

Product Name: POSISTRIP® EKC865™

Rev. A - Date Prepared: June 20, 1995



MATERIAL SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Identifier: POSISTRIP® EKC865™

General Use: Positive Photoresist Stripper

Product Description: Organic Solvent Blend

MANUFACTURER:

EKC Technology, Inc.
2520 Barrington Court
Hayward, CA 94545
(510) 784-9105

EMERGENCY TELEPHONE NUMBERS:

CHEMTREC (800)424-9300
24 Hours Everyday

2. COMPOSITION / INFORMATION ON INGREDIENTS

	<u>wt. %</u>	<u>CAS Registry #</u>
N-methyl Pyrrolidone	Proprietary	872-50-4
N-(2-Hydroxyethyl)-2-Pyrrolidone	Proprietary	3445-11-2

	<u>EXPOSURE LIMITS 8 hrs. TWA (ppm)</u>		
	<u>OSHA PEL</u>	<u>ACGIH TLV</u>	<u>OTHER</u>
N-Methyl Pyrrolidone	None	None	100 ppm(Supplier)
N-(2-Hydroxyethyl)-2-Pyrrolidone	None	None	None

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW:

Straw color liquid with an amine odor.

POTENTIAL HEALTH EFFECTS:

INHALATION:

The vapor may cause irritation to the upper respiratory tract.

EYE CONTACT:

Contact with this material may cause eye irritation.

SKIN CONTACT:

Contact with this material may cause skin irritation.

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FIRE FIGHTING INSTRUCTIONS:

Use water spray to cool containers and fire exposed surfaces. Shut off fuel to fire if possible to do so without hazard.

FIRE FIGHTING EQUIPMENT:

Wear full protective clothing with self-contained positive pressure breathing apparatus.

HAZARDOUS COMBUSTION PRODUCTS:

Carbon monoxide, Carbon dioxide, Nitrogen oxides.

6. ACCIDENTAL RELEASE MEASURES

SPILL OR LEAK PROCEDURES:

Evacuate area and keep personnel upwind. Cut off any source of ignition and ventilate the spill area. Dilute spills with water and contain spill with absorbent material. Transfer absorbent and other contaminated materials to a DOT approved covered container for disposal. Consult with appropriate regulatory agencies to determine acceptable clean-up levels. Comply with Federal, State and local regulations on reporting releases.

7. HANDLING AND STORAGE:

STORAGE TEMPERATURE:

Storage in a cool, dry, well-ventilated area at 40° - 90°F (5° - 32°C) is recommended.

GENERAL:

Keep in original tightly closed containers.
Keep away from strong oxidizing agents and acids.
Prevent skin and eye contact.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

PERSONAL PROTECTION:

RESPIRATORY PROTECTION:

No respiratory protection is required when this material is handled under proper ventilation, such as a wet bench or fume hood. If proper ventilation is not available, use a NIOSH approved full-face respirator with canisters or cartridges specifically approved for organic vapors. Whenever cartridges or canister respirators are used, ensure the frequent changing of the filter element. Use a supplied air respirator when in doubt of the atmospheric concentration. Consult 29 CFR 1910.134 regarding use of respirators.

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PROTECTIVE CLOTHING:

Take all precautions to prevent skin contact. Wear Nitrile or Latex clothing, gloves, and chemical resistant boots when there is a probability of liquid contact. Use chemical goggles or face shield.

9. PHYSICAL AND CHEMICAL PROPERTIES

Vapor Pressure: <1 mmHg @ 70°F (21°C)
Specific Gravity: 0.95 - 1.10 g/ml
Solubility in Water: Complete
pH: Not Available
Boiling Point: 395 - 563°F (202 - 295°C)

Vapor Density: Not Available
Evaporation Rate: <1 (Butyl Acetate = 1)
Freezing Point: Not available
Odor: Amine
Appearance: Straw color
Physical State: Liquid

10. STABILITY AND REACTIVITY

GENERAL:

This product is stable at normal temperatures and conditions of storage.

INCOMPATIBLE MATERIALS AND CONDITIONS TO AVOID:

Strong oxidizing agents, acids.

HAZARDOUS DECOMPOSITION:

Carbon monoxide, Nitrogen oxides.

HAZARDOUS POLYMERIZATION:

Will not normally occur.

11. TOXICOLOGICAL INFORMATION

DATA FOR POSISTRIP® EKC865™:

INHALATION:	LC ₅₀	No information available on this mixture.
INGESTION:	LD ₅₀	No information available on this mixture.
SKIN CONTACT:	LD ₅₀	No information available on this mixture.
EYE CONTACT:		No information available on this mixture.
GENOTOXICITY:		No information available on this mixture.

