

Chem-Impex International Inc.

Tel: (630) 766-2112
E-mail: sales@chemimpex.com
Shipping and Correspondence:
935 Dillon Drive
Wood Dale, IL 60191 USA

Fax: (630) 766-2218
Web site: www.chemimpex.com
Manufacturing site:
825 Dillon Drive
Wood Dale, IL 60191 USA

SAFETY DATA SHEET

SECTION 1. CHEMICAL IDENTIFICATION

CATALOG #:	35680
NAME:	Manganese(II) chloride tetrahydrate
SYNONYMS:	Manganese dichloride tetrahydrate
24 HOUR EMERGENCY TELEPHONE:	(800) 535-5053(USA) 352-323-3500 (INTERNATIONAL)
TO REQUEST AN MSDS:	(800) 869-9290
CUSTOMER SERVICE:	(630) 766-2112

SECTION 2. HAZARDS IDENTIFICATION

CLASSIFICATION OF THE SUBSTANCE OR MIXTURE

GHS CLASSIFICATION IN ACCORDANCE WITH 29 CFR 1910 (OSHA HCS)

ACUTE TOXICITY, ORAL (CATEGORY 3), H301
SERIOUS EYE DAMAGE (CATEGORY 1), H318
SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE (CATEGORY 2), BRAIN,
H373
SHORT-TERM (ACUTE) AQUATIC HAZARD (CATEGORY 3), H402

FOR THE FULL TEXT OF THE H-STATEMENTS MENTIONED IN THIS SECTION, SEE SECTION 16.

GHS LABEL ELEMENTS, INCLUDING PRECAUTIONARY STATEMENTS PICTOGRAM



SIGNAL WORD DANGER

HAZARD STATEMENT(S)

H301 TOXIC IF SWALLOWED.
H318 CAUSES SERIOUS EYE DAMAGE.
H373 MAY CAUSE DAMAGE TO ORGANS THROUGH PROLONGED OR REPEATED EXPOSURE.
H402 HARMFUL TO AQUATIC LIFE

PRECAUTIONARY STATEMENT(S)

P260 DO NOT BREATHE DUST/ FUME/ GAS/ MIST/ VAPOURS/ SPRAY.
P264 WASH SKIN THOROUGHLY AFTER HANDLING.
P270 DO NOT EAT, DRINK OR SMOKE WHEN USING THIS PRODUCT.
P273 AVOID RELEASE TO THE ENVIRONMENT.
P280 WEAR EYE PROTECTION/ FACE PROTECTION
P301 + P310 + P330 IF SWALLOWED: IMMEDIATELY CALL A POISON CENTER/DOCTOR. RINSE MOUTH.
P305 + P351 + P338 + P310 IF IN EYES: RINSE CAUTIOUSLY WITH WATER FOR SEVERAL MINUTES. REMOVE CONTACT LENSES, IF PRESENT AND EASY TO DO. CONTINUE RINSING. IMMEDIATELY CALL A POISON CENTER/DOCTOR.
P314 GET MEDICAL ADVICE/ ATTENTION IF YOU FEEL UNWELL.
P405 STORE LOCKED UP.
P501 DISPOSE OF CONTENTS/ CONTAINER TO AN APPROVED WASTE DISPOSAL PLANT.

HAZARDS NOT OTHERWISE CLASSIFIED (HNO) OR NOT COVERED BY GHS NONE

MF: MnCl2·4H2O
MW: 197.91
CAS-NO. 13446-34-9
PURITY: 98 - 101% (Assay by titration)

HAZARDOUS COMPONENTS

COMPONENT	CLASSIFICATION	CONCENTRATION
Manganese(II) chloride tetrahydrate		
	ACUTE TOX. 3; EYE DAM. 1; STOT RE 2; AQUATIC ACUTE 3; H301, H318, H373, H402	<= 100%

FOR THE FULL TEXT OF THE H-STATEMENTS MENTIONED IN THIS SECTION, SEE SECTION 16.

