Material Safety Data Sheet

Trimet™ solution

MSDS Number 1665 (4/1/2008) 6 Pages

Section 1: C/HEMICAL PRODUCT and COMPANY IDENTIFICATION

1.1 Product Name ..... **Trimet™ Solution**
Chemical Family ..... Thiocarbonate
Synonyms ..... Carbonotrithioic acid, disodium salt;
Formula ..... $C_2S_3.2Na$

1.2 Manufacturer ..... Tessenderlo Kerley Inc.
2255 N. 44th Street, Suite 300
Phoenix, Arizona 85008-3279
Information ..... (602) 889-8300

1.3 Emergency Contact ..... (800) 877-1737 (Tessenderlo Kerley)
(800) 424-9300 (CHEMTREC)

Section 2: COMPOSITION, INFORMATION ON INGREDIENTS

2.1 Chemical Ingredients (% by wt.)
2.2

Carbonotrithioic acid, disodium salt	CAS #:534-18-9	24 - 43%
Water	CAS # 7732-18-5	57 - 76%

(See Section 8 for exposure guidelines)

Section 3: HAZARDS IDENTIFICATION

NFPA: Health - 3 Flammability - 0 Reactivity - 0

EMERGENCY OVERVIEW

Warning:
Product solution is very alkaline and corrosive to the skin.
Eye contact will cause severe eye irritation and possible corneal damage.
Ingestion will result in corrosion of tissues of the gastrointestinal tract and in contact with stomach acid release toxic hydrogen sulfide and carbon disulfide..

Section 3: HAZARDS IDENTIFICATION (Cont.)

3.1 POTENTIAL HEALTH EFFECTS

EYE: Contact with the eyes by product mist or solution will cause irritation and a burning sensation. Eye contact may result in severe corneal injury.

SKIN CONTACT: Contact with product mist or solution will cause skin irritation and may result in corrosion of the skin.

SKIN ABSORPTION: Absorption is unlikely to occur.

INGESTION: Ingestion of product solution will cause irritation and corrosion of the gastrointestinal tract to include nausea, vomiting and diarrhea. In addition, contact with stomach acid will cause the release of toxic hydrogen sulfide and carbon disulfide vapors.

INHALATION: Inhalation of product vapors, may be fatal and liquid or mist may produce burns of the respiratory tract.

CHRONIC EFFECTS/CARCINOGENICITY: Not listed as a carcinogen by NTP, IARC or OSHA.

Section 4: FIRST AID MEASURES

4.1 EYES: Immediately flush with large quantities of water for 15 minutes. Hold eyelids apart to insure thorough flushing of the entire area of the eye and lids. Obtain immediate medical attention.

4.2 SKIN: Immediately flush with large quantities of water. Remove contaminated clothing under a safety shower. Obtain immediate medical attention.

4.3 INGESTION: DO NOT INDUCE VOMITING. If victim is conscious, immediately give large quantities of water. If vomiting does occur, continue to give fluids. Obtain immediate medical attention.

4.4 INHALATION: Remove victim from contaminated atmosphere. If breathing is labored, administer oxygen. If breathing has ceased, clear airway and start mouth to mouth resuscitation. If heart has stopped beating, external heart massage should be applied. Obtain immediate medical attention.

Section 5: FIRE FIGHTING MEASURES

5.1 FLAMMABLE PROPERTIES

FLASH POINT: Not combustible **METHOD USED:** NA

5.2 FLAMMABLE LIMITS **LFL**: ND **UFL**: ND

5.3 EXTINGUISHING MEDIA: Water fog, foam, CO_2 dry chemical or as appropriate for combustibles involved in fire.

Section 5: FIRE FIGHTING MEASURES (Cont.)

5.4 FIRE & EXPLOSIVE HAZARDS: When heated or involved in a fire carbon disulfide and/or hydrogen sulfide may evolve. These gases are heavier than air and may accumulate in low areas. They may form explosive mixtures with air. (See Section 5.2) Keep containers/storage vessels in fire area cooled with water spray.

5.5 FIRE FIGHTING EQUIPMENT: Because of the possible presence of toxic gases and the corrosive nature of the product, wear self-contained breathing apparatus, positive pressure, MSHA/NIOSH (approved or equivalent) and full protective gear.

Section 6: ACCIDENTAL RELEASE MEASURES

6.1 Small releases: Vapors from spill may ignite. Keep sources of ignition away from spill. Confine and absorb small releases on sand, earth or other inert absorbent. Place contaminated product and soil in a suitable container for disposal.

6.2 Large releases: Confine area to qualified personnel. Wear proper protective equipment. Shut off release if safe to do so. Dike or divert spill area to prevent runoff into sewers, drains or surface waterways (potential aquatic toxicity). Recover as much of the solution as possible. Treat remaining material as a small release (above).

Section 7: HANDLING and STORAGE

7.1 Handling: Handle in enclosed containers to avoid breathing product. Avoid contact with skin and eyes. Use in a well ventilated area. Wash thoroughly after handling.

7.2 Storage: Store in well ventilated areas in enclosed containers. Do not store combustibles in the area of storage vessels. Keep away from any sources of heat or flame. Store tote and smaller containers out of direct sunlight at moderate temperatures [<100ºF (38ºC), >40ºF(5ºC)]. (See Section 10.4 for materials of construction)

Section 8: EXPOSURE CONTROLS, PERSONAL PROTECTION

8.1 RESPIRATORY PROTECTION: Wear self-contained breathing apparatus, positive pressure, MSHA/NIOSH (approved or equivalent) if gas concentrations exceed established exposure limits.

