



SAFETY DATA SHEET

Issue Date 08-May-1998

Revision Date 01 September-2020

Version 2

1. PRODUCT AND COMPANY IDENTIFICATION

Product Identifier

Product Name LINDAX-5

Other Means of Identification

SDS # LC-066

Recommended Use of the Chemical and Restrictions on Use

Recommended Use Catalytic curing agent for epoxy resins

Details of the Supplier of the Safety Data Sheet

Supplier Address

Lindau Chemicals, Inc.
731 Rosewood Drive
Columbia, SC 29201

Emergency Telephone Number

Company Phone Number

Phone: 1-803-799-6863

Fax: 1-803-256-3639

Emergency Telephone

INFOTRAC 01-352-323-3500 (International)

1-800-457-4280 (North America)

2. HAZARDS IDENTIFICATION

Classification

Corrosive to Metals	Category 1
Skin Corrosion/Irritation	Category 1C
Serious Eye Damage/Eye Irritation	Category 1
Aquatic Hazard (Acute)	Category 3
Acute Toxicity: Oral	Category 4
Aquatic Hazard (Long-term)	Category 4

Signal Word

Danger

Hazard Statements

H290: May be corrosive to metals

H314: Causes severe skin burns and eye damage

H318: Causes serious eye damage

H402: Harmful to aquatic life

H302: Harmful if swallowed

H413: May cause long lasting harmful effects to aquatic life



Appearance Light yellow to amber liquid

Physical State Liquid

Odor Characteristic

Precautionary Statements - Prevention

P260: Do not breathe fumes, vapors or mists.

P264: Wash face, hands and any exposed skin thoroughly after handling.

P270: Do not eat, drink or smoke when using this product.

P273: Avoid release to the environment.

P280: Wear protective gloves, protective clothing and eye protection.

Precautionary Statements - Response

P301 + P330 + P331: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

P312: Call a POISON CENTER or doctor/physician if you feel unwell.

P305 + P351: IF IN EYES: Rinse cautiously with water for several minutes.

P338: Remove contact lenses, if present and easy to do. Continue rinsing.

P310: Immediately call a POISON CENTER or doctor/physician.

P303 + P361 + P353: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.

P363: Wash contaminated clothing before reuse.

P304 + P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P310: Immediately call a POISON CENTER or doctor/physician.

Precautionary Statements - Storage

P405: Store locked up.

Precautionary Statements - Disposal

P501: Dispose of contents/container in accordance with local, regional and national regulations.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Synonym Phenol, compound with 2,3,4,6,7,8,9,10-octahydropyrimido[1,2-a]azepine (1:1)

Formula C₁₅H₂₂N₂O

Chemical Name	CAS No	Weight-%
1,8-Diazabicyclo[5.4.0]undec-7-ene phenol salt (1:1)	57671-19-9	100

4. FIRST AID MEASURES

First Aid Measures

Inhalation	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Apply artificial respiration/oxygen if needed. Consult a doctor/physician.
Eye Contact	Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Get medical advice/attention.
Ingestion	Never give anything by mouth to an unconscious person. Rinse mouth with water. Do not induce vomiting. Consult a doctor/physician.
Skin Contact	Immediately remove contaminated clothing. Wash skin with plenty of soap and water for at least 20 minutes. If skin irritation or burn occurs, consult a doctor/physician. Wash all contaminated clothing before reuse.

Most Important Symptoms and Effects

Symptoms Causes burns and severe irritation of skin, eyes and other exposed tissue

Indication of any Immediate Medical Attention and Special Treatment Needed (if Necessary)

Note to Physician Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Extinguishing Media

Suitable Media Use CO₂, alcohol-resistant foam or dry chemical

Unsuitable Media Not determined

Specific Hazards Arising from the Chemical

Product may support combustion if exposed to fire. Combustion products may be toxic or irritating. Avoid contact of product with skin.

