



NORTH METAL & CHEMICAL COMPANY
World Class Molybdenum & Tungsten Compounds
 Since 1921

PHOSPHONATES

TDS_HPAA-040418

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.



Hydroxyphosphono Acetic Acid (HPAA)

Description: HPAA (Hydroxyphosphono Acetic Acid) is a viscous dark brown, 50% active solution that is soluble in water, ethylene, methanol, and 50% caustic soda.

Technical Specifications: (CAS No. 23783-26-8)

<u>ELEMENT</u>	<u>SPECIFICATION</u>
Physical Form	Brown , viscous liquid
Odor	Sight
Color, Gardner	20 Max.
Solids Content; % wt.	50% Min.
Specific Gravity	1.30-1.50
Phosphonate; % wt.	30% Min.
Phosphorous Acid Content; as PO ₃	3% Max.
Phosphoric Acid Content; as PO ₄	2% Max.
Freezing Point	-5°C (22°F)
pH Value (1% Solution)	1.0-2.5

APPLICATION: HPAA is an organic corrosion inhibitor for mild steel in cooling water treatment programs.

PACKAGING: Available in 551.16 lb. (250 Kgs) drums.

SAFETY: HPAA is corrosive to the skin and eyes. Refer to MSDS for additional precautions.



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HPAA - Technical Data Sheet