SECTION 4. FIRST-AID MEASURES

DESCRIPTION OF FIRST AID MEASURES

GENERAL ADVICE SHOW THIS MATERIAL SAFETY DATA SHEET TO THE DOCTOR IN ATTENDANCE.

IF INHALED IF BREATHED IN, MOVE PERSON INTO FRESH AIR. IF NOT BREATHING, GIVE ARTIFICIAL RESPIRATION. CONSULT A PHYSICIAN.

IN CASE OF SKIN CONTACT TAKE OFF IMMEDIATELY ALL CONTAMINATED CLOTHING. RINSE SKIN WITH WATER/ SHOWER. CONSULT A PHYSICIAN.

IN CASE OF EYE CONTACT RINSE OUT WITH PLENTY OF WATER. IMMEDIATELY CALL IN OPHTHALMOLOGIST. REMOVE CONTACT LENSES.

IF SWALLOWED IF SWALLOWED: GIVE WATER TO DRINK (TWO GLASSES AT MOST). SEEK MEDICAL ADVICE IMMEDIATELY. IN EXCEPTIONAL CASES ONLY, IF MEDICAL CARE IS NOT AVAILABLE WITHIN ONE HOUR, INDUCE VOMITING (ONLY IN PERSONS WHO ARE WIDE AWAKE AND FULLY CONSCIOUS), ADMINISTER ACTIVATED CHARCOAL (20 - 40 G IN A 10% SLURRY) AND CONSULT A DOCTOR AS QUICKLY AS POSSIBLE.

MOST IMPORTANT SYMPTOMS AND THE MOST IMPORTANT KNOWN SYMPTOMS AND EFFECTS ARE DESCRIBED IN THE LABELLING (SEE SECTION 2.2) AND/OR IN SECTION 11.

**EFFECTS, BOTH ACUTE
AND DELAYED**

**INDICATION OF ANY
IMMEDIATE MEDICAL
ATTENTION AND
SPECIAL TREATMENT
NEEDED**

NO DATA AVAILABLE

SECTION 5. FIRE AND EXPLOSION DATA

EXTINGUISHING MEDIA

**SUITABLE
EXTINGUISHING MEDIA**

SUITABLE EXTINGUISHING MEDIA
USE EXTINGUISHING MEASURES THAT ARE
APPROPRIATE TO LOCAL CIRCUMSTANCES AND THE
SURROUNDING ENVIRONMENT.

UNSUITABLE EXTINGUISHING MEDIA
FOR THIS SUBSTANCE/MIXTURE NO LIMITATIONS OF
EXTINGUISHING AGENTS ARE GIVEN.

**SPECIAL HAZARDS
ARISING FROM THE
SUBSTANCE OR MIXTURE**

HYDROGEN CHLORIDE GAS,
MANGANESE/MANGANESE OXIDES
NOT COMBUSTIBLE.
AMBIENT FIRE MAY LIBERATE HAZARDOUS VAPOURS.

**ADVICE FOR
FIREFIGHTERS**

STAY IN DANGER AREA ONLY WITH SELF-CONTAINED
BREATHING APPARATUS. PREVENT SKIN CONTACT BY
KEEPING A SAFE DISTANCE OR BY WEARING
SUITABLE PROTECTIVE CLOTHING.

FURTHER INFORMATION

SUPPRESS (KNOCK DOWN) GASES/VAPORS/MISTS
WITH A WATER SPRAY JET. PREVENT FIRE
EXTINGUISHING WATER FROM CONTAMINATING
SURFACE WATER OR THE GROUND WATER SYSTEM.

SECTION 6. ACCIDENTAL RELEASE MEASURES

**PERSONAL
PRECAUTIONS,
PROTECTIVE
EQUIPMENT AND
EMERGENCY
PROCEDURES**

ADVICE FOR NON-EMERGENCY PERSONNEL: AVOID
INHALATION OF DUSTS. AVOID SUBSTANCE CONTACT.
ENSURE ADEQUATE VENTILATION. EVACUATE THE
DANGER AREA, OBSERVE EMERGENCY PROCEDURES,
CONSULT AN EXPERT.
FOR PERSONAL PROTECTION SEE SECTION 8.

