

Technical Data Sheet (TDS)

Product Name: Heavy Metal Remover

Product Code: CHR-1500

Revision Date: 2025-03-18

1. Product Description

CHR-1500 is a highly effective and selective heavy metal precipitant. It reacts with divalent and trivalent metal ions to form stable, low-solubility complexes that can be easily removed by sedimentation or filtration. This product is a water-soluble, environmentally friendly product that works across a broad pH range, offering a reliable and efficient solution for heavy metal removal in industrial effluents.

CHR-1500 is an advanced, thiol-based heavy metal precipitant engineered for high-efficiency removal of a wide range of heavy metals in industrial wastewater. It outperforms conventional precipitants like metal hydroxide in key areas including chemical stability, chelate-breaking capability, safety, and precipitate quality.

Unlike conventional agents, which is prone to oxidation and degradation under certain conditions, CHR-1500 offers exceptional long-term stability, both in storage and in application. Its liquid form ensures easy, precise, and automated dosing, making it highly compatible with modern treatment systems.

CHR-1500 is highly effective against a broad range of heavy metals — mercury, copper, cadmium, nickel, lead, zinc, silver, and more — even when these metals exist in complex or chelated forms. Thanks to its functional groups, CHR-1500 exhibits superior chelate-breaking power, enabling the precipitation of metals that other removers often cannot fully capture.

The resulting complexes form highly stable, low-solubility precipitates that are non-toxic, non-odorous, and easy to filter, in contrast to the malodorous and sometimes environmentally problematic residues formed by other removers.

2. Application

CHR-1500 is specifically formulated for the removal of dissolved heavy metal ions from industrial wastewater. It effectively precipitates metals such as mercury (Hg), copper (Cu), cadmium (Cd), lead (Pb), and others. It is widely used in wastewater treatment systems in electroplating, mining, electronics, and chemical industries.

3. Product Features

- Highly effective removal of heavy metals such as Hg^{2+} , Cu^{2+} , Cd^{2+} , Pb^{2+} , Ni^{2+} , Zn^{2+} , etc.
- Forms stable and low-solubility metal complexes

- Fast reaction kinetics and efficient precipitation
- Water-soluble and easy to dose
- Operates effectively over a wide pH range of 5–11
- Reduces heavy metal concentrations to meet discharge regulations
- Environmentally friendly and non-toxic formulation

4. Typical Properties

Property	Value
Appearance	yellow to orange liquid
pH (1% solution)	9.0 – 11.5
Density (20°C)	1.05 – 1.20 g/cm ³
Solubility	fully soluble in water

Note: The above data are typical values and not product specifications.

5. Usage & Dosage

Typical dosage: 50 – 200 mg/L depending on the concentration of heavy metals present. Dosage should be determined through jar testing or based on wastewater characteristics. Please consult our technical team for optimized treatment programs.

6. Packaging

- 25 kg / 200 kg plastic drums / 1000L IBC Tote
- Customized packaging available upon request

7. Storage & Handling

- Store in a cool, dry, and well-ventilated area
- Avoid freezing and direct sunlight
- Shelf life: 12 months in original unopened packaging

8. Safety & Environmental Information

- Non-toxic and biodegradable formulation
- Use standard industrial safety precautions during handling
- Refer to Safety Data Sheet - SDS for detailed safety and handling instructions

9. Compliance

Complies with local and international environmental regulations for industrial wastewater treatment.