



Material Safety Data Sheet

Metam KLR 54%

Revision Date 24-Mar-2011

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY/UNDERTAKING

Product Name	Metam KLR 54%
Synonyms	Potassium methyldithiocarbamate
Use of the Substance/Preparation	Biocides, Agrochemical (soil disinfectant)
EPA Reg No	45728-27
Company/Undertaking Identification	Taminco Inc. Two Windsor Plaza, Suite 411 7540 Windsor Drive Allentown, PA 18195 (800) 223-3258
Emergency telephone number	In case of emergency call CHEMTREC 1-800-424-9300 703-527-3887 (International Calls), 02-8014-4880 (Australia local calls) For product information call (800) 223-3258

2. HAZARDS IDENTIFICATION

Appearance	yellow liquid, characteristic odor
Emergency Overview	<ul style="list-style-type: none">• DANGER!• Corrosive• Causes skin burns• Causes eye irritation• Harmful by inhalation• Harmful if swallowed• May be fatal if absorbed through skin• Repeated or prolonged skin contact may cause allergic reactions with susceptible persons• Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
Principal Routes of Exposure	<ul style="list-style-type: none">• Inhalation• Eye contact• Skin contact

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS-No	Weight %
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Potassium N-methyldithiocarbamate

137-41-7

37-58

4. FIRST AID MEASURES

Ingestion

- Call a physician or Poison Control Centre immediately
- Rinse mouth
- Give small amounts of water to drink
- Do not induce vomiting without medical advice
- Never give anything by mouth to an unconscious person
- Take the container, label, or product name and Pest Control Registration Number with you when seeking medical attention.

Skin Contact

- Immediately flush skin with running water for 20 minutes or until no traces remain. Wash with soap and water. Remove contaminated clothing immediately.
- Wash contaminated clothing before re-use
- Call a physician or Poison Control Centre immediately

Eye Contact

- Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 20 minutes.
- Call a physician or Poison Control Centre immediately

Inhalation

- Move to fresh air
- If breathing is difficult, give oxygen
- If not breathing, give artificial respiration
- Call a physician or Poison Control Centre immediately

Notes to Physician

- Potential for aspiration if swallowed

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

- water spray
- carbon dioxide (CO₂)
- dry chemical
- foam

Specific methods

- Evacuate area and fight fire from a safe distance
- Keep containers and surroundings cool with water spray
- Wash/Decontaminate removed clothing before reuse
- Dike and collect water used to fight fire
- Water runoff can cause environmental damage
- Do not flush into surface water or sanitary sewer system

Special protective equipment for fire-fighters

- Firefighters and others who may be exposed to products of combustion should wear full fire fighting turn out gear (full Bunker Gear) and self-contained breathing apparatus (pressure demand NIOSH approved or equivalent)

Specific hazards

- Heating or fire can release toxic gas
- Decomposes after dilution with water to form hydrogen sulfide which is highly flammable and toxic.
- Toxic to fish
- Toxic to wildlife and domestic animals

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions

- Wear suitable protective equipment
- Evacuate personnel to safe areas
- Keep people away from and upwind of spill/leak

Environmental Precautions

- Prevent product from entering drains
- Do not flush into surface water or sanitary sewer system
- Report spills as required by local and federal regulations.
- Toxic to fish
- Toxic to wildlife and domestic animals
- Read the product label for additional information.

Methods for Clean-up

- Prevent further leakage or spillage if safe to do so
- Contain and collect spillage with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13)
- Read the product label for additional information.

