SAFETY DATA SHEET
according to the OSHA Hazard Communication Standard

Metam KLR 54%
PRD / SDSUS / Z8 / 0330

Version	Revision Date:	SDS Number:	Date of last issue: 07/05/2024
1.7	07/18/2024	150000104093	Date of first issue: 09/06/2016

SECTION 1. IDENTIFICATION

Product name : Metam KLR 54%
Product code : P5114445

Manufacturer or supplier's details

Company name of supplier : Taminco US LLC
A Subsidiary of Eastman Chemical Company
Address : 200 South Wilcox Drive
Kingsport TN 37660
Telephone : (423) 229-2000
Emergency telephone : CHEMTREC: +1-800-424-9300, +1-703-527-3887 CCN7321

Recommended use of the chemical and restrictions on use

Recommended use : Agrochemical (soil disinfectant)

SECTION 2. HAZARDS IDENTIFICATION

GHS classification in accordance with the OSHA Hazard Communication Standard (29 CFR 1910.1200)

Corrosive to Metals : Category 1

Acute toxicity (Oral) : Category 4

Acute toxicity (Inhalation) : Category 4

Skin corrosion : Category 1B

Serious eye damage : Category 1

Carcinogenicity : Category 2

Reproductive toxicity : Category 2

Specific target organ toxicity - repeated exposure : Category 2

GHS label elements

Hazard pictograms :

Signal Word : Danger

Hazard Statements : H290 May be corrosive to metals.
H302 + H332 Harmful if swallowed or if inhaled.
H314 Causes severe skin burns and eye damage.
H351 Suspected of causing cancer.
H361 Suspected of damaging fertility or the unborn child.

H373 May cause damage to organs through prolonged or repeated exposure.

Precautionary Statements :

Prevention:

P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P234 Keep only in original container.
P260 Do not breathe mist or vapors.
P264 Wash skin thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P271 Use only outdoors or in a well-ventilated area.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response:

P301 + P312 + P330 IF SWALLOWED: Call a POISON CENTER/ doctor if you feel unwell. Rinse mouth.
P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower.
P304 + P340 + P310 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/ doctor.
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.
P308 + P313 IF exposed or concerned: Get medical advice/ attention.
P363 Wash contaminated clothing before reuse.
P390 Absorb spillage to prevent material damage.

Storage:

P405 Store locked up.
P406 Store in corrosive resistant container with a resistant inner liner.

Disposal:

P501 Dispose of contents/ container to an approved waste disposal plant.

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Components

Chemical name	CAS-No.	Concentration (% w/w)
metam potassium	137-41-7	>= 50 - < 70

Eastman is committed to the safety, health and environment of our employees, our customers, and the communities we operate within. As part of this commitment, Eastman's Safety Data Sheets (SDS) are prepared in accordance with all applicable national and local regulations. The compositions of our documents reflect these requirements which include, but are not limited to, requirements under the Globally Harmonized System of Classification and Labeling (GHS). These compositions commonly involve the use of ranges versus specific analytical values. If you require a composition that is more specific , please refer to the Certificate of Analysis, sales specification, or contact your Customer Service Representative.

SECTION 4. FIRST AID MEASURES

If inhaled	:	Move to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Treat symptomatically. If symptoms persