



**MICROCHROME TECHNOLOGY, INC.**  
PRODUCTS FOR MICROPHOTOLITHOGRAPHY

## Material Safety Data Sheet

### Section 1 – Chemical Product and Company Identification

MSDS Name: **PPD-450 – Positive Photoresist Developer**

**Company Identification:**

Microchrome Technology, Inc.

4835 Longley Lane

Reno, Nevada 89502

[www.microchrometechnology.com](http://www.microchrometechnology.com)

For information in the US, call (775) 826-4949

For emergencies in the U.S., call CHEMTREC at 1-800-424-9300

### Section 2 – Composition, Information on Ingredients

- A. CAS # 1310-58-3 – Potassium Hydroxide – 2%
- B. CAS # 7757-83-7 – Sodium Sulfite – 3%
- C. Other Non-Hazardous Raw Materials – 95%

### Section 3 – Physical / Chemical Characteristics & Hazards Identification

**Boiling Point:** 212 F

**Vapor Pressure (mm Hg.):** @20 degrees Celsius – 18mm Hg

**Vapor Density (AIR=1):** @20 degrees Celsius – 1g/cm

**Solubility in Water:** Fully Soluble

**Appearance & Odor:** Colorless, No odor.

**pH:** Not available

**Evaporation rate:** Not available

**Viscosity:** Not available

**Specific Gravity:** 1.079

## Section 4 – Health Hazard Data and First Aid Measures

### EMERGENCY OVERVIEW – Mild Alkaline Solution

Caution! The toxicological properties of this product have not been fully investigated. May cause eye, skin, gastrointestinal and respiratory tract irritation.

#### Potential Health Effects & First Aid Measures

- A. Eye – May cause eye irritation. If contact w/ eye occurs, flush affected eye with running water for 10-15 minutes. If irritation persists, consult a physician immediately.
- B. Skin – May cause significant skin irritation or dermatitis (blotching, redness). If contact occurs on skin, remove any contaminated clothing first, flush affected body part/area with plenty of water. If skin begins to burn, seek emergency medical attention immediately. Wash clothing before reuse.
- C. Ingestion – May cause severe digestive tract disturbances. Do not induce vomiting. Call emergency medical services or consult a doctor immediately. If victim is conscious and alert, drink large amounts of water or milk to dilute chemical effects. Never give anything by mouth to an unconscious person.
- D. Inhalation – May cause respiratory tract irritation. If dizziness, blurred vision or faint feeling occurs, supply fresh air. If a problem persists, consult a doctor immediately. If victim not breathing, initiate CPR.
- E. Chronic – No information found.

## Section 5 – Fire Fighting Measures and Explosion Hazard Data

**General Information:** As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion.

**Extinguishing Media:** In case of fire, use water, dry chemical, chemical foam, or alcohol resistant foam.

**Flash Point:** not applicable, chemical is non-flammable.

**NFPA Rating:** Health: 1; Flammability: 0; Instability: 0 (estimated)

## Section 6 – Accidental Release Measure – Spills & Leaks

**General Information:** Use proper personal protective equipment as outlined in section 8.

**Spills / Leaks:** Absorb spill with inert material (e.g. vermiculite, sand or earth), and then place in suitable container. Wear goggles, rubber boots, gloves and an acid-protecting smock. Contain a spill by diking/absorbing the spill. Do not allow spill to enter sewage system, ground and city water. Clean up spill immediately. Observe all PPE precautions and provide adequate ventilation to spill area

## Section 7 - Handling and Storage

**Handling:** Wash hands thoroughly after handling. Remove any contaminated clothing and wash before reuse. Use with adequate ventilation. Avoid contact with eyes, skin, and clothing. Always keep containers tightly closed. Avoid ingestion and inhalation.

**Storage:** Keep container closed when not in use. Store in a cool, dry, well-ventilated area away from any incompatible substances. Prevent exposure to high temperatures or freezing.

## Section 8 – Exposure Controls & Personal Protection

**Engineering Controls:** Facilities storing or utilizing this material should be equipped with an eyewash station and a safety shower. Use process enclosure, local exhaust ventilation, or other engineering controls to control airborne levels.

**Personal Protective Equipment (PPE):**

- A. **Eyes** – Wear appropriate eyeglasses or chemical safety goggles. Tightly sealed around face.
- B. **Skin** – Wear appropriate gloves to prevent skin exposure. Acid resistant.
- C. **Clothing** – Wear appropriate clothing to prevent skin exposure. Acid resistant.
- D. **Respirators** – Always use a NIOSH approved respirator when necessary.

## Section 9 - Reactivity and Stability Data

**Chemical Stability:** Stable under normal temperatures and pressures.

**Reactivity & Conditions to Avoid:** Excess heat, Avoid boiling of product! Do not mix with strong acids.

Sodium Sulfide and/or Sulfur Dioxide maybe given off at high temperatures.

## Section 10 – Disposal Considerations

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

## Section 11 – Additional Information and Disclaimer

**MSDS Creation Date: 10-01-2003**

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall Microchrome Technology, Inc. be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if Microchrome Technology, Inc. has been advised of the possibility of such damages.