7. HANDLING AND STORAGE

Storage

Technical measures/Precautions

- Protect containers from physical damage
- Keep in a dry, cool and well-ventilated place
- Store in original container
- Keep away from food, drink and animal feedingstuffs
- Keep away from children
- Do not re-use empty containers
- Observe label precautions

Incompatible products

- acids
- copper
- zinc

Handling

Technical measures/Precautions

- Wear personal protective equipment
- Ensure that eyewash stations and safety showers are close to the workstation location
- Handle in accordance with good industrial hygiene and safety practice
- When using, do not eat, drink or smoke
- It is a violation of Federal Law to use this product in a manner that is inconsistent with its labeling.
- Toxic to fish
- Toxic to wildlife and domestic animals

Safe handling advice

- Avoid contact with skin, eyes and clothing
- Do not breathe vapors or spray mist
- Use only in well-ventilated areas
- Remove and wash contaminated clothing before re-use
- Wash hands and face before breaks and immediately after handling the product
- Re-open used containers with caution
- Empty containers retain product residue and may be hazardous
- Use this product only in accordance with its labeling and the Worker Protection Standard, 40 CFR 170. It contains requirements for training, decontamination, notification and emergency assistance.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Chemical Name	ACGIH TLV	OSHA PEL
Potassium N-methyldithiocarbamate	Not listed	None Established

Respiratory Protection

- In the case of dust or aerosol formation use respirator with an approved filter
- The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace
- Handle in accordance with good industrial hygiene and safety practice
- For additional information on the use and care of respiratory protection see product label.

Engineering measures

- Ensure adequate ventilation, especially in confined areas
- For additional information on ventilation requirements see product label or consult the Worker Protection Standard for agricultural pesticides (40 CFR 170.240(d)).

Personal Protective Equipment**Eye Protection**

- Tightly fitting safety goggles

Hand protection

- Impervious gloves
- Request information on glove permeation properties from the glove supplier

Skin Protection

- Wear suitable protective equipment
- Choose body protection according to the amount and concentration of the dangerous substance at the work place
- For information on the use and care of personal protective equipment see product label.

Other protective equipment

- Ensure that eyewash stations and safety showers are close to the workstation location

Environmental exposure controls

- Prevent product from entering drains
- Do not contaminate surface water
- Avoid subsoil penetration

9. PHYSICAL AND CHEMICAL PROPERTIES

General Information

Physical State
Color

Liquid
yellow tint

Odor percept

Important Health Safety and Environmental Information

Boiling Point/Range	97 - 102°C 206 - 215°F
Flash Point	Not applicable
Viscosity	3.70(cps) @ 20°C
Vapor Pressure	0.0575Pa @ 20 °C active ingredient
Partition Coefficient (n-octanol/water)	log Pow -2.9
pH	No data available 7.5 - 10.5 (54% solution)
Water solubility	Miscible
Oxidizing Properties	Not applicable
Evaporation Rate	Not applicable
Explosion Limits	Not explosive
Explosive Properties	
Melting Point/Range	-20°C -4°F
Density	1.28 g/mL
Flammability	The product is not flammable
Autoignition Temperature	No data available

10. STABILITY AND REACTIVITY

Stability	<ul style="list-style-type: none"> • Stable
Conditions to Avoid	<ul style="list-style-type: none"> • To avoid thermal decomposition, do not overheat • Decomposes by reaction with strong acids • copper • zinc
Hazardous Decomposition Products	<ul style="list-style-type: none"> • Carbon oxides • Nitrogen oxides (NOx) • sulphur oxides • methyl isothiocyanate • hydrogen sulfide
Hazardous Polymerization	Hazardous polymerization does not occur.

11. TOXICOLOGICAL INFORMATION

Eye Contact	Contact with eyes may cause irritation.
Skin Contact	Corrosive to skin. May be fatal if absorbed through skin. Repeated or prolonged skin contact may cause allergic reactions with susceptible persons.
Inhalation	Exposure may result in reddening, tears and itching of the eyes and soreness in the nose and throat, together with coughing, shortness of breath.
Ingestion	Ingestion may cause burns of the gastrointestinal tract, nausea, vomiting, and diarrhea. Harmful if swallowed.

Chronic Effects

May cause damage to organs through prolonged or repeated exposure. Kidney. Liver. Bladder. Nasal Cavities. Use of alcoholic beverages may enhance toxic effects.

Chemical Name	IARC	ACGIH	OSHA	NTP
Potassium N-methyldithiocarbamate	Not Listed	Not Listed	Not Listed	Not Listed

Aggravated Medical Conditions Respiratory disorders. Skin disorders.

