



# Material Safety Data Sheet

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## 1. PRODUCT AND COMPANY IDENTIFICATION

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### MICROPOSIT(TM) Remover 1165

Revision date: 11/29/2004

**Supplier**

Rohm and Haas Electronic Materials LLC  
455 Forest Street  
Marlborough, MA 01752 United States of America

**For non-emergency information contact:** 508-481-7950

**Emergency telephone number**

Chemtrec 800-424-9300  
Rohm and Haas Emergency 215-592-3000

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## 2. COMPOSITION/INFORMATION ON INGREDIENTS

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| Component                | CAS-No.  | Concentration |
|--------------------------|----------|---------------|
| 1-methyl-2-pyrrolidinone | 872-50-4 | 94.0 - 95.0 % |
| Pyrrolidinone Compound   |          | 5.0 - 6.0 %   |

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## 3. HAZARDS IDENTIFICATION

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**Emergency Overview**

**Appearance**

Form liquid  
Colour Natural, slightly white  
Odour amines

**Hazard Summary**

**CAUTION!**

Combustible liquid and vapor. Causes irritation to eyes, nose, and respiratory tract.  
Prolonged, repeated contact with skin may cause drying, defatting, or dermatitis.

**Potential Health Effects**

**Primary Routes of Entry:** Inhalation, ingestion, eye and skin contact.

**Eyes:** May cause pain, transient irritation and superficial corneal effects.

**Skin:** Material may cause irritation.

**Ingestion:** Swallowing may have the following effects:  
irritation of mouth, throat and digestive tract

**Inhalation:** Inhalation may have the following effects:  
irritation of nose, throat and respiratory tract

**Target Organs:** Eye  
Respiratory System  
Skin

**Carcinogenicity**  
Not considered carcinogenic by NTP, IARC, and OSHA

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#### 4. FIRST AID MEASURES

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**Inhalation:** Remove from exposure. If there is difficulty in breathing, give oxygen. Seek medical attention if symptoms persist.

**Skin contact:** Wash skin with water. Continue washing for at least 15 minutes. Obtain medical attention if blistering occurs or redness persists.

**Eye contact:** Immediately flush the eye with plenty of water for at least 15 minutes, holding the eye open. Obtain medical attention if soreness or redness persists.

**Ingestion:** Wash out mouth with water. Have victim drink 1-3 glasses of water to dilute stomach contents. Induce vomiting if person is conscious. Immediate medical attention is required. Never administer anything by mouth if a victim is losing consciousness, is unconscious or is convulsing.

**Notes to physician**

Treat symptomatically.

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#### 5. FIRE-FIGHTING MEASURES

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**Flash point** 88 °C (190 °F)

**Suitable extinguishing media:** Use water spray, foam, dry chemical or carbon dioxide.  
Keep containers and surroundings cool with water spray.

**Specific hazards during fire fighting:** This product may give rise to hazardous vapors in a fire. Vapors can travel a considerable distance to a source of ignition and result in flashback.

**Special protective equipment for fire-fighters:** Wear full protective clothing and self-contained breathing apparatus.

**Further information:** Pressure may build up in closed containers with possible liberation of combustible vapors.

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## 6. ACCIDENTAL RELEASE MEASURES

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### Personal precautions

Wear suitable protective clothing.  
Wear respiratory protection.  
Eliminate all ignition sources.

### Environmental precautions

Prevent the material from entering drains or water courses.  
Do not discharge directly to a water source.  
Advise Authorities if spillage has entered watercourse or sewer or has contaminated soil or vegetation.

### Methods for cleaning up

Contain spills immediately with inert materials (e.g., sand, earth).  
Transfer into suitable containers for recovery or disposal.  
Finally flush area with plenty of water.

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## 7. HANDLING AND STORAGE

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### Handling

Use local exhaust ventilation. Avoid contact with eyes, skin and clothing. Keep container tightly closed.

**Further information on storage conditions:** Keep away from heat, sparks, flame, and other sources of ignition. Practice good personal hygiene to prevent accidental exposure.

### Storage

**Storage conditions:** Store in original container. Keep away from heat and sources of ignition. Storage area should be: cool dry well ventilated out of direct sunlight

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## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

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### Exposure limit(s)

Exposure limits are listed below, if they exist.

| Component                | Regulation    | Type of listing   | Value  |
|--------------------------|---------------|-------------------|--------|
| 1-methyl-2-pyrrolidinone | Rohm and Haas | TWA               | 10 ppm |
|                          | Rohm and Haas | STEL              | 25 ppm |
|                          | Rohm and Haas | Absorbed via skin |        |

**Eye protection:** goggles

**Hand protection:** Butyl rubber gloves. Other chemical resistant gloves may be recommended by your safety professional.

**Skin and body protection:** Normal work wear.

**Respiratory protection:** Respiratory protection if there is a risk of exposure to high vapor concentrations. The specific respirator selected must be based on the airborne concentration found in the workplace and must not exceed the working limits of the respirator.

**Engineering measures:** Engineering methods to prevent or control exposure are preferred. Methods include process or personnel enclosure, mechanical ventilation (local exhaust), and control of process conditions.