**ENVIRONMENTAL
PRECAUTIONS**

DO NOT LET PRODUCT ENTER DRAINS.

**METHODS AND
MATERIALS FOR
CONTAINMENT AND
CLEANING UP**

COVER DRAINS. COLLECT, BIND, AND PUMP OFF
SPILLS. OBSERVE POSSIBLE MATERIAL RESTRICTIONS
(SEE SECTIONS 7 AND 10). TAKE UP CAREFULLY.
DISPOSE OF PROPERLY. CLEAN UP AFFECTED AREA.
AVOID GENERATION OF DUSTS.

**REFERENCE TO OTHER
SECTIONS**

FOR DISPOSAL SEE SECTION 13.

SECTION 7. HANDLING AND STORAGE

**PRECAUTIONS FOR SAFE
HANDLING**

WORK UNDER HOOD. DO NOT INHALE
SUBSTANCE/MIXTURE.
CHANGE CONTAMINATED CLOTHING. PREVENTIVE
SKIN PROTECTION RECOMMENDED. WASH HANDS
AFTER WORKING WITH SUBSTANCE.
FOR PRECAUTIONS SEE SECTION 2.2.

**CONDITIONS FOR SAFE
STORAGE, INCLUDING
ANY INCOMPATIBILITIES**

TIGHTLY CLOSED. DRY. KEEP IN A WELL-VENTILATED
PLACE. KEEP LOCKED UP OR IN AN AREA ACCESSIBLE
ONLY TO QUALIFIED OR AUTHORIZED PERSONS.

STORAGE CLASS (TRGS 510): 6.1D: NON-COMBUSTIBLE,
ACUTE TOXIC CAT.3 / TOXIC HAZARDOUS MATERIALS
OR HAZARDOUS MATERIALS CAUSING CHRONIC
EFFECTS

Store at RT

SPECIFIC END USE(S)

APART FROM THE USES MENTIONED IN SECTION 1.2
NO OTHER SPECIFIC USES ARE STIPULATED

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

CONTROL PARAMETERS

COMPONENTS WITH WORKPLACE CONTROL PARAMETERS

COMPONENT	CAS-NO.	VALUE	CONTROL PARAMETERS	BASIS

Manganese(II) chloride tetrahydrate	13446-34-9	C	5 MG/M3	USA. OCCUPATIONAL EXPOSURE LIMITS (OSHA) - TABLE Z-1 LIMITS FOR AIR CONTAMINANTS
		TWA	0.1 MG/M3	USA. ACGIH THRESHOLD LIMIT VALUES (TLV)
	REMARKS	NOT CLASSIFIABLE AS A HUMAN CARCINOGEN		
		TWA	0.02 MG/M3	USA. ACGIH THRESHOLD LIMIT VALUES (TLV)
		NOT CLASSIFIABLE AS A HUMAN CARCINOGEN		
		TWA	1 MG/M3	USA. NIOSH RECOMMENDED EXPOSURE LIMITS
		ST	3 MG/M3	USA. NIOSH RECOMMENDED EXPOSURE LIMITS
		PEL	0.2 MG/M3	CALIFORNIA PERMISSIBLE EXPOSURE LIMITS FOR CHEMICAL CONTAMINANTS (TITLE 8, ARTICLE 107)

EXPOSURE CONTROLS

APPROPRIATE ENGINEERING CONTROLS

CHANGE CONTAMINATED CLOTHING. PREVENTIVE SKIN PROTECTION RECOMMENDED. WASH HANDS AFTER WORKING WITH SUBSTANCE.