Hazardous Combustion Products Carbon monoxide, carbon dioxide, nitrogen oxides, ammonia

Special Protective Equipment for Fire-fighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Water spray may be used to keep containers cool.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures

Personal Precautions Wear protective clothing as described in Section 8 of this safety data sheet. Isolate hazard area. Keep unnecessary and unprotected personnel from entering area. Provide adequate ventilation. Avoid breathing fumes or vapors. Shut off or remove all ignition sources.

Environmental Precautions Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12 (Ecological Information) and Section 13 (Disposal Considerations) for additional information.

Methods and Materials for Containment and Cleaning Up

If possible, stop flow or leak of product. Contain spill with dike, isolate the hazard area and provide ventilation. Reduce the spreading of vapor with water spray. Absorb into inert absorbent material and shovel or transfer into suitable containers for later disposal. Dispose of in accordance with federal, state and local regulations. Flush spill area with water spray.

7. HANDLING AND STORAGE

Precautions for Safe Handling

Advice on Safe Handling Handle in accordance with good industrial hygiene and safety practice. Use personal protection recommended in Section 8. Avoid contact with skin, eyes or clothing. Wash face, hands, and any exposed skin thoroughly after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area.

General Hygiene Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should thoroughly wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for Safe Storage (Including any Incompatibilities)

Storage Conditions Keep container tightly closed and store upright in a cool, dry and well-ventilated place. Store locked up in steel containers within a confinement area. Avoid excessive temperatures. Keep product in original container. Do not store in containers made of reactive metal.

Incompatible Materials Strong oxidizing agents, strong acids, strong bases, reactive metals

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines

This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region-specific regulatory bodies.

Control Parameters

Engineering Controls Ensure adequate ventilation, especially in confined areas. Use mechanical ventilation. Local exhaust is required. Eyewash stations and showers should be accessible and functional.

Individual Protection Measures

Eye/Face Protection Safety glasses with side shields or chemical splash goggles

Skin and Body Protection Rubber, neoprene or other impervious gloves are recommended to prevent skin contact. Impervious long-sleeved shirts, pants without cuffs and work boots should be worn.

Respiratory Protection Ensure adequate ventilation, especially in confined areas. If natural ventilation is inadequate, local exhaust ventilation may be necessary.

General Hygiene Handle in accordance with good industrial hygiene and safety practice. Wash face, hands and any exposed skin thoroughly after handling. Do not eat, drink or smoke when using this product. Discard any clothing items made of leather that have been contaminated.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on Basic Physical and Chemical Properties

Physical State	Liquid		
Appearance	Light yellow to amber liquid	Odor	Characteristic
Color	Light yellow to amber	Odor Threshold	Not determined

<u>Property</u>	<u>Values</u>	<u>Remarks/Method</u>
pH	Not determined	(alkaline)
Melting Point	Not determined	
Boiling Point/Condensation point	280 °C (536 °F)	(ASTM D-86)
Flash Point	93–110 °C (200–230 °F)	(Tag closed cup)
Evaporation Rate	Not determined	
Flammability (Solid, Gas)	Not applicable	
Upper Flammability Limit	Not determined	
Lower Flammability Limit	Not determined	
Vapor Pressure	< 1.3 mm Hg	@ 21 °C (70 °F)
Relative Vapor Density	Not determined	
Specific Gravity	1.1	(water = 1) @ 25 °C (77 °F)
Water Solubility	Soluble	
Solubility in Other Solvents	Not determined	
Partition Coefficient (n-Octanol/Water)	No data available	
Auto-ignition Temperature	No data available	
Decomposition Temperature	No data available	
Kinematic Viscosity	No data available	
Dynamic Viscosity	No data available	
Explosive Properties	No data available	
Percent Volatile (By Volume%)	nil	

10. STABILITY AND REACTIVITY

Reactivity

Product can slowly corrode copper, aluminum, zinc and galvanized surfaces.

Chemical Stability

Stable under recommended storage conditions

Possibility of Hazardous Reactions

No data available

Hazardous Polymerization Hazardous polymerization does not occur.

