

MATERIAL SAFETY DATA SHEET

SECTION I - PRODUCT IDENTIFICATION

PRODUCT NAME: MANGANESE DEXTRO-LAC

MANUFACTURERS NAME: AGRO-K CORPORATION ADDRESS: 8030 Main Street N.E.

Minneapolis, MN 55432-1844

TELEPHONE: (763) 780-4116 / (800) 328-2418

FAX: (763) 780-4316

CHEMICAL NAME: Chelated Salt of Manganese

COMMON SYNONYMS Saccharated Manganese in an aqueous solution

FORMULA WEIGHT: 169.01 CAS No.: 10034-96-5 NIOSH/RTECS No.: OP1050000

SECTION II - PRECAUTIONARY LABELING

WARNING: CAUSES IRRITATION. HARMFUL IF SWALLOWED.

Avoid contact with eyes, skin, and clothing.

Keep in tightly closed container.

Use with adequate ventilation. Wash thoroughly after handling.

International Labeling

Harmful if swallowed. Irritating to respiratory system and skin. After contact with skin, wash immediately with plenty of

soap and water.

SAF-T-DATA: Storage Color Code: Orange (general storage)

SECTION III - PHYSICAL DATA

Boiling Point: 850 degrees C. (1562 degrees F.) (at 760 mm Hg)

Vapor Pressure (mmHg): N/A Vapor Density (air=1): N/A Specific Gravity: $(H_2O = 1)$ 1.14 Evaporation Rate: N/A % Volatiles by Volume: (21 degrees C) 0 pH: N/A Odor Threshold (ppm): N/A Physical State: Liquid Coefficient Water/Oil Distribution: N/A

Appearance & Odor light brown & Odorless.

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

Extinguishing Media: water

Toxic Gases Produced: sulfur dioxide, manganese fumes

SECTION V - HEALTH HAZARD DATA

Threshold Limit Value (TLV/TWA): 5 mg/m3, TLV is for Manganese, dusts and mists, as Mn.

Short-term exposure limit (STEL): not established

Permissible exposure limit (PEL): 5 mg/m3, PEL is for Manganese dust and mist, as Mn.

Toxicity of components

MSDS - MANGANESE

Page 2

Intraperitonual Mouse LD 50 for Manganous Sulfate, Monohydrate 120 mg/kg

Effects of Overexposure

INHALATION: irritation of upper

respiratory tract, irritation of mucous membranes

SKIN CONTACT: irritation

EYE CONTACT: irritation

INGESTION: nausea, vomiting, diarrhea, gastrointestinal pain

CHRONIC EFFECTS: blood damage

Emergency and First Aid Procedures

INGESTION: CALL A PHYSICIAN. If

swallowed, if conscious, give large amounts of water. Induce

vomiting.

INHALATION: If inhaled, remove to fresh

air. If not breathing, give artificial respiration. If breathing is

difficult, give oxygen.

SKIN CONTACT: In case of contact, flush skin with water.

EYE CONTACT: In case of eye contact,

immediately flush with plenty of water for at least 15 minutes.

SECTION VI - REACTIVITY DATA

Stability: Stable Conditions to Avoid: Heat

Incompatibles: Strong reducing agents, strong oxidizing agents, magnesium

Decomposition Products: Oxides of sulfur

SECTION VII - SPILL & DISPOSAL PROCEDURES

Disposal Procedure: Dispose in accordance with environmental

regulations.