

MATERIAL SAFETY DATA SHEET

Date Prepared: April 24, 2006
Supersedes: February 1, 2000
Prepared By: Compliance Office

01. Product and Manufacturer Identification

Product Name: LINDAX 5
Chemical Name: Diazabicyclo (5.4.0)undec-7-ene phenol salt, 1,8, (1:1)
Chemical Family: Amine
Manufacturer: Lindau Chemicals, Inc.
731 Rosewood Drive
Columbia, SC 29201
Phone: (803) 799-6863
Fax: (803) 256-3639

24 Hr. Emergency Telephone Number (800) 457-4280

02. Composition

| Product Name | CAS No | % | R-phrases |
|---|------------|-----|-----------------------------|
| Diazabicyclo (5.4.0) undec-7-ene phenol salt, 1,8, (1:1) | 57671-19-9 | >50 | C; R21/22, R34, R52, R53 |

03. Hazards Identification

Classification:

R52 Harmful to aquatic organisms.
R53 May cause long-term adverse effects in the aquatic environment.
R34 Causes burns.
R21/22 Harmful in contact with skin and if swallowed

Emergency Overview

Corrosive
Keep away from heat and sources of ignition.
Severe skin irritant
Severe eye irritant
Harmful if swallowed

Potential Health Effects

Inhalation Inhalation of aerosol may cause irritation to the upper respiratory tract. Can cause severe eye, skin and respiratory tract burns.

Eye contact Causes eye burns. May cause blindness. Severe eye irritation.

| | |
|------------------------------|---|
| Skin contact | Causes skin burns. |
| Ingestion | If ingested, severe burns of the mouth and throat, as well as a danger of perforation of the oesophagus and the stomach. Harmful if swallowed. |
| Chronic Health Hazard | This product contains no listed carcinogens according to Directive 67/548/EEC, IARC, ACGIH and/or NTP in concentrations of 0.1 percent or greater. Prolonged contact may result in chemical burns and permanent damage. |
| Aggravated Medical Condition | Eye disease Skin disorders and Allergies. Adverse skin effects (such as rash, irritation or corrosion). Adverse eye effects (such as conjunctivitis or corneal damage). |
| Target Organs | Skin Eyes |

04. First Aid Measures

- General Advice:** Seek medical advice. If breathing has stopped or is labored, give assisted respirations. Supplemental oxygen may be indicated. If the heart has stopped, trained personnel should begin cardiopulmonary resuscitation immediately.
- Eye Contact:** Rinse immediately with plenty of water also under eyelids for at least 20 minutes. Remove contact lens.
- Skin Contact:** Immediately remove contaminated clothing, and any extraneous chemical, if possible to do so without delay. Wash off immediately with plenty of water for at least 20 minutes. Cover wound with sterile dressing.
- Ingestion:** Prevent aspiration of vomit. Turn victim's head to the side.
- Inhalation:** Move to fresh air.

05. Fire-Fighting

Suitable extinguishing media: Ignition will give rise to a Class B fire. In case of large fire, use Water Spray or Alcohol Foam. In case of small fire, use Carbon Dioxide (CO₂) Dry Chemical, Dry Sand or limestone.

Hazardous Decomposition Products: May generate toxic or irritation combustion products. Contact of liquid with skin must be prevented. May generate carbon monoxide gas. May generate toxic nitrogen oxide gases. May generate ammonia gas. Personnel in vicinity and downwind should be evacuated.

Special Protective Equipment: A face shield should be worn. Firefighters should wear butyl rubber boots, gloves and body suit and a self-contained breathing apparatus. Retain expended liquids from fire fighting for later disposal.

06. Accidental Release

Containment Techniques: (Removal of ignition sources, diking etc). Stop the leak, if possible. Reduce vapor spreading with a water spray. Shut off or remove all ignition sources. Construct a dike to prevent spreading.

Clean-up Procedures: If recovery is not feasible, admix with dry soil, sand or non-reactive absorbent (sodium bisulfate) and place in a container or dumpster pending disposal. Transfer to containers by suction, preparatory for later disposal. Place in metal containers for recovery or disposal. Flush area with water spray. Clean-up personnel must be equipped with self-contained breathing apparatus and butyl rubber protective clothing. For large spills, recover spilled material with vacuum truck.

Wear protective clothing, boots, gloves and eye protection.

07. Handling and Storage

Storage: Keep away from acids, oxidizers. Keep in cool, dry ventilated storage and in closed containers. Store in steel containers preferably located outdoors, above ground, and surrounded by dikes to contain spills or leaks. Do not store in iron or other reactive metal containers.

Handling: Avoid contact with skin or eyes. When handling, do not eat, drink or smoke.

Other Precautions: Emergency showers and eye wash stations should be readily accessible.