Conditions to Avoid

Excessively high temperatures, storage in containers made of reactive metals

Incompatible materials

Strong oxidizing agents, strong acids, strong bases, reactive metals

Hazardous Decomposition Products

Carbon monoxide, carbon dioxide, nitrogen oxides, ammonia, nitric acid, aldehydes

11. TOXICOLOGICAL INFORMATION

Information on Likely Routes of Exposure

Inhalation Inhalation may cause respiratory tract and nasal irritation and burns.

Eye Contact Causes severe eye irritation and burns

Ingestion May be harmful if swallowed, with burns to the mouth and digestive tract

Skin Contact Causes severe skin irritation and burns

Information on Acute Toxicological Effects

Chemical Name	Oral LD50	Dermal LD50
1,8-Diazabicyclo[5.4.0]undec-7-ene phenol salt (1:1) 57671-19-9	1160 mg/kg (Rat)	> 2000 mg/kg (estimated) (Rabbit)

Information on Physical, Chemical and Toxicological Effects

Symptoms Please see Section 4 of this SDS for symptoms.

Delayed and Immediate Effects and also Chronic Effects from Short-term and Long-term Exposure

Carcinogenicity This product does not contain any carcinogens or potential carcinogens as listed by OSHA, IARC, ACGIH or NTP.

STOT – Single Exposure Not determined

Numerical Measures of Toxicity

Not determined

12. ECOLOGICAL INFORMATION

Ecotoxicity

This product is classified as being harmful to aquatic life, possibly with long-lasting harmful effects. Releases of this product to the environment are to be avoided.

Persistence/Degradability

Not determined

Bioaccumulation

Not determined

Mobility

Not determined

Other Adverse Effects

Not determined

13. DISPOSAL CONSIDERATIONS




Waste Treatment Methods

Disposal of Wastes	Disposal should be in accordance with applicable regional, national and local laws and regulations.
Contaminated Packaging	Disposal should be in accordance with applicable regional, national and local laws and regulations.

14. TRANSPORT INFORMATION

Shipping Name by Regulatory Entity

DOT	Amines, Liquid, Corrosive, n. o. s. (1,8-Diazabicyclo[5.4.0]undec-7-ene phenol salt (1:1))
IATA	Amines, Liquid, Corrosive, n. o. s. (1,8-Diazabicyclo[5.4.0]undec-7-ene phenol salt (1:1))
IMDG	Amines, Liquid, Corrosive, n. o. s. (1,8-Diazabicyclo[5.4.0]undec-7-ene phenol salt (1:1))

Regulatory Information	UN Number	Class	Packing Group	Label
DOT Classification	UN-2735	8	III	
IATA Classification	UN-2735	8	III	
IMDG Classification	UN-2735	8	III	

Note

Please see current shipping paper for most up-to-date shipping information, including exemptions and special circumstances.

15. REGULATORY INFORMATION

International Inventories

LISTED

TSCA, DSL/NDSL, ENCS, IECSC, KECI, PICCS, TCSI, AICS, NZIoC

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

KECI - Korea Existing Chemicals Inventory

PICCS - Philippines Inventory of Chemicals and Chemical Substances

TCSI - Taiwan Chemical Substance Inventory

AICS - Australian Inventory of Chemical Substances

NZIoC - New Zealand Inventory of Chemicals

United States Federal Regulations

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) of the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355).

SARA 302

No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

EPCRA

This product does not contain any chemicals with known CAS numbers that are subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-to-know Act of 1986 (40 CFR 372).

SARA 311/312 Hazards

Acute health hazard

United States State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals.

United States State Right-to-know Regulations

Chemical Name	New Jersey	Pennsylvania
1,8-Diazabicyclo[5.4.0]undec-7-ene phenol salt (1:1) 57671-19-9	X	X

16. OTHER INFORMATION

NEPA

Health Hazards

Not determined

Flammability

Not determined

Instability

Not determined

Special Hazards

Not determined

HMIS

Health Hazards

3

Flammability

1

Physical Hazards

0

Personal Protection

Not determined

Issue Date

08-May-1998

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01-September-2020

Revision Note

Reviewed/updated

GHS Version

2

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The 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, unless specified in the text.

End of Safety Data Sheet