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DATA FOR N-METHYLPYRROLIDONE, A COMPONENT OF POSISTRIP® EKC865™:

INHALATION:	LC ₅₀ , rats: No information is available.
INGESTION:	LD ₅₀ , rats: 3914 mg/kg, slightly toxic.
SKIN CONTACT:	LD ₅₀ , rabbits: 8000 mg/kg, practically nontoxic. Irritating to skin.
EYE CONTACT:	Irritating to eyes.
GENOTOXICITY:	Did not cause mutations in bacterial cells in culture; caused chromosomal changes in yeast
TARGET ORGANS:	Skin, eyes, reproductive system, lungs, thymus, blood.
DEVELOPMENTAL TOXICITY:	Gavage study (rabbit, days 6-18 of gestation): NOAEL for maternal toxicity = 55 mg/kg LOAEL for maternal toxicity = 175 mg/kg NOAEL for developmental toxicity = 175 mg/kg LOAEL for developmental toxicity = 540 mg/kg (malformations and resorptions noted; no selective effect on the fetus). Dermal study (rat, days 6-15 of gestation): NOAEL for maternal toxicity = 237 mg/kg LOAEL for maternal toxicity = 750 mg/kg NOAEL for developmental toxicity = 237 mg/kg LOAEL for developmental toxicity = 750 mg/kg (embryotoxicity and malformations noted). Inhalation study (rat, 6 hr/day, days 6-15 of gestation): NOAEL for maternal and developmental toxicity = 0.36 mg/l (highest dose).
REPRODUCTION:	Dietary study (rat): NOAEL = 160 mg/kg LOAEL = 500 mg/kg (decreased fertility and fecundity, embryo- and fetotoxicity noted)
SUBCHRONIC:	Dietary study (13 weeks, dog): NOAEL = 250 mg/kg (highest dose tested) Inhalation study (6 hr/day for 90 days plus 4 week recovery, rat):

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(CONT.)

NOAEL = 1 mg/l

LOAEL = 3 mg/l

(respiratory irritation, decreased weight gain, and effects on testes noted)

Inhalation study (6 hr/day for 4 weeks plus 2 week recovery, rat):

NOAEL = 0.5 mg/l

LOAEL = 1.0 mg/l

(pulmonary edema and congestion, focal interstitial pneumonitis; hemorrhage, hypoplasia, and necrosis in hemopoietic cells; atrophy and necrosis in lymphoid tissues and the thymus noted)

CHRONIC:

TOXICITY:

Inhalation study (6 hr/day for 2 years, rat):

NOAEL = 0.4 mg/l (highest dose tested)

DATA FOR N-(2-HYDROXYETHYL)-2-PYRROLIDONE, A COMPONENT OF POSISTRIP® EKC865™:

EYE CONTACT: Slightly irritating to the rabbit eye

SKIN CONTACT: Not a primary irritant in rabbits or humans; not a sensitizer except in unusual cases of atopic individuals

INGESTION: LD₅₀, rats: >14,430 mg/kg, practically nontoxic

12. ECOLOGICAL INFORMATION.

No data are available for POSISTRIP® EKC865™. Data for the components are summarized below.

DATA FOR N-METHYLPYRROLIDONE, A COMPONENT OF POSISTRIP® EKC865™:

FATE: Potentially biodegradable under aerobic conditions. Expected to be highly mobile in soil. It may slowly volatilize from dry soil, but is not expected to significantly evaporate from moist soil or from water. It is not expected to significantly bioconcentrate in fish and aquatic organisms.

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13. DISPOSAL CONSIDERATIONS

DISPOSAL METHODS:

Consult 40 CFR, Parts 261 and 268 for guidance on disposal of this product. Incineration at a facility with appropriate permits or authorizations is the recommended method for disposal.

CONTAINER DISPOSAL:

Empty containers retain product residue. Observe all hazard precautions. Keep away from heat, sparks, and flames. Do not distribute, make available, or reuse empty containers except for storage and shipment of original product. Remove all hazardous product residue, and puncture or otherwise destroy empty containers before disposal. Consult 40 CFR 261 and 268 for guidance on disposal.

14. TRANSPORT INFORMATION

DOT, IMO/IMDG and ICAO/IATA

Proper Shipping Name: Not Regulated

Hazard Class: None

Identification Number: None

Packing Group: None

Labels Required: None

IMDG Page No.: None

15. REGULATORY INFORMATION

TSCA (Toxic Substance Control Act):

Components of this product are listed on the TSCA Inventory.

SARA TITLE III (Superfund Amendments and Reauthorization Act):

311/312 Hazard Categories

Acute, Chronic

313 This product contains N-Methylpyrrolidone which is subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 and of 40 CFR 372.

CERCLA (Comprehensive Response Compensation, and Liability Act):

NOT Reportable.

We recommend you contact local authorities to determine if there may be other local reporting requirements.

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16. OTHER INFORMATION

Because the health effects from exposure to POSISTRIP® EKC865™ have not been fully evaluated, exposure should be kept to the lowest level possible.

This material is for industrial use and should only be used under the supervision of a technically qualified individual.

Label Information:

NFPA Codes

Health - 1

Fire - 1

Reactivity - 0

Specific Hazard - None

REVISION SUMMARY:

Rev. A --Initial 16 Section MSDS.

Prepared by: Steven C. Dawson, CIH
Manager, Industrial Hygiene & Health

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