



**RBP Chemical Technology, Inc.**

150 S. 118th ST. • P.O. Box 14069  
Milwaukee, WI 53214-0069  
www.rbpchemical.com  
corporate: 800-558-0747  
fax: 414-258-7908

## Product Data Sheet

Date: 02/26/02  
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**PRODUCT #: N9932**

# ***SUMP DOCTOR***

Equipment Cleaner

### ***DESCRIPTION:***

A liquid concentrate designed to clean and condition resist developing and resist stripping machines. It has an increased capability to remove stubborn dye and antifoam residues, and other insoluble materials, along with residues from dry film photoresists and solder masks. A regular maintenance program using ***SUMP DOCTOR*** will insure maximum efficiency from equipment, consistent high quality product and minimal downtime.

### ***BENEFITS:***

- **Fast-acting on deposits**
- **Simplified maintenance saves hours of down-time**
- **Helps remove antifoam residues and dyes**

### ***SPECIFICATIONS:***

<b>Density:</b>	1.16 gm/ml, 9.6 lbs./gal.
<b>pH (10% solution) :</b>	10.0
<b>Flash Point (TCC):</b>	None
<b>Appearance:</b>	Colorless to light yellow liquid
<b>Shelf life:</b>	Indefinite

### ***INSTRUCTIONS:***

***SUMP DOCTOR*** is used at 15% concentration for first time use. With regular cleaning, more dilute solutions (10%) can be used. ***SUMP DOCTOR*** should be used regularly for maximum effectiveness. Fill machine sump to normal working level or slightly above. Allow the solution to circulate in the machine for approximately 90 minutes at 100°-120°F. The degree of contamination will determine the time and temperature necessary to clean the equipment. Drain solution and rinse. ***SUMP DOCTOR*** solution is compatible with resist stripping and developing solutions, so it is usually not necessary to neutralize after cleaning. If an acid rinse is desired, it should be done after treatment with ***SUMP DOCTOR***.

### ***CAUTIONS:***

***SUMP DOCTOR*** is alkaline; avoid contact with skin and eyes. Goggles or glasses and gloves should be worn when handling this product. In case of contact with eyes, flush with water for at least 15 minutes and obtain medical assistance. For skin contact, rinse immediately with water. Refer to Material Safety Data Sheet for further information.

### ***DISPOSAL:***

Refer to waste treatment information on the reverse side.

## ***SUMP DOCTOR* Waste Treatment**

Before waste treating a spent solution, it is important to determine if the solution needs to be treated and which materials you are treating for. The following information should help make that determination.

***SUMP DOCTOR*** contains a metal chelating agent; therefore, it should be segregated from waste streams found to be incompatible with metal chelating agents. ***SUMP DOCTOR*** should be treated in a tank or container into which the solution is pumped; it should not be treated in the sump of the machine.

Our analysis of spent ***SUMP DOCTOR*** indicates that it contains suspended film residue, ink solids, and metals within the following ranges:

### **Typical Spent *SUMP DOCTOR***

15-40 PPM Copper  
20-50 PPM Lead  
10-30 PPM Tin  
0.3-0.5% Solids

### **Procedure for Batch Treatment of *SUMP DOCTOR***

#### **Removal of Solids\***

1. Lower pH of spent solution to 3.0 with 10-20% sulfuric acid.
2. Allow to settle; decant solution.

#### **Removal of Metals and Solids\***

1. Lower pH of spent solution to 3.0 with 10-20% sulfuric acid.
2. Add, with mixing, approximately 10mls per gallon of ***CHEMTREAT 5000*** (sodium dimethyldithiocarbamate) to the solution.
3. Allow to settle; decant solution.

\* A large amount of flocculent from the product may precipitate out if the pH drops below 3.0.

This product should be used only for its intended purpose. The information stated above is based on our laboratory tests and experience, and is accurate to the best of our knowledge. Since actual use is beyond our control, the recommendations or suggestions are made without warranty, expressed or implied.