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## 9. PHYSICAL AND CHEMICAL PROPERTIES

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|                                |                         |
|--------------------------------|-------------------------|
| <b>Appearance</b>              |                         |
| <b>Form</b>                    | liquid                  |
| <b>Colour</b>                  | Natural, slightly white |
| <b>Odour</b>                   | amines                  |
| <b>pH</b>                      | not applicable          |
| <b>Boiling point/range</b>     | 202 °C (396 °F)         |
| <b>Flash point</b>             | 88 °C (190 °F)          |
| <b>Relative vapour density</b> | Heavier than air.       |
| <b>Water solubility</b>        | completely soluble      |
| <b>Relative density</b>        | 1.03                    |
| <b>Evaporation rate</b>        | Slower than ether       |
| <b>VOC's</b>                   | 1,030 g/l               |

NOTE: The physical data presented above are typical values and should not be construed as a specification.

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## 10. STABILITY AND REACTIVITY

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|   |   |
|---|---|
| <b>Hazardous reactions</b>              | Stable under normal conditions.                         |
| <b>Conditions to avoid</b>              | High temperatures Static discharge                      |
| <b>Materials to avoid</b>               | Reducing agents Oxidizing agents acids                  |
| <b>Hazardous decomposition products</b> | Carbon monoxide, carbon dioxide, nitrogen oxides (NOx), |
| <b>polymerization</b>                   | Will not occur.   |

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## 11. TOXICOLOGICAL INFORMATION

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*Toxicological information on this product or its components appear in this section when such data is available.*

Component: **1-methyl-2-pyrrolidinone**

**Acute oral toxicity** LD50 guinea pig 1,400 mg/kg

Component: **1-methyl-2-pyrrolidinone**

**Acute oral toxicity** LD50 rat 3,914 mg/kg

Component: **1-methyl-2-pyrrolidinone**

**Acute dermal toxicity** LD50 guinea pig > 2,000 mg/kg

Component: **1-methyl-2-pyrrolidinone**

**Acute dermal toxicity** LD50 rabbit 8,000 mg/kg

Component: **1-methyl-2-pyrrolidinone**

**Subchronic toxicity** In a 2 year inhalation study, NMP did not cause any life-shortening or carcinogenic effects in rats at 0.04 or 0.4 mg/l (10 and 100 ppm respectively).

Component: **1-methyl-2-pyrrolidinone**

**Toxicity to reproduction**

Several inhalation studies in rats did not reveal any indication of maternal or embryo toxicity.

Component: **1-methyl-2-pyrrolidinone**

**Mutagenicity**

Not mutagenic when tested in bacterial or mammalian systems.

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## 12. ECOLOGICAL INFORMATION

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*Ecotoxicological information on this product or its components appear in this section when such data is available.*

**1-methyl-2-pyrrolidinone**

**Ecotoxicity effects**

**Toxicity to fish** LC50 Bluegill sunfish 96 h  
832 ppm

**Toxicity to algae** EC50 Algae 72 h  
>500 ppm

**Toxicity to aquatic invertebrates** EC50 Daphnia magna 48 h  
4897 ppm

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## 13. DISPOSAL CONSIDERATIONS

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**Environmental precautions:** Prevent the material from entering drains or water courses.

Do not discharge directly to a water source.

Advise Authorities if spillage has entered watercourse or sewer or has contaminated soil or vegetation.

**Disposal**

Dispose in accordance with all local, state (provincial), and federal regulations. Incineration is the recommended method of disposal for containers. Under RCRA, it is the responsibility of the product's user to determine at the time of disposal, whether the product meets RCRA criteria for hazardous waste. This is because the product uses, transformations, mixtures, processes, etc. may render the resulting materials hazardous.

Do not remove label until container is thoroughly cleaned. Empty containers may contain hazardous residues. This material and its container must be disposed of in a safe way.

**14. TRANSPORT INFORMATION****DOT**

Not regulated for transport

**IMO/IMDG**

Not regulated (Not dangerous for transport)

*Transportation classifications may vary by container volume and may be influenced by regional or country variations in regulations*

**15. REGULATORY INFORMATION**

**SARA TITLE III: Section 311/312 Categorizations (40CFR370):** Immediate (acute) Health Hazard  
Fire Hazard

**SARA TITLE III: Section 313 Information (40CFR372)**

This product contains a chemical which is listed in Section 313 at or above de minimis concentrations.  
SARA Title III Components: Methyl pyrrolidone 872-50-4

**US. Toxic Substances Control Act (TSCA) Section 12(b) Export Notification (40 CFR 707, Subpt D):**

US. Toxic Substances Control Act (TSCA) Section 12(b) Export Notification (40 CFR 707, Subpt D)  
This product does not contain any substances subject to Section 12(b) export notification.

**US. Toxic Substances Control Act (TSCA)** All components of this product are in compliance with the inventory listing requirements of the U.S. Toxic Substances Control Act (TSCA) Chemical Substance Inventory.

**California (Proposition 65)**

This product contains a component or components known to the state of California to cause cancer and/or reproductive harm.

Components: 1-methyl-2-pyrrolidinone 872-50-4

**16. OTHER INFORMATION****Hazard Rating**

|             | Health | Fire | Reactivity |
|-------------|--------|------|------------|
| <b>NFPA</b> | 1      | 2    | 0          |

**Legend**

|       |   |
|-------|---|
| ACGIH | American Conference of Governmental Industrial Hygienists |
| BAC   | Butyl acetate   |

|      |   |
|------|---|
| OSHA | Occupational Safety and Health Administration |
| PEL  | Permissible Exposure Limit                    |
| STEL | Short Term Exposure Limit (STEL):             |
| TLV  | Threshold Limit Value                         |
| TWA  | Time Weighted Average (TWA):                  |
|      | Bar denotes a revision from prior MSDS.       |

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 guidance 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.

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