attention promptly if symptoms occur after washing.

Eye contact

Remove victim immediately from source of exposure. Make sure to remove any contact lenses from the eyes before rinsing. Promptly wash eyes with plenty of water while lifting the eye lids. Continue to rinse for at least 15 minutes and get medical attention.

4.2. Most important symptoms and effects, both acute and delayed

Inhalation

Upper respiratory irritation.

Ingestion

May cause stomach pain or vomiting. May cause chemical burns in mouth and throat.

Skin contact

Burning pain and severe corrosive skin damage. Allergic rash.

Eye contact

Extreme irritation of eyes and mucous membranes, including burning and tearing.

4.3. Indication of any immediate medical attention and special treatment needed

Treat Symptomatically.

SECTION 5: FIREFIGHTING MEASURES

5.1. Extinguishing media

Extinguishing media

Use fire-extinguishing media appropriate for surrounding materials.

5.2. Special hazards arising from the substance or mixture

Hazardous combustion products

When heated, toxic and corrosive vapours/gases may be formed. Ammonia or amines. Hydrogen chloride (HCl). Nitrous gases (NO_x). Oxides of: Zinc.

Unusual Fire & Explosion Hazards

May develop highly toxic or corrosive fumes if heated.

5.3. Advice for firefighters

Protective equipment for fire-fighters

Self contained breathing apparatus and full protective clothing must be worn in case of fire.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Wear protective clothing as described in Section 8 of this safety data sheet.

6.2. Environmental precautions

Do not discharge into drains, water courses or onto the ground.

6.3. Methods and material for containment and cleaning up

DO NOT touch spilled material. Wear necessary protective equipment. Shovel into dry containers. Cover and move the containers. Flush the area with water. Inform Authorities if large amounts are involved.

6.4. Reference to other sections

Wear protective clothing as described in Section 8 of this safety data sheet.

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SECTION 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

Avoid spilling, skin and eye contact. Ventilate well, avoid breathing vapours. Use approved respirator if air contamination is above accepted level. Eye wash facilities and emergency shower must be available when handling this product. Avoid handling which leads to dust formation.

7.2. Conditions for safe storage, including any incompatibilities

Store in tightly closed original container in a dry, cool and well-ventilated place. Store in closed original container at temperatures between 5°C and 30°C.

Storage Class

Chemical storage.

7.3. Specific end use(s)

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Name	STD	TWA - 8 Hrs	STEL - 15 Min	Notes
AMMONIUM CHLORIDE	WEL	10 (Fume) mg/m ³	20 (Fume) mg/m ³	
ZINC CHLORIDE	WEL	1 mg/m ³	2 mg/m ³	
ZINC OXIDE	WEL	5 mg/m ³	10 mg/m ³	

WEL = Workplace Exposure Limit.

AMMONIUM CHLORIDE (CAS: 12125-02-9)

DNEL				
Industry	Inhalation.	Long Term	43.97	mg/m ³
Industry	Dermal	Long Term	128.9	mg/kg/day
PNEC				
Industry	Freshwater	Long Term	0.25 mg/l	
Industry	Sediment	Long Term	0.9 mg/kg	
Industry	Soil	Long Term	50.7 mg/kg	
Industry	STP	Long Term	13.1 mg/l	

ZINC CHLORIDE (CAS: 7646-85-7)

DNEL				
Industry	Dermal	Long Term	Systemic Effects	8.3 mg/kg/day
Industry	Inhalation.	Long Term	Systemic Effects	1 mg/m ³
PNEC				
Freshwater	20.6	µg/l		
Marinewater	6.1	µg/l		
Sediment (Freshwater)	235.6	mg/kg		
Sediment (Marinewater)	113	mg/kg		
Soil	106.8	mg/kg		
STP	52	µg/l		

Units given are mg of: Zn

ZINC OXIDE (CAS: 1314-13-2)

DNEL				
Industry	Inhalation.	Long Term	5	mg/m ³
PNEC				
Freshwater	0.0206	mg/l		
Marinewater	0.0061	mg/l		
Sediment (Freshwater)	235.6	mg/kg		
Sediment (Marinewater)	113	mg/kg		
Soil	106.8	mg/kg		
STP	0.052	mg/l		

Units given are mg of: Zn These PNECS are added value PNECS, they are to be added to background levels.

8.2. Exposure controls

Protective equipment

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Process conditions

Use engineering controls to reduce air contamination to permissible exposure level. Provide eyewash station.

Engineering measures

Provide adequate general and local exhaust ventilation.

Respiratory equipment

In case of inadequate ventilation or risk of inhalation of dust, use suitable respiratory equipment with particle filter (type P2).

Hand protection

Use protective gloves.

Eye protection

Use approved safety goggles or face shield.

Other Protection

Wear appropriate clothing to prevent any possibility of skin contact.

Hygiene measures

DO NOT SMOKE IN WORK AREA! Wash hands at the end of each work shift and before eating, smoking and using the toilet. Promptly remove any clothing that becomes contaminated. Wash promptly with soap & water if skin becomes contaminated. Use appropriate skin cream to prevent drying of skin. When using do not eat, drink or smoke.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Appearance	Crystalline powder.
Colour	White.
Solubility	Slightly soluble in water.
pH-Value, Diluted Solution	4-5 @30%
Oxidising properties	
Does not meet the criteria for oxidising.	

9.2. Other information

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity

10.2. Chemical stability

Stable under normal temperature conditions.

