



Product Name: LT4 LiquiTrace®

MATERIAL SAFETY DATA SHEET

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PRODUCT INFORMATION & COMPOSITION

PRODUCT NAME: LT4 LiquiTrace® CAS #: None
TRADE NAME / SYNONYM: None Formula: Solution of metal – amino acid complexes and sodium salts
NFPA RATINGS (scale 0-4): HEALTH=2 FLAMMABILITY=0 REACTIVITY=0

PRODUCT COMPOSITION (w/w)	CAS NUMBER	CHEMICAL NAME
< 25 %	NA	ZINC (II) METHIONINE
< 8 %	NA	COPPER (II) BETAINE CHLORIDE ¹
< 17 %	NA	MANGANESE (II) METHIONINE CHLORIDE ²
< 1.5 %	10124-43-3	COBALT (II) SULFATE ³
50 %	7732-18-5	WATER

PHYSICAL AND CHEMICAL PROPERTIES

DESCRIPTION: DARK BLUE SOLUTION
SPECIFIC GRAVITY (H₂O=1): 1.38
PH: 2.8
FLASHPOINT (TAG CLOSED CUP): NA
MELTING POINT: 31°F (0°C)
STABILITY: STABLE
INCOMPATIBILITIES: OXIDIZERS; CONCENTRATED STRONG ACIDS AND BASES

VAPOR PRESSURE (MM HG): 23.8 @ 25°C
SOLUBILITY IN WATER: MODERATELY SOLUBLE
VOLATILITY: NA
BOILING POINT: 212°F (100°C)
HAZARDOUS POLYMERIZATION: NONE

HEALTH HAZARDS, EXPOSURE LIMITS, & CARCINOGENICITY

AN EXPOSURE LIMIT FOR THIS PRODUCT HAS NOT BEEN ESTABLISHED. EXPOSURE LIMITS FOR COPPER (II) CHLORIDE DIHYDRATE ARE:

ACUTE TOXICITY: LD₅₀ (ORAL): 960 MG/KG CARCINOGEN STATUS: NONE
ACUTE EFFECTS: TOXIC TARGET ORGANS: LIVER, RESPIRATORY AND GASTROINTESTINAL TRACTS, KIDNEYS

¹ Copper is subject to the requirements of 40 CFR Part 372, SARA Title III Section 313, and Section 112 of the Clean Air Act Amendments.

² Manganese is subject to the requirements of 40 CFR Part 372, SARA Title III Section 313, and Section 112 of the Clean Air Act Amendments.

³ Cobalt is subject to the requirements of 40 CFR Part 372, SARA Title III Section 313, and Section 112 of the Clean Air Act Amendments.

EMERGENCY, PRECAUTIONARY AND FIRST AID PROCEDURES

SKIN CONTACT: WASH THOROUGHLY WITH WATER FOR A MINIMUM OF 15 MINUTES. CONTACT MEDICAL AUTHORITIES.

EYE CONTACT: REMOVE CONTACT LENSES. WASH THOROUGHLY WITH WATER FOR 15 MINUTES WHILE HOLDING EYELIDS OPEN. CONTACT MEDICAL AUTHORITIES IMMEDIATELY.

INGESTION: DO NOT INDUCE VOMITING. ADMINISTER 8-12 OUNCES OF WATER OR MILK. SEEK IMMEDIATE MEDICAL ATTENTION.

INHALATION: REMOVE TO FRESH AIR AND SEEK MEDICAL ATTENTION IF BREATHING DIFFICULTY DEVELOPS.

FIRE: USE DRY CHEMICAL OR FOAM EXTINGUISHING MEDIA; NOT CONSIDERED A FIRE HAZARD.

HANDLING: WEAR APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT (GLASSES, GOGGLES, & FACE SHIELD) TO PREVENT EYE CONTACT. APPROPRIATE MEASURES MUST ALSO BE TAKEN TO PREVENT PROLONGED SKIN CONTACT AND INHALATION EXPOSURES. SUCH MEASURES SHOULD INCLUDE, AT A MINIMUM, RUBBER GLOVES AND ENGINEERING CONTROLS TO MINIMIZE EXPOSURE RISKS.

TRANSPORTATION DATA

D.O.T. PROPER SHIPPING NAME: NOT CURRENTLY REGULATED HAZARD CLASS: NOT APPLICABLE

DATE PREPARED

DECEMBER 21, 2004