PERSONAL PROTECTIVE EQUIPMENT

EYE/FACE PROTECTION USE EQUIPMENT FOR EYE PROTECTION TESTED AND APPROVED UNDER APPROPRIATE GOVERNMENT STANDARDS SUCH AS NIOSH (US) OR EN 166(EU). TIGHTLY FITTING SAFETY GOGGLES

SKIN PROTECTION

THIS RECOMMENDATION APPLIES ONLY TO THE PRODUCT STATED IN THE SAFETY DATA SHEET, SUPPLIED BY US AND FOR THE DESIGNATED USE. WHEN DISSOLVING IN OR MIXING WITH OTHER SUBSTANCES AND UNDER CONDITIONS DEVIATING FROM THOSE STATED IN EN 16523-1 PLEASE CONTACT THE SUPPLIER OF CE-APPROVED GLOVES (E.G. KCL GMBH, D-36124 EICHENZELL).

FULL CONTACT

MATERIAL: NITRILE RUBBER
MINIMUM LAYER THICKNESS: 0.11 MM
BREAK THROUGH TIME: 480 MIN
MATERIAL TESTED:KCL 741 DERMATRIL L

THIS RECOMMENDATION APPLIES ONLY TO THE PRODUCT STATED IN THE SAFETY DATA SHEET, SUPPLIED BY US AND FOR THE DESIGNATED USE. WHEN DISSOLVING IN OR MIXING WITH OTHER SUBSTANCES AND UNDER CONDITIONS DEVIATING FROM THOSE STATED IN EN 16523-1 PLEASE CONTACT THE SUPPLIER OF CE-APPROVED GLOVES (E.G. KCL GMBH, D-36124 EICHENZELL).

SPLASH CONTACT

MATERIAL: NITRILE RUBBER
MINIMUM LAYER THICKNESS: 0.11 MM
BREAK THROUGH TIME: 480 MIN
MATERIAL TESTED:KCL 741 DERMATRIL L

BODY PROTECTION

COMPLETE SUIT PROTECTING AGAINST CHEMICALS, THE TYPE OF PROTECTIVE EQUIPMENT MUST BE SELECTED ACCORDING TO THE CONCENTRATION AND AMOUNT OF THE DANGEROUS SUBSTANCE AT THE SPECIFIC WORKPLACE.

RESPIRATORY PROTECTION

RECOMMENDED FILTER TYPE: FILTER TYPE P3
THE ENTREPRENEUR HAS TO ENSURE THAT MAINTENANCE, CLEANING AND TESTING OF RESPIRATORY PROTECTIVE DEVICES ARE CARRIED OUT ACCORDING TO THE INSTRUCTIONS OF THE PRODUCER. THESE MEASURES HAVE TO BE PROPERLY DOCUMENTED.
REQUIRED WHEN DUSTS ARE GENERATED.
OUR RECOMMENDATIONS ON FILTERING RESPIRATORY PROTECTION ARE BASED ON THE FOLLOWING STANDARDS: DIN EN 143, DIN 14387 AND OTHER ACCOMPANYING STANDARDS RELATING TO THE USED RESPIRATORY PROTECTION SYSTEM.

CONTROL OF ENVIRONMENTAL EXPOSURE

DO NOT LET PRODUCT ENTER DRAINS.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE	Pink slightly deliquescent crystals
ODOUR	ODOURLESS
ODOUR THRESHOLD	NO DATA AVAILABLE
PH	3.5 - 6 AT 50 G/L AT 25 C
MELTING POINT/FREEZING POINT	58 °C
INITIAL BOILING POINT AND BOILING RANGE	
FLASH POINT	
EVAPORATION RATE	NO DATA AVAILABLE
FLAMMABILITY (SOLID, GAS)	THE PRODUCT IS NOT FLAMMABLE. - FLAMMABILITY (SOLIDS)
UPPER/LOWER FLAMMABILITY OR EXPLOSIVE LIMITS	NO DATA AVAILABLE
VAPOUR PRESSURE	NO DATA AVAILABLE
VAPOUR DENSITY	NO DATA AVAILABLE
RELATIVE DENSITY	2.01
WATER SOLUBILITY	1,980 G/L AT 20 C 757 G/L AT 20 C - REGULATION (EC) NO. 440/2008, ANNEX, A.6 - COMPLETELY SOLUBLE
PARTITION COEFFICIENT: N- OCTANOL/WATER	NOT APPLICABLE FOR INORGANIC SUBSTANCES
AUTO-IGNITION TEMPERATURE	NO DATA AVAILABLE
DECOMPOSITION TEMPERATURE	106 - 198 C - ELIMINATION OF WATER OF CRYSTALLISATION
VISCOSITY	NO DATA AVAILABLE
EXPLOSIVE PROPERTIES	NO DATA AVAILABLE
OXIDIZING PROPERTIES	NONE

