Section 1. Product and Company Identification

Product Identification: FEOMS MSDS Number: FEOMS Recommended Use: For Laboratory Use. Company Identification: High-Purity Standards P.O. Box 41727 Charleston, SC 29423 Telephone: (843) 767-7900 FAX: (843) 767-7906 In case of emergency call INFOTRAC: 800-535-5053

Section 2. Hazard Identification

Classification: None Labeling: Symbol: None Signal Word: None Hazard Statement: None Precautionary Statement: None

Section 3. Composition

Component	CAS/EINECS Registry #	Percent Concentration
Iron metallo-organic	N/A	0.1
Mineral Oil	8042-47-5/232-455-8	Balance

Section 4. First Aid Measures

Emergency Overview: Slightly hazardous in case of eye contact (irritant), of ingestion. Nonirritant for skin. Non-hazardous in case of inhalation.

Target Organs: None

- Skin/eye Contact: May be harmful if absorbed through skin. May cause skin/eye irritation. Wash off with soap and plenty of water. Flush eyes with water as a precaution.
- Inhalation: May be harmful if inhaled. May cause respiratory tract irritation. If breathed in, move person into fresh air. If not breathing, give artificial respiration.
- Ingestion: May be harmful if swallowed. Never give anything by mouth to an unconscious person. Rinse mouth with water

Section 5. Fire Fighting Measures

Fire & Explosion hazards: May be combustible at high temperature. Slightly flammable to flammable in presence of open flames and sparks, of heat. Non-flammable in presence of shocks.

Extinguishing Media: SMALL FIRE: Use DRY chemical powder. LARGE FIRE: Use water spray, fog or foam. Do not use water jet.

Specific Methods: Firefighters should wear proper protective equipment and self-contained breathing apparatus with full face piece operated in positive pressure mode.

Section 6. Accidental Release Measures

Ventilate area of leak or spill. Wear appropriate personal protective equipment as specified in Section 8. Absorb spills with absorbent (vermiculite, sand, fuller's earth) and place in plastic bags for later disposal. Always dispose of in accordance with local regulations.

Section 7. Handling and Storage

Keep away from heat. Keep away from sources of ignition. Empty containers pose a fire risk, evaporate the residue under a fume hood. Ground all equipment containing material. Do not breathe gas/fumes/ vapor/spray. Keep away from incompatibles such as oxidizing agents. Keep container tightly closed. Keep container in a cool, well-ventilated area. Do not store above 24°C (75.2°F).

Section 8. Exposure Controls and Personal Protection

Engineering Controls: Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value. Personal Protection: Wear proper gloves, safety glasses with side shields, lab coat/apron.

Exposure Limits:

Component	ACGIH STEL
Iron metallo-organic	N/A
Mineral Oil	10 (mg/m3) as oil mist

Section 9. Physical and Chemical Properties

Physical State: Liquid Color: Clear, colorless liquid Odor: Odorless Odor threshold: None pH: N/A Melting point: N/A Freezing Point: N/A Boiling Point: >338 °C Flash point: CLOSED CUP: 168.33°C (335°F). Evaporation rate: N/A Flammability: N/A Explosion limits: N/A Vapor Pressure (mm): <0.1 mm Hg Vapor Density (air+1): N/A Relative density: $(H_2O = 1)$: 0.862 g/cm3 at 25 °C (77 °F) Solubility in H₂O: Insoluble in cold water. Soluble in hydrocarbons. Auto ignition temperature: N/A Decomposition temperature: N/A Molecular Weight: 55.845 (Fe)

Date: March 19, 2014

Revision: new

1000µg/g Iron Metallo-Organic Standard

Page 3 of 3

Section 10. Stability and Reactivity

Stability Indicator:YESConditions to Avoid:Sources of ignition and high temperaturesIncompatibles:Strong oxidizing agents.Hazardous Decomposition Products:Carbon dioxide, carbon monoxide.Hazardous Polymerization:Does not polymerize.

Section 11. Toxicological Information

Toxicity Data: RTECS #: (Mineral Oil) PY8047000

Section 12. Ecological Information

Ecotoxicological information: No information found.

Section 13. Disposal Considerations

General: Follow Federal, state and local regulations for waste.

Section 14. Transport Information

D.O.T. Classification: Not hazardous by DOT regulations

Section 15. Regulations (Not meant to be all inclusive-selected regulation listed)

TSCA Status: The components of this solution are listed on the TSCA Inventory. RCRA Status: No SARA: No WHMIS Information (Canada): None

Section 16. Other Information

HPS products are intended for laboratory use only. All products should be handled and used by trained professional personnel only. The responsibility for the safe handling and use of these products rests solely with the buyer and/or user. The MSDS was prepared carefully and represents the best data currently available to us; however, HPS does not certify the data on the MSDS. Certified values for this material are given only on the Certificate of Analysis.

Theodore C. Rains, Ph.D.