10.3. Possibility of hazardous reactions

Hazardous Polymerisation

Will not polymerise.

10.4. Conditions to avoid

Avoid exposure to high temperatures or direct sunlight. Water, moisture.

10.5. Incompatible materials

Materials To Avoid

Strong acids. Strong alkalis. Inorganic cyanides. Inorganic sulphides.

10.6. Hazardous decomposition products

None under normal conditions.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

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Inhalation

May cause irritation to the respiratory system.

Ingestion

May cause chemical burns in mouth and throat.

Skin contact

Causes burns.

Eye contact

Causes burns. Risk of serious damage to eyes.

Health Warnings

Swallowing concentrated chemical may cause severe internal injury. RESPIRATORY SYSTEM. Serious damage to the lining of nose, throat and lungs.

Toxicological information on ingredients.

ZINC CHLORIDE (CAS: 7646-85-7)

Toxic Dose 1 - LD 50

253 mg/kg (oral rat)

Toxic Dose 2 - LD 50

58 mg/kg (ipr-rat)

Aspiration hazard:

Inhalation

May cause irritation to the respiratory system.

Ingestion

May cause chemical burns in mouth and throat.

Skin contact

Causes burns.

Eye contact

Causes burns. Risk of serious damage to eyes.

Swallowing concentrated chemical may cause severe internal injury. RESPIRATORY SYSTEM. Serious damage to the lining of nose, throat and lungs.

SECTION 12: ECOLOGICAL INFORMATION

Ecotoxicity

The product contains substances which are toxic to aquatic organisms and which may cause long term adverse effects in the aquatic environment.

12.1. Toxicity

Ecological information on ingredients.

ZINC CHLORIDE (CAS: 7646-85-7)

Acute Fish Toxicity

Toxic to aquatic organisms

LC 50, 96 Hrs, Fish mg/l

5.4 (Bluegill)

EC 50, 48 Hrs, Daphnia, mg/l

0.2

IC 50, 72 Hrs, Algae, mg/l

0.1

ZINC OXIDE (CAS: 1314-13-2)

Acute Fish Toxicity

The product contains a substance which is harmful to aquatic organisms.

EC 50, 48 Hrs, Daphnia, mg/l

0.413

12.2. Persistence and degradability

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Ecological information on ingredients.

ZINC CHLORIDE (CAS: 7646-85-7)

Degradability

The product is not biodegradable.

ZINC OXIDE (CAS: 1314-13-2)

Degradability

The product solely consists of inorganic compounds which are not biodegradable.

12.3. Bioaccumulative potential

Ecological information on ingredients.

ZINC OXIDE (CAS: 1314-13-2)

Bioaccumulative potential

The product is not bioaccumulating.

12.4. Mobility in soil

Ecological information on ingredients.

ZINC OXIDE (CAS: 1314-13-2)

Mobility:

The product is insoluble in water.

Adsorption/Desorption Coefficient

Soil Koc 158.5

12.5. Results of PBT and vPvB assessment

Ecological information on ingredients.

ZINC OXIDE (CAS: 1314-13-2)

This product does not contain any PBT or vPvB substances.

12.6. Other adverse effects

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Dispose of waste and residues in accordance with local authority requirements.

SECTION 14: TRANSPORT INFORMATION

14.1. UN number

UN No. (ADR/RID/ADN) 3260

UN No. (IMDG) 3260

UN No. (ICAO) 3260

14.2. UN proper shipping name

Proper Shipping Name CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S. (ZINCCHLORIDE)

14.3. Transport hazard class(es)

ADR/RID/ADN Class 8

ADR/RID/ADN Class Class 8: Corrosive substances.

ADR Label No. 8

IMDG Class 8

ICAO Class/Division 8

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Transport Labels



14.4. Packing group

ADR/RID/ADN Packing group	III
IMDG Packing group	III
ICAO Packing group	III

14.5. Environmental hazards

Environmentally Hazardous Substance/Marine Pollutant



14.6. Special precautions for user

EMS	F-A, S-B
Emergency Action Code	2X
Hazard No. (ADR)	80
Tunnel Restriction Code	(E)

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

SECTION 15: REGULATORY INFORMATION

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

Uk Regulatory References

Health and Safety at Work Act 1974. The Control of Substances Hazardous to Health Regulations.

Statutory Instruments

The Chemicals (Hazard Information and Packaging for Supply) Regulations 2009 (S.I 2009 No. 716). Control of Substances Hazardous to Health.

Guidance Notes

Workplace Exposure Limits EH40.

National Regulations

Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC, including amendments.

15.2. Chemical Safety Assessment

SECTION 16: OTHER INFORMATION

Information Sources

Dangerous Properties of Industrial Chemicals, N.Sax, Croner's: Dangerous Substances. Croner's: Emergency Spillage Guide. Croner's: Substances Hazardous to Health. Material Safety Data Sheet, Misc. manufacturers.

Revision Date 18/02/2016

Revision 1

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Risk Phrases In Full

R34	Causes burns.
R22	Harmful if swallowed.
R36	Irritating to eyes.
R37	Irritating to respiratory system.
R50/53	Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Hazard Statements In Full

H319	Causes serious eye irritation.
H314	Causes severe skin burns and eye damage.
H302	Harmful if swallowed.
H335	May cause respiratory irritation.
H410	Very toxic to aquatic life with long lasting effects.
H400	Very toxic to aquatic life.

Disclaimer

This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.