OTHER SAFETY INFORMATION

NO DATA AVAILABLE

SECTION 10. STABILITY AND REACTIVITY

REACTIVITY	NO DATA AVAILABLE
CHEMICAL STABILITY	THE PRODUCT IS CHEMICALLY STABLE UNDER STANDARD AMBIENT CONDITIONS (ROOM TEMPERATURE).

POSSIBILITY OF HAZARDOUS REACTIONS	RISK OF EXPLOSION WITH: ALKALI METALS ZINC VIOLENT REACTIONS POSSIBLE WITH: ACIDS
CONDITIONS TO AVOID	NO DATA AVAILABLE
INCOMPATIBLE MATERIALS	METALS, LIGHT METALS
HAZARDOUS DECOMPOSITION PRODUCTS	IN THE EVENT OF FIRE: SEE SECTION 5

SECTION 11. TOXICOLOGICAL INFORMATION

INFORMATION ON TOXICOLOGICAL EFFECTS

ACUTE TOXICITY	LD50 ORAL - RAT - FEMALE - 236 MG/KG REMARKS: (ECHA) THE VALUE IS GIVEN IN ANALOGY TO THE FOLLOWING SUBSTANCES: MANGANESE(II) CHLORIDE INHALATION: NO DATA AVAILABLE DERMAL: NO DATA AVAILABLE NO DATA AVAILABLE
SKIN CORROSION/IRRITATION	SKIN - RABBIT RESULT: NO SKIN IRRITATION - 4 H (OECD TEST GUIDELINE 404)
SERIOUS EYE DAMAGE/EYE IRRITATION	EYES RABBIT RESULT: CAUSES SERIOUS EYE DAMAGE. (OECD TEST GUIDELINE 405)
RESPIRATORY OR SKIN SENSITISATION	LOCAL LYMPH NODE ASSAY (LLNA) MOUSE RESULT: NEGATIVE (OECD TEST GUIDELINE 429) THE VALUE IS GIVEN IN ANALOGY TO THE FOLLOWING SUBSTANCES: MANGANESE(II) CHLORIDE

**GERM CELL
MUTAGENICITY**

TEST TYPE: MUTAGENICITY (MAMMAL CELL TEST):
CHROMOSOME ABERRATION.
TEST SYSTEM: HUMAN LYMPHOCYTES
METABOLIC ACTIVATION: WITH AND WITHOUT
METABOLIC ACTIVATION
METHOD: OECD TEST GUIDELINE 473
RESULT: NEGATIVE

TEST TYPE: AMES TEST
TEST SYSTEM: ESCHERICHIA COLI/SALMONELLA
TYPHIMURIUM
METABOLIC ACTIVATION: WITH AND WITHOUT
METABOLIC ACTIVATION
METHOD: OECD TEST GUIDELINE 471
RESULT: NEGATIVE

TEST TYPE: IN VITRO MAMMALIAN CELL GENE
MUTATION TEST
TEST SYSTEM: MOUSE LYMPHOMA TEST
METABOLIC ACTIVATION: WITH AND WITHOUT
METABOLIC ACTIVATION
METHOD: OECD TEST GUIDELINE 476
RESULT: NEGATIVE
THE VALUE IS GIVEN IN ANALOGY TO THE
FOLLOWING SUBSTANCES: MANGANESE(II)
CHLORIDE TEST TYPE: MICRONUCLEUS TEST
SPECIES: MOUSE
CELL TYPE: RED BLOOD CELLS (ERYTHROCYTES)
APPLICATION ROUTE: ORAL
METHOD: OECD TEST GUIDELINE 474
RESULT: NEGATIVE

CARCINOGENICITY

IARC:

NO INGREDIENT OF THIS PRODUCT PRESENT AT
LEVELS GREATER THAN OR EQUAL TO 0.1% IS
IDENTIFIED AS PROBABLE, POSSIBLE OR CONFIRMED
HUMAN CARCINOGEN BY IARC.