Product Information

LD50/oral/rat = 500 mg/kg
LD50/dermal/rat = > 2000 mg/kg
LC50/inhalation/4h/rat = 3.04 mg/l
Eye irritation rabbit eye none
Skin irritation rabbit skin Corrosive
Sensitization Did not cause sensitization on laboratory animals
Target Organ Effects Nasal inner lining, Kidney, Liver, Bladder
Mutagenic Effects Did not show mutagenic effects in animal experiments
Reproductive toxicity No toxicity to reproduction
Carcinogenic effects Did not show carcinogenic effects in animal experiments

Central nervous system Causes severe burns Symptoms may be delayed

12. ECOLOGICAL INFORMATION

Ecotoxicity

Toxicity to fish LC50 : 0.10 - 100 mg/L
EC50/48h/daphnia = 110mg/L
EC50/72h/algae = 0.56 mg/l
Toxicity to bacteria - 4.36 mg/l (3 h)

Mobility

Koc = <50

Persistence and Degradability

aquatic environment
 According to the results of tests of biodegradability this product is considered as being readily biodegradable

Bioaccumulative Potential

minimum

13. DISPOSAL CONSIDERATIONS

Waste disposal methods Dispose of in accordance with local regulations

Contaminated Packaging Empty containers should be taken for local recycling, recovery or waste disposal.

14. TRANSPORT INFORMATION

DOT

Proper Shipping Name UN 3267, Corrosive liquid, basic, organic, n.o.s., (Metam-Potassium 54% in water), 8, PG II
Hazard Class 8
UN-No UN3267
Packing Group PGII
Reportable Quantity (RQ) None
Marine Pollutant Yes.
Labelling Corrosive

IMDG/IMO

Proper Shipping Name UN 3267, Corrosive liquid, basic, organic, n.o.s., (Metam-Potassium 54% in water), 8, PG II, Marine pollutant
Hazard Class 8
UN-No UN3267
Packing Group PGII
Marine Pollutant Yes
Labelling Corrosive, Marine pollutant

IATA

UN-No UN3267
Proper Shipping Name UN 3267, Corrosive liquid, basic, organic, N.O.S., (Metam-Potassium 54% in water), 8, PG II
Hazard Class 8
Packing Group PGII
Labelling Corrosive

15. REGULATORY INFORMATION

International Inventories

NOTE: X = Listed

Chemical Name	TSCA	EINECS	DSL	ENCS	MITI	AICS	PICCS	IECSC	KECL	NZIoC
Potassium N-methyldithiocarbamate		2052925		2-2895		X		X		X

OSHA HAZARD CLASSIFICATION:Corrosive, Toxic

SARA 311/312 Hazardous Categorization
 Acute Health Hazard

SARA TITLE III SECTION 313 INFORMATION:

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372:

NOTE: X = Listed

Chemical Name	de minimus %
Potassium N-methyldithiocarbamate 137-41-7	X

CERCLA Hazardous Substances

This product does not contain any RQs or TPQs under this regulation.

State Right-to-Know**NOTE: X = Listed**

Chemical Name	PA	NJ	MA
Potassium N-methyldithiocarbamate 137-41-7	Not Listed	Not Listed	Not Listed

California Proposition 65

This product does not contain any Proposition 65 chemicals.

WHMIS Hazard ClassD2B Toxic materials
E Corrosive material**Canadian Environmental Protection Act**

This product has been classified according to the hazard criteria of the CPR and the MSDS contains all of the information required by the CPR

16. OTHER INFORMATION

HMIS	Health 3	Flammability 1	Physical Hazard 0
NFPA	Health 3	Fire 1	Instability 0

Legend: 0 - Minimal; 1 - Slight; 2 - Moderate; 3 - Serious; 4 - Severe

Literary Reference

-Taminco Proprietary Studies -IUCALID CD-ROM, 2000 -TOMES on line

Disclaimer: The information provided on this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

End of Safety Data Sheet