

**WST****PRODUCT INFORMATION****WATER SPECIALISTS TECHNOLOGIES LLC**

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**TR-50 PRECIPITANT**

TR-50 is a proprietary formulation designed as a non-toxic precipitant of heavy metals from industrial process wastewaters, including metals from chelated/complexed environments. It is a powerful replacement for commonly used toxic DTC/carbamate-type products. When compared to such products, tests show that TR-50 has twice the precipitating activity at a similar dosage.

**PRINCIPAL USES:**

TR-50 has been formulated to remove heavy metals from industrial process waters including effluents of plating baths, etching solutions, and rinses containing soluble metals. TR-50 will reduce the concentration of the following metals to acceptable levels within regulatory requirements: AG, AU, CD, CO, CU, FE, HG, MN, NI, PB, and ZN.

**PHYSICAL DATA:**

APPEARANCE:	Red Liquid
ODOR:	Slight
SPECIFIC GRAVITY:	1.140 – 1.150
PH	12.0 – 12.5

**HANDLING AND STORAGE:**

As with any chemical, this product should be handled with reasonable care. See the Material Safety Data Sheet for complete handling information. Avoid contact with skin, eyes and clothing. Do not take internally.

**DOSAGE:**

Bench scale jar testing will help determine the optimum dosage. Ask for our information bulletin on performing such testing. To optimize the dosage, oxidizers present in solution must be destroyed (reduced) prior to dosing TR-50. In full-scale installations, the dosing of TR-50 is most efficiently accomplished with an automatic feed control system. Your Water Specialists representative will make dosage recommendations to apply to your application.

**FEEDING:**

Adjust the solution pH to above 8.0 prior to adding TR-50. The metal precipitation reaction is almost instantaneous. For some applications, the addition of an iron coagulant (ferrous sulfate or ferric chloride) will help the coagulation and clarification operations.

**TECHNICAL ASSISTANCE:**

Your Water Specialists representative is available to assist you with any water treatment problems that may arise.

04/03

# MATERIAL SAFETY DATA SHEET

DATE OF ISSUE: 3/17/00  
 DATE OF LATEST REVISION: 9/22/06  
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## SECTION 1: PRODUCT and COMPANY IDENTIFICATION

**PRODUCT NAME:** TR-50  
**PRIMARY FUNCTION:** Precipitation  
**CHEMICAL FAMILY:** Organic Sulfur  
**CHEMICAL NAME:** Hydropholysulfide, carbonothioyl/bis-, disodium salt

**MANUFACTURER:**  
 WATER SPECIALISTS TECHNOLOGIES LLC  
 1515 KASTNER PLACE  
 SANFORD, FL 32771 USA  
 PHONE: 407-321-7910 FAX: 407-321-3098

**EMERGENCY 24/7 CONTACT:**  
 CHEMTREC PHONE: 1-800-424-9300

## SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS

<u>INGREDIENT</u>	<u>(CAS #)</u>	<u>%WT</u>	<u>OSHA PEL</u>	<u>ACGIH TLV</u>	<u>OTHER</u>
Hydropholysulfide, carbonothioyl/bis	128578-22-3				

Other components may be blended in this formulation. The precise composition is proprietary. Bona fide requests for disclosure to medical personnel must be made in accordance with the procedures in 29 CFR 1910.1200(i) 1-13. While this material is not classified as hazardous under OSHA regulations, this MSDS contains valuable information critical to the safe handling and proper use of the product. This MSDS should be retained and available for employees and other users of this product.

## SECTION 3: HAZARDS IDENTIFICATION

**EYES:** May cause irritation and redness and burning. Flush eyes gently with water for at least 15 minutes while holding eyelids apart. Seek medical attention immediately.  
**SKIN:** May cause irritation and burns. Remove contaminated clothing and shoes and flush affected area with water for at least 15 minutes. Wash with soap and water. If irritation persists seek medical attention. Wash or discard contaminated clothing and shoes.  
**INGESTION:** Immediately rinse mouth with water. Do not induce vomiting. Drink milk or water to dilute. If vomiting occurs, drink more liquids. Seek medical attention.  
**INHALATION:** Mist or spray may cause irritation if inhaled. If respiratory distress occurs, get into fresh air and, if needed, administer oxygen and start CPR. Seek medical attention.  
**CHRONIC EFFECTS AND MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE:** irritation to respiratory passages.  
**SPECIAL NOTE:** The components in this product are not considered a carcinogen by OSHA, NTP or IARC.

## SECTION 4: FIRST AID MEASURES

**EYES:** Flush eyes gently with water for at least 15 minutes while holding eyelids apart. Seek medical attention.  
**SKIN:** Remove contaminated clothing and shoes and flush affected area with water for at least 15 minutes. Wash with soap and water. If irritation persists seek medical attention. Wash or discard contaminated clothing and shoes  
**INGESTION:** Immediately rinse mouth with water. Do not induce vomiting. Drink milk or water to dilute. If vomiting occurs, drink more liquids. Seek medical attention  
**INHALATION:** If respiratory distress occurs, get into fresh air and, if needed, administer oxygen and start CPR. Seek medical attention.

