

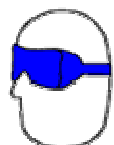
Microstrip® 2001

10/17/96

Safety	Chemistry	Management
Protective	Synonyms	Responsible
Toxicity	Incompatible	Manufacturer and Order Number
Health Effects	Structure	
PEL/TWA	Disposal	
NFPA	Hazardous Decomposition	
	Physical Data	

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Protective Equipment



Splash Goggles



Face Shield



Gloves



Boots



Protective Apron



Air Line Hood or Mask

Eyes

- Wear chemical safety goggles and full faceshield.

Skin

- Wear impervious gloves, boots, and apron.
- A full impermeable suit is recommended if exposure is possible to large portion of body.

Respiratory

- If vapors, mists, aerosols are generated, wear NIOSH/MSHA approved

Positive-pressure supplied-air respirator.

Special Precautions

- **Ventilation:**
 1. Use local exhaust ventilation.
- **Storage:**
 1. Store in a cool, dry place.
 2. Store away from all sources of ignition.
 3. Do Not store above 104°F (40°C)
 4. Shelf life - 2 years.

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Toxicity

Acute Toxicity Data

- Dermal-rabbit LD50: > 2g/kg
- Oral-rat LD50: approximately 4-5 gm/kg
- Irritation: causes burns to eyes and skin.

Acute Target Organ Toxicity

- This product is corrosive to all tissues contacted and upon inhalation, may cause irritation to mucous membranes and respiratory tract.

Chronic Target Organ Toxicity

- There are no known or reported effects from repeated exposure except those secondary to burns.
- N-Methyl Pyrrolidone has been shown to cause severe dermatitis in humans upon prolonged or repeated contact.

Reproductive and Developmental Toxicity

- There are no known or reported effects on reproductive function or fetal development from dermal or inhalation exposure to this product.
- Teratogenicity studies were performed in rats given n-methyl pyrrolidone by dermal application. There was no evidence of teratogenic effects not effects on the dams at 75 and 237 mg/kg of body weight.
- Dermal exposure produced embryoletality at dose levels close to the LD50. This can be attributed to maternal toxicity.
- Pregnant rats were exposed to n-methyl pyrrolidone at atmospheric

concentrations of 0.1 and 0.36 mg/l for 6 hours/day on days 6 through 15 of gestation. Exposure did not effect the outcome of pregnancy, fetal development or embryonic growth rate.

- Teratogenicity studies were performed in rats and mice given n-methyl pyrrolidone by oral and intraperitoneal routes of exposure. In these studies, evidence of embryotoxicity was observed at very high dose levels close to the LD50. The no-observable effect level (NOEL) for embryoletality was determined as 1054 mg/kg in the mouse (oral) and 332 mg/kg in the rat (oral). No maternal toxicity was noted in the oral studies. Oral and intraperitoneal administration are two unlikely routes of exposure during the industrial use of n-methyl pyrrolidone.

Carcinogenicity, Mutagenicity

- This product is not known or reported to be carcinogenic or mutagenic by any reference source including IARC, OSHA, NTP, EPA.

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Health

Effects:

- **Inhalation:**
 1. **Acute:** Inhalation of this material is irritating to the nose, mouth, throat and respiratory tract. It may also cause burns to the respiratory tract which can result in symptoms which may include coughing, wheezing, choking, shortness of breath, chest pain, and impairment of lung function. Inhalation of high concentrations can result in permanent lung damage and may produce central nervous system depression, characterized by: headache, giddiness, mental confusion and nausea.
 2. **Chronic:** Chronic inhalation may cause impairment of lung function and permanent lung damage.
- **Skin:**
 1. **Acute:** Dermal exposure can cause severe irritation and/or burns characterized by redness, swelling and scab formation. Prolonged skin exposure may cause permanent damage.
 2. **Chronic:** Repeated dermal exposure may cause tissue destruction due to the corrosive nature of the product. Prolonged or repeated skin contact causes severe dermatitis and defatting of the skin.
- **Eyes:**
 1. Severe irritation and/or burns can occur following exposure. Direct contact may cause impairment of vision and corneal damage.
- **Ingestion:**

1. **Acute:** Irritation and/or burns can occur to the entire gastrointestinal tract, including the stomach and intestines, characterized by nausea, vomiting, diarrhea, abdominal pain, bleeding and/or tissue ulceration. Ingestion causes severe damage to the gastrointestinal tract with the potential to cause perforation.
 2. **Chronic:** There are no known or repeated effects from chronic exposure. Chronic ingestion of significant
- **Medical Conditions Aggravated by Exposure:** Asthma and other respiratory diseases. Skin contact may aggravate an existing skin condition such as dermatitis.