08. Exposure Controls/Personal Protection

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|-----------------------------|---|
| Eye Protection | Full face shield with goggles underneath. |
| Hand Protection | Neoprene rubber gloves. Impermeable gloves. Cuffed butyl rubber gloves. Nitrile rubber gloves |
| Respiratory Protection | Not required under normal conditions in a well-ventilated workplace. |
| Protective Clothing | Impervious clothing. Slicker Suit. Rubber boots. Full rubber suit (rain gear). Butyl or latex protective clothing. |
| Work and Hygienic Practices | Provide readily accessible eye wash stations and safety showers. Wash at the end of each shift and before eating, smoking or using the toilet. Promptly remove clothing that becomes contaminated. Discard contaminated leather articles. |

09. Physical and Chemical Properties

| | |
|-------------------------------|--------------------|
| Physical Form | Mobile Liquid. |
| Color | Straw Yellow/Amber |
| Odor | Irritating |
| pH | Alkaline |
| Vapor Pressure (mm Hg @ 21°C) | 1.30 |
| Vapor Density (Air = 1) | No Data |
| Boiling Point | >100°C |
| Solubility in water | Completely (100%) |
| Molecular Weight | No Data |
| Flash Point (closed cup) | > 100°C |
| Specific Gravity (Water = 1) | 1.07 |

10. Stability and Reactivity

| | |
|----------------------------------|--|
| Stability | Stable under normal conditions |
| Materials to avoid | Dehydrating agents Organic acids (i.e. acetic acid, citric acid etc.). Mineral acids Product slowly corrodes copper, aluminum, zinc and galvanized surfaces. Reactive metals (e.g. sodium, calcium zinc etc.). Materials reactive with hydroxyl compounds. Oxidizing agents. |
| Hazardous Decomposition Products | Nitric acid Ammonia Nitrogen oxides (NO _x) Nitrogen oxide can react with water vapors to form corrosive nitric acid. Carbon monoxide Carbon dioxide (CO ₂) Aldehydes |

11. Toxicological Information

Acute Health Hazard

| | |
|--------------------------------------|---|
| Ingestion | LD50 : 1.160 mg/kg Species : Rat |
| Inhalation | No data is available on the product itself. |
| Skin | No data is available on the product itself. |
| Eye irritation/ corrosion | Severe eye irritation |
| Acute dermal Irritation/corrosion | Severe skin irritation |

12. Ecological Information:

Ecotoxicity effects

| | |
|-----------------------------|---|
| Aquatic toxicity | No data is available on the product itself. |
| Toxicity to other organisms | No data is available |

Persistence and degradability

| | |
|-----------------|---|
| Mobility | No data is available |
| Bioaccumulation | No data is available on the product itself. |

13. Disposal Considerations

Waste from residues/
unused products Contact supplier if guidance is required.

Contaminated packaging Dispose of container and unused contents in accordance with federal,
state and local requirements.

14. Transport Information:

ADR

| | |
|-----------------------|--|
| Proper shipping name | Amines, Liquid, Corrosive, N.O.S. (Amine salt) |
| Class | 8 |
| UN/ID No | UN2735 |
| Packing group | III |
| ADR/RID Hazard ID No. | 80 |

IATA:

| | |
|----------------------|--|
| Proper shipping name | Amines, Liquid, Corrosive, N.O.S. (Amine salt) |
| Class | 8 |
| UN/ID No | UN2735 |
| Packing group | III |

IMDG:

| | |
|----------------------|--|
| Proper shipping name | Amines, Liquid, Corrosive, N.O.S. (Amine salt) |
| Class | 8 |
| UN/ID No | UN2735 |
| Packing group | III |

RID:

| | |
|----------------------|--|
| Proper shipping name | Amines, Liquid, Corrosive, N.O.S. (Amine salt) |
| Class | 8 |
| UN/ID No | UN2735 |
| Packing group | III |

15. Regulatory Information

Labelling according to EEC Directive

Hazard symbol C Corrosive.

R-phrase(s) R52 Harmful to aquatic organisms
 R53 May cause long-term adverse effects in the aquatic environment
 R34 Causes burns
 R21,22 Harmful in contact with skin and if swallowed

S-phrase(s) 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.
 S61 Avoid release to the environment. Refer to special instructions/Safety data sheets.
 S45 In case of accident or if you feel unwell, seek medical advice immediately (show label where possible).

| Country | Regulatory List | Notification |
|-------------|-----------------|--|
| USA | TSCA | Included on Inventory. |
| EU | EINECS | Included on Inventory |
| Canada | DSL | Not on Inventory. Notifications have been submitted to Environment Canada. |
| Australia | AICS | Included on Inventory |
| Japan | ENCS | Included on Inventory |
| South Korea | ECL | Included on Inventory |
| China | SEPA | Included on Inventory |
| Philippines | PICCS | Included on Inventory |

Water hazard classification (WGK) 2- water endangering

16. Other Information

HMIS RATING

Health 3
 Flammability 1
 Reactivity 0

HAZARD RATING

4 = Severe
 3 = Serious
 2 = Moderate
 1 = Slight
 0 = Minimal

This product should be stored and used in accordance with good industrial hygiene practices and in conformity with any legal regulation. We believe all information is accurate. It is offered in good faith, but without guarantee. Since conditions of use are beyond our control, all risks of use are assumed by the user. Nothing herein shall be construed as a recommendation for uses which infringe valid patents or as extending a license under valid patents.