## SECTION 5: FIRE FIGHTING MEASURES

**FLASH POINT:** Not Applicable - water solution  
**EXTINGUISHING MEDIA:** Not Applicable - water solution  
**SPECIAL FIRE FIGHTING PROCEDURES:** None  
**UNUSUAL FIRE AND EXPLOSION HAZARDS:** None

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## SECTION 6: ACCIDENTAL RELEASE MEASURES

**SMALL SPILLS:** Cover spilled liquid with absorption material.

**LARGE SPILLS:** Dike the spilled liquid and either pump into original container or cover with clay-type substance for adsorption.

**WASTE DISPOSAL METHOD:** Dispose of in accordance with local, state and federal regulations.

## SECTION 7: HANDLING and STORAGE

**HANDLING AND STORAGE:** Protect drum from damage, freezing and intense heat.

**OTHER PRECAUTIONS:** Do not swallow. Wear protective eye goggles, gloves, boots and clothing.

## SECTION 8: EXPOSURE CONTROLS and PERSONAL PROTECTION

**EYE PROTECTION:** Wear chemical splash-proof goggles

**PROTECTIVE GLOVES:** Wear alkaline resistant gloves.

**RESPIRATORY PROTECTION:** None normally required.

**VENTILATION:** Always store and use all chemicals in well ventilated areas.

**OTHER PROTECTIVE EQUIPMENT:** Wear protective clothing and rubber boots suitable for protection from alkaline products. Provide eye wash and safety shower stations.

## SECTION 9: PHYSICAL and CHEMICAL PROPERTIES

**BOILING POINT:** 212° F.

**SPECIFIC GRAVITY:** 1.125 - 1.150

**EVAPORATION RATE:** Not Determined

**VAPOR DENSITY:** Not Determined

**VAPOR PRESSURE:** Not Determined

**SOLUBILITY IN WATER:** Complete

**pH of NEAT SOLUTION:** 12.0-12.5

**APPEARANCE/ODOR:** Red Liquid, Slight Odor

## SECTION 10: STABILITY and REACTIVITY

**STABILITY:** Stable

**HAZARDOUS POLYMERIZATION:** Will not occur.

**INCOMPATIBILITY (MATERIALS TO AVOID):** Strong oxidizing agents or mineral acids

**HAZARDOUS DECOMPOSITION PRODUCTS:** None known.

## SECTION 11: TOXICOLOGICAL INFORMATION

The following are LC<sub>50</sub> values from 48-hour static acute toxicity tests:

Daphnia Magna (water flea)	56.0 ppm
Pimephales Promelas (fathead minnow)	15.8 ppm

## SECTION 12: ECOLOGICAL INFORMATION

Not determined.

## SECTION 13: DISPOSAL CONSIDERATIONS

**SMALL SPILLS:** Soak up with an absorbent and shovel into waste container.

**LARGE SPILLS:** Contain spill and recover liquid for reprocessing or disposal.

**WASTE DISPOSAL METHOD:** Dispose of in accordance with local, state and federal regulations.

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#### SECTION 14: TRANSPORT INFORMATION

**DOT Classification:** Not regulated.

**NMFC Shipping Name:** Compounds, Industrial Process Water Treating, NMFC: Class 60, Item #50227 sub 1.

**Required Labels:**

- DO NOT STORE NEAR ACID

#### SECTION 15: REGULATORY INFORMATION

##### FEDERAL EPA

**Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA):**

Requires notification to the National Response Center of releases of quantities of Hazardous Substances equal to or greater than the reportable quantities (RQ) in 40 CFR 302.4. Components present in this product at a level which would require reporting under the statute are:

<u>Chemical</u>	<u>CAS Number</u>	<u>RQ</u>
None		

**Superfund Amendments and Reauthorization Act of 1986 (SARA) Title III:**

Requires emergency planning based on Threshold Planning Quantities (TPQs) and release reporting based on Reportable Quantities (RQ) in 40 CFR 355 (SARA 302, 304, 311 and 312) Components present in this product at a level which could require reporting under the statute are: NONE

**Toxic Substances Control Act (TSCA) Status:**

All components of this product are on the TSCA inventory

**EPA Priority Pollutants:** NONE

**RCRA Hazard Class:** If discarded - non-hazardous.

#### SECTION 16: OTHER INFORMATION

**HMIS RATINGS:** Health=1, Flammability=0, Reactivity=0

HMIS HAZARD INDEX: 0=MINIMAL, 1=SLIGHT, 2=MODERATE, 3=SERIOUS, 4=SEVERE

##### LEGEND:

CAS Chemical Abstract Number  
CERCLA Comprehensive Environmental Response, Compensation and Liability Act  
CFR Code of Federal Regulations  
DOT Department of Transportation  
HMIS Hazardous Materials Identification System  
IARC International Agency for Research on Cancer  
MSDS Material Safety Data Sheet  
N/A Not Applicable  
N/D Not Determined  
NTP National Toxicity Program  
OSHA Occupational Safety and Health Administration  
PEL Permissible Exposure Limit  
SARA Superfund Amendments and Reauthorization Act  
TSCA Toxic Substance Control Act  
TLV Threshold Limit Value

*The information accumulated herein is believed to be accurate but is not warranted to be whether originating with the company or not. Recipients are advised to confirm in advance of need that the information is current, applicable, and suitable to their circumstances. Users are responsible to determine the suitability of this product and to evaluate risks prior to use.*