First Aid:

- **Inhalation:** If person experiences nausea, headache or dizziness, person should stop work immediately and move to fresh air until these symptoms disappear. If breathing is difficult, administer oxygen, keep the person warm and at rest. Call a physician. In the event that an individual inhales enough product to lose consciousness, person should be moved to fresh air at once and a physician should be called immediately. If breathing has stopped, artificial respiration should be given immediately. In all cases, ensure adequate ventilation and provide respiratory protection before the person returns to work.
- **Skin:** Immediately flush with water for at least 15 minutes. Call a physician. If clothing comes in contact with the product, the clothing should be removed immediately and should be laundered before re-use.
- **Eyes:** Immediately flush with large amounts of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Call physician at once.
- **Ingestion:** Immediately drink large quantities of water. Do not induce vomiting. Call a physician at once. Do not give anything by mouth if the person is unconscious or if having convulsions.

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PEL/TWA

PEL

- Information not given by the manufacturer.

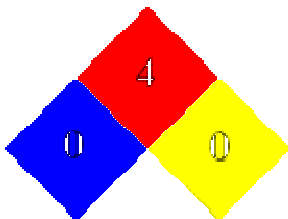
TWA

- **TWA 8-hr.** 10ppm (Olin recommended interim internal exposure standard)

Fire Hazard Data

- **Flash point:** 210°F (99°C)
- **Lower Explosion Limits:** **lower-** 0.9% **upper-** 11-7%
- **Extinguishing Media:** Carbon dioxide, dry chemical, water spray, alcohol resistant foam.
- **Special Fire-Fighting Procedures:** Use water to cool containers exposure to fire.
- **Unusual Hazards:** Pressure may build up in closed containers. This is accelerated by heat with possible liberation of combustible vapors.

NFPA: No information given by the manufacturer.



HMIS:

- **Health:** 0
- **Flammability:** 4
- **Reactivity:** 0

Synonyms

- None given by the manufacturer.

Incompatibles

- Oxidizers
- Acids
- Nitrosating agents

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Structure

- **Ingredients:**
 1. N-Methyl Pyrrolidone 45-55% (CAS# 872-50-4)
 2. 2-(2-Aminoethoxy)ethanol 40-55% (CAS# 929-06-6)

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Disposal

Spill Procedures:

- Evacuation procedures must be placed into effect.
- Evacuate all non-essential personnel.
- Hazardous concentrations in air may be found in local spill area and immediately downwind.
- Remove all sources of ignition.
- Stop source of spill as soon as possible and notify appropriate personnel.
 1. **Air Release:** Vapors may be suppressed by the use of water fog or spray. Contain all liquid for treatment and/or disposal as a (potential) hazardous waste.
 2. **Water Release:** This material is heavier than and miscible with water. Notify all downstream users of possible contamination. Divert water flow around spill if possible and safe to do so. If unable to divert, create an overflow dam to contain material. Continue to handle as described in land spill.
 3. **Land Spill:** Create a dike or trench to contain materials. Spill materials may be absorbed using sand, clay, or non-combustible absorbent. Do not place spill materials back in their original containers. Containerize and label all spill materials properly. Decontaminate all clothing and the spill area using a soap solution and flush with large amounts of water.

Disposal:

- If this product becomes a waste, it meets the criteria of a hazardous waste

as defined under 40 CFR 261 and would have the following EPA hazardous waste number: D002.

- If this product becomes a waste, it will be a hazardous waste which is subject to the Land Disposal Restrictions under 40 CFR 268 and must be managed accordingly.
- As a hazardous liquid waste, it must be disposed of in accordance with local, state, and federal regulations in a permitted hazardous waste treatment, storage and disposal facility by incineration.
- Care must be taken to prevent environmental contamination from the use of this material. This user of this material has the responsibility to dispose of unused material, residues and containers in compliance with all relevant local, state, and federal laws and regulations regarding treatment, storage and disposal for hazardous and non-hazardous wastes.
- The components of this product are listed on the **Toxic Substance Control Act** inventory.
- **SARA Title III Health:** immediate(acute), Physical: none

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Hazardous Decomposition

- Carbon Dioxide
- Carbon Dioxide
- Ammonia
- Nitrogen Oxides

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Physical Data

- Boiling range: no data
- Specific Gravity: 1.03-1.05
- Vapor Density: 3-4
- Solubility in H₂O: miscible
- Evaporation rate: slower than ether
- Vapor Pressure: 2-Ethoxyethyl Acetate: 8 mm (at 25°C)
- % Volatile/Volume: 100%
- Appearance: light, tan liquid
- Odor: ammonia-like

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Manufacturer

Olin Corporation

501 Merritt 7

P.O. Box 4500

Norwalk, CT 06856-4500

Product Code: HPE843987

MSDS #: HPE00791.0010

Phone #: (800) 511-MSDS

Emergency Phone: (800) OLIN-911

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