8.2 SKIN PROTECTION: Gloves, boots, and full chemical suit should be worn to prevent liquid contact. Wash contaminated clothing prior to reuse. Contaminated shoes cannot be cleaned and should be discarded

8.3 EYE PROTECTION: Chemical goggles and a full face shield.

8.4 EXPOSURE GUIDELINES:

	OSHA		ACGIH	
	TWA	STEL	TLV	STEL
Hydrogen sulfide	20 ppm (ceiling)		10 ppm (ceiling)	
Carbon disulfide	4 ppm (skin)	12 ppm (skin)	10 ppm (skin)	

Section 8: EXPOSURE CONTROLS, PERSONAL PROTECTION (Cont.)

8.5 ENGINEERING CONTROLS: Use adequate exhaust ventilation to prevent inhalation of product vapors. Maintain eyewash/safety shower in areas where chemical is handled.

Section 9: PHYSICAL and CHEMICAL PROPERTIES

9.1 APPEARANCE:	Clear cherry red liquid
9.2 ODOR:	Sulfide odor
9.3 BOILING POINT:	212ºF (100ºC)
9.4 VAPOR PRESSURE:	Not determined
9.5 VAPOR DENSITY:	Not determined
9.6 SOLUBILITY IN WATER:	Not determined
9.7 SPECIFIC GRAVITY:	1.2 – 1.4 @ 60°F (10.0 – 11.66 lbs/gal)
9.8 CRYSTAL POINT:	-1°F (-18.5°C)
9.9 pH:	12 – 13.5
9.10 VOLATILE:	Not determined

Section 10: STABILITY and REACTIVITY

10.1 STABILITY: This is a stable material under normal conditions of storage and handling.

10.2 HAZARDOUS POLYMERIZATION: Will not occur.

10.3 HAZARDOUS DECOMPOSITION PRODUCTS: Carbon disulfide is a normal decomposition product. Contact with acids or acidic materials will release hydrogen sulfide and carbon disulfide. If involved in a fire, oxides of carbon and sulfur may be generated..

10.4 INCOMPATIBILITY: acids or acidic materials (pH<5) or oxidizing agents. Avoid all possible sources of ignition. (SEE Section 7.2, Storage)

Section 11: TOXICOLOGICAL INFORMATION

11.1 ORAL: Female Rats LD_{50}: 3,500 mg/kg (25% solution)
Male Rats LD_{50}: 2,900 mg/kg (25% solution)

11.2 DERMAL: Skin-Albino Rabbit LD_{50}: 3,100 mg/kg (25% solution)

11.3 INHALATION: Rat LC_{50}: >5.93 mg/l (25% solution – exposure time unknown)

11.4 CHRONIC/CARCINOGENICITY: No evidence available

11.5 TERATOLOGY: Data not available

11.6 REPRODUCTION: Data not available

Section 11: TOXICOLOGICAL INFORMATION (Cont.)

11.7 MUTAGENICITY: Data not available

Section 12: ECOLOGICAL INFORMATION

No data available.

Section 13: DISPOSAL CONSIDERATIONS

If released to the environment for other than its intended purpose, this product may meet the criteria of a D002, Corrosive waste. It is not a listed hazardous waste.

Section 14: TRANSPORT INFORMATION

14.1 DOT Shipping Name: Corrosive liquid, basic, inorganic, n.o.s.

14.2 DOT Hazard Class: 8

14.3 UN/NA Number: UN3266

14.4 Packing Group: II

14.5 DOT Placard: Corrosive

14.6 DOT Label(s): Corrosive

14.7 IMO Shipping Name: Corrosive liquid, basic, inorganic, n.o.s.

14.8 RQ (Reportable Quantity): Not applicable

14.9 RR STCC Number:

Section 15: REGULATORY INFORMATION

15.1 OSHA: This product is considered a hazardous material under criteria of the Federal OSHA Hazard Communication Standard, 29 CFR 1910.1200.

15.2 SARA TITLE III:

a. **EHS** (Extremely Hazardous Substance) List: No

b. Section 311/312, (Tier I,II) Categories:

Immediate (acute)	Yes
Fire	Yes
Sudden release	No
Reactivity	Yes
Delayed (chronic)	No

Section 15: REGULATORY INFORMATION (Cont.)

15.2 SARA TITLE III: (Cont.)

c. Section 313 (Toxic Release Reporting-Form R): No

Chemical Name	CAS Number	Concentration
N/A		

d. **TPQ** (Threshold Planning Quantity): No

15.3 CERCLA/SUPERFUND: RQ (Reportable Quantity) No

15.4 TSCA (Toxic Substance Control Act) Inventory List: Yes

15.5 RCRA (Resource Conservation and Recovery Act) Status: D002 (?)
(See Section 13)

15.6 WHMIS (Canada) Hazard Classification: E, D2B

15.7 DOT Hazardous Material: (See Section 14) Yes

15.8 CAA Hazardous Air Pollutant (HAP) No

15.9 EINECS Inventory, EC #: 208-592-4

Section 16: OTHER INFORMATION

REVISIONS: The entire MSDS was reformatted to comply to ANSI Standard Z400.1-1993, by Technical Services-Tessenderlo Kerley, Inc.

Revised product strength, specific gravity and modified NFPA rating, 4/25/05.
Revised Toxicological Information, Section 11, added Section 15.9 EC#, 4/28/05.
Revised Storage temperatures, section 7.2, 9/22/05.
Revised Section 9.8, 11/29/2007.
Revised Section 1, 2, 4/1/2008