



# NORTH METAL & CHEMICAL COMPANY

World Class Molybdenum & Tungsten Compounds

Since 1921

HEDP\_TBS061008

## Technical Bulletin

### About us.....

- Founded in York, PA in 1921, NM&C remains a financially stable, family owned producer of World Class Molybdenum & Tungsten compounds serving the Metal Finishing, Agriculture, Water Treatment, Pigment, and Antifreeze markets worldwide.
- NM&C maintains over \$2 million inventory of finished goods and ore concentrates to guarantee our customers a stable and secure source of molybdate in the event of a crisis or shortage.
- All orders for one drum to truckload quantities are shipped the next business day or as requested.
- NM&C molybdates are American Made and backed by full 'Cradle-to-Grave' product liability.
- NM&C is unrivaled in customer service and technical support.
- Strict Quality Assurance programs and ISO 9002 practices assure products of the highest quality and consistency.



### 1-Hydroxyethylidene-1,1-Diphosphonic Acid (HEDP)

**Description:** HEDP is freely miscible with water, alcohol and organic solvents. Very stable over wide pH and temperature ranges.

**Technical Specifications:** (1-Hydroxyethylidene-1,1-Diphosphonic Acid)

(CAS No. 2809-21-4)

<b>Form</b>	<b>Clear, colorless to pale yellow liquid</b>
<b>Empirical Formula</b>	<b>C<sub>2</sub>H<sub>8</sub>O<sub>7</sub>P<sub>2</sub></b>
<b>Molecular Weight</b>	<b>206</b>
<b>Phosphorous Acid content; % wt. as PO<sub>3</sub></b>	<b>2.5% max.</b>
<b>Specific gravity @ 25°C</b>	<b>1.44 ± 0.01</b>
<b>Active content as HEDP; % wt</b>	<b>60% ± 1.0%</b>
<b>Color (APHA)</b>	<b>50 max. (typical 10 to 30)</b>
<b>Seq Value @ pH -11 (as CaCO<sub>3</sub>)</b>	<b>500 min. (typical 551)</b>
<b>pH (1% solution)</b>	<b>2.0 max. ( 1.7 to 1.9 typical)</b>
<b>Iron (Fe) content; ppm</b>	<b>&lt; 35 (4 to 6 ppm typical)</b>
<b>Freezing point; °C</b>	<b>-25°C (-13°F)</b>
<b>Chloride (Cl); % wt.</b>	<b>1.0% max.</b>

**Application:** HEDP is used as scale and corrosion inhibitor, deflocculant, sequestrant, water stabilizer in water treatment pipeline, detergent under high temperature and high pH value

**Packaging:** Available in 551.16 lb. non-returnable poly drums.

**Shelf Life:** At least one year when properly stored in unopened container.

**Safety:** HEDP is corrosive to the skin and eyes. Inhalation of vapors may irritate the respiratory tract. Refer to MSDS for additional precautions.



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