

SAFETY DATA SHEET
LCE-11 INDIUM TIN OXIDE ETCHANT

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Issued: 01/12/2005
Revision No: 2

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

Product name: LCE-11 INDIUM TIN OXIDE ETCHANT
Product code: REM216
Company name: Rockwood Electronic Materials
Amber Business Centre
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2. COMPOSITION / INFORMATION ON INGREDIENTS

Hazardous ingredients: NITRIC ACID 1-10%
EINECS: 231-714-2 CAS: 7697-37-2
[O] R8; [C] R35

- HYDROCHLORIC ACID 1-10%
EINECS: 231-595-7
[C] R34; [Xi] R37
- FERRIC CHLORIDE 10-30%
[C] R35; [Xi] R37; [Xi] R41; [Xn] R68/22

3. HAZARDS IDENTIFICATION

Main hazards: Causes severe burns. Irritating to respiratory system. Risk of serious damage to eyes. Harmful: possible risk of irreversible effects if swallowed.

4. FIRST AID MEASURES (SYMPTOMS)

Skin contact: Blistering may occur. Progressive ulceration will occur if treatment is not immediate.
Eye contact: Corneal burns may occur. May cause permanent damage.
Ingestion: Corrosive burns may appear around the lips. Blood may be vomited. There may be bleeding from the mouth or nose.
Inhalation: There may be shortness of breath with a burning sensation in the throat. Exposure may cause coughing or wheezing.

4. FIRST AID MEASURES (ACTION)

Skin contact: Remove all contaminated clothes and footwear immediately unless stuck to skin. Drench the affected skin with running water for 10 minutes or longer if substance is still on skin. Transfer to hospital if there are burns or symptoms of poisoning.

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Eye contact: Bathe the eye with running water for 15 minutes. Transfer to hospital for specialist examination.

Ingestion: Wash out mouth with water. Do not induce vomiting. Give 1 cup of water to drink every 10 minutes. If unconscious, check for breathing and apply artificial respiration if necessary. If unconscious and breathing is OK, place in the recovery position. Transfer to hospital as soon as possible.

Inhalation: Remove casualty from exposure ensuring one's own safety whilst doing so. If unconscious and breathing is OK, place in the recovery position. If conscious, ensure the casualty sits or lies down. If breathing becomes bubbly, have the casualty sit and provide oxygen if available. Transfer to hospital as soon as possible.

5. FIRE-FIGHTING MEASURES

Extinguishing media: Suitable extinguishing media for the surrounding fire should be used. Use water spray to cool containers.

Exposure hazards: Corrosive. In combustion emits toxic fumes.

Protection of fire-fighters: Wear self-contained breathing apparatus. Wear protective clothing to prevent contact with skin and eyes.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions: If outside keep bystanders upwind and away from danger point. Mark out the contaminated area with signs and prevent access to unauthorised personnel. Do not attempt to take action without suitable protective clothing - see section 8 of SDS. Turn leaking containers leak-side up to prevent the escape of liquid.

Environmental precautions: Do not discharge into drains or rivers. Contain the spillage using bunding.

Clean-up procedures: Clean-up should be dealt with only by qualified personnel familiar with the specific substance. Absorb into dry earth or sand. Transfer to a closable, labelled salvage container for disposal by an appropriate method.

7. HANDLING AND STORAGE

Handling requirements: Avoid direct contact with the substance. Ensure there is sufficient ventilation of the area. Do not handle in a confined space. Avoid the formation or spread of mists in the air.

Storage conditions: Store in cool, well ventilated area. Keep container tightly closed.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Hazardous ingredients: NITRIC ACID...100%
WEL (8 hr exposure limit): 5.2 mg/m³ WEL (15 min exposure limit): 10 mg/m³

- HYDROCHLORIC ACID...100%
WEL (15 min exposure limit): 7.6 mg/m³

Engineering measures: Ensure there is sufficient ventilation of the area.

Respiratory protection: Self-contained breathing apparatus must be available in case of emergency.

Hand protection: Impermeable gloves.

Eye protection: Tightly fitting safety goggles. Ensure eye bath is to hand.

Skin protection: Impermeable protective clothing.

9. PHYSICAL AND CHEMICAL PROPERTIES

State: Liquid

Colour: Dark brown

Odour: Pungent

Solubility in water: Soluble

Relative density: 1.13

10. STABILITY AND REACTIVITY

Stability: Stable under normal conditions.

Conditions to avoid: Heat.

Materials to avoid: Strong oxidising agents. Strong acids.

Haz. decomp. products: In combustion emits toxic fumes.

11. TOXICOLOGICAL INFORMATION

Routes of exposure: Refer to section 4 of SDS for routes of exposure and corresponding symptoms.

12. ECOLOGICAL INFORMATION

Mobility: Readily absorbed into soil.

Persistence and degradability: Biodegradable.

Bioaccumulative potential: No bioaccumulation potential.

Other adverse effects: Negligible ecotoxicity.

13. DISPOSAL CONSIDERATIONS

NB: The user's attention is drawn to the possible existence of regional or national regulations regarding disposal.

14. TRANSPORT INFORMATION

ADR / RID

UN no: 1760

ADR Class: 8

Packing group: II

Classification code: C9

Shipping name: CORROSIVE LIQUID, N.O.S.

Labelling: 8

Hazard ID no: 80



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IMDG / IMO

UN no: 1760	Class: 8
Packing group: II	EmS: F-A,S-B
Marine pollutant: .	Labelling: 8

IATA / ICAO

UN no: 1760	Class: 8
Packing group: II	Packing instructions: 808(P&CA); 812(CAO)
Labelling: 8	

15. REGULATORY INFORMATION**Hazard symbols:** Corrosive.

Risk phrases: R35: Causes severe burns.
R37: Irritating to respiratory system.
R41: Risk of serious damage to eyes.
R68/22: Harmful: possible risk of irreversible effects if swallowed.

Safety phrases: S23: Do not breathe fumes.
S26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S36/37/39: Wear suitable protective clothing, gloves and eye / face protection.
S45: In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
S53: Avoid exposure - obtain special instructions before use.

Note: The regulatory information given above only indicates the principal regulations specifically applicable to the product described in the safety data sheet. The user's attention is drawn to the possible existence of additional provisions which complete these regulations. Refer to all applicable national, international and local regulations or provisions.

16. OTHER INFORMATION

Risk phrases used in s.2: R8: Contact with combustible material may cause fire.
R35: Causes severe burns.
R34: Causes burns.
R37: Irritating to respiratory system.
R41: Risk of serious damage to eyes.
R68/22: Harmful: possible risk of irreversible effects if swallowed.

Legal disclaimer: The above information is believed to be correct but does not purport to be all inclusive and shall

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be used only as a guide. This company shall not be held liable for any damage resulting from handling or from contact with the above product.