NTP:

NO INGREDIENT OF THIS PRODUCT PRESENT AT
LEVELS GREATER THAN OR EQUAL TO 0.1% IS
IDENTIFIED AS A KNOWN OR ANTICIPATED
CARCINOGEN BY NTP.

OSHA:

NO COMPONENT OF THIS PRODUCT PRESENT AT
LEVELS GREATER THAN OR EQUAL TO 0.1% IS ON
OSHA S LIST OF REGULATED CARCINOGENS.

REPRODUCTIVE TOXICITY

NO DATA AVAILABLE

**SPECIFIC TARGET ORGAN
TOXICITY - SINGLE
EXPOSURE**

NO DATA AVAILABLE

**SPECIFIC TARGET ORGAN
TOXICITY - REPEATED
EXPOSURE**

MAY CAUSE DAMAGE TO ORGANS THROUGH
PROLONGED OR REPEATED EXPOSURE. - BRAIN

ASPIRATION HAZARD

NO DATA AVAILABLE

**ADDITIONAL
INFORMATION**

RTECS: 009650000

TO THE BEST OF OUR KNOWLEDGE, THE CHEMICAL,
PHYSICAL, AND TOXICOLOGICAL PROPERTIES HAVE
NOT BEEN THOROUGHLY INVESTIGATED.

AFTER ABSORPTION:
WE HAVE NO DESCRIPTION OF ANY TOXIC
SYMPTOMS. OTHER DANGEROUS PROPERTIES CAN
NOT BE EXCLUDED.
THIS SUBSTANCE SHOULD BE HANDLED WITH
PARTICULAR CARE.

LIVER - IRREGULARITIES - BASED ON HUMAN
EVIDENCE

SECTION 12. ECOLOGICAL INFORMATION

TOXICITY**TOXICITY TO ALGAE**

STATIC TEST ERC50 - DESMODESMUS SUBSPICATUS
(GREEN ALGAE) - 61 MG/L - 72 H
(OECD TEST GUIDELINE 201)
REMARKS: (IN ANALOGY TO SIMILAR PRODUCTS)
THE VALUE IS GIVEN IN ANALOGY TO THE
FOLLOWING SUBSTANCES: MANGANESE SULPHATE
(MANGANESE DICHLORIDE TETRAHYDRATE)

SEMI-STATIC TEST NOEC - LEMNA MINOR
(DUCKWEED) - 30.72 MG/L - 7 D
REMARKS: (ECHA)

TOXICITY TO BACTERIA

THE VALUE IS GIVEN IN ANALOGY TO THE
FOLLOWING SUBSTANCES:
MANGANESE(II) CHLORIDE
(MANGANESE DICHLORIDE TETRAHYDRATE)
REMARKS: (IN ANALOGY TO SIMILAR PRODUCTS)
THE VALUE IS GIVEN IN ANALOGY TO THE
FOLLOWING SUBSTANCES: MANGANESE SULPHATE
(MANGANESE DICHLORIDE TETRAHYDRATE)

**PERSISTENCE AND
DEGRADABILITY**

THE METHODS FOR DETERMINING THE BIOLOGICAL
DEGRADABILITY ARE NOT APPLICABLE TO
INORGANIC SUBSTANCES.

**BIOACCUMULATIVE
POTENTIAL**

NO DATA AVAILABLE

MOBILITY IN SOIL	NO DATA AVAILABLE
RESULTS OF PBT AND VPVB ASSESSMENT	PBT/VPVB ASSESSMENT NOT AVAILABLE AS CHEMICAL SAFETY ASSESSMENT NOT REQUIRED/NOT CONDUCTED
OTHER ADVERSE EFFECTS	NO DATA AVAILABLE

SECTION 13. DISPOSAL CONSIDERATIONS

WASTE TREATMENT METHODS

PRODUCT	WASTE MATERIAL MUST BE DISPOSED OF IN ACCORDANCE WITH THE NATIONAL AND LOCAL REGULATIONS. LEAVE CHEMICALS IN ORIGINAL CONTAINERS. NO MIXING WITH OTHER WASTE. HANDLE UNCLEARED CONTAINERS LIKE THE PRODUCT ITSELF.
CONTAMINATED PACKAGING	DISPOSE OF AS UNUSED PRODUCT.

SECTION 14. TRANSPORT INFORMATION

DOT (US)	
PROPER SHIPPING NAME:	TOXIC SOLID, INORGANIC, N.O.S. (MANGANESE DICHLORIDE TETRAHYDRATE)
UN NUMBER:	3288
CLASS:	6.1
PACKING GROUP:	III
REPORTABLE QUANTITY (RQ):	
POISON INHALATION HAZARD:	NO
IMDG	
PROPER SHIPPING NAME:	TOXIC SOLID, INORGANIC, N.O.S. (MANGANESE DICHLORIDE TETRAHYDRATE)
UN NUMBER:	3288
CLASS:	6.1
PACKING GROUP:	III
EMS-NO:	F-A, S-A
MARINE POLLUTANT :	YES
IATA	
PROPER SHIPPING NAME:	TOXIC SOLID, INORGANIC, N.O.S. (MANGANESE DICHLORIDE TETRAHYDRATE)

UN NUMBER: 3288
CLASS: 6.1
PACKING GROUP: III

SECTION 15. REGULATORY INFORMATION

SARA 302 COMPONENTS THIS MATERIAL DOES NOT CONTAIN ANY COMPONENTS WITH A SECTION 302 EHS TPQ.

SARA 313 COMPONENTS THE FOLLOWING COMPONENTS ARE SUBJECT TO REPORTING LEVELS ESTABLISHED BY SARA TITLE III, SECTION 313:

	CAS-NO.	REVISION DATE
Manganese(II) chloride tetrahydrate	13446-34-9	07-08-2015

SARA 311/312 HAZARDS ACUTE HEALTH HAZARD, CHRONIC HEALTH HAZARD

MASSACHUSETTS RIGHT TO KNOW COMPONENTS
NO COMPONENTS ARE SUBJECT TO THE MASSACHUSETTS RIGHT TO KNOW ACT.

PENNSYLVANIA RIGHT TO KNOW COMPONENTS

	CAS-NO.	REVISION DATE
Manganese(II) chloride tetrahydrate	13446-34-9	07-08-2015

SECTION 16. OTHER INFORMATION

FULL TEXT OF H-STATEMENTS REFERRED TO UNDER SECTIONS 2 AND 3.

H301 TOXIC IF SWALLOWED.
H318 CAUSES SERIOUS EYE DAMAGE.
H373 MAY CAUSE DAMAGE TO ORGANS THROUGH PROLONGED OR REPEATED EXPOSURE.
H402 HARMFUL TO AQUATIC LIFE.

MSDS LEGEND

MW: MOLECULAR WEIGHT
MF: MOLECULAR FORMULA
VOC: VOLATILE ORGANIC COMPOUNDS
ACGIH: AMERICAN CONFERENCE OF GOVERNMENTAL INDUSTRIAL HYGINISTS
CAS: CHEMICAL ABSTRACTS SERIVE REGISTRY NUMBER
OSHA: OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION
PEL: PERMISSIBLE EXPOSURE LIMIT (OSHA)
TLV: THRESHOLD LIMIT VALUE (ACGIH)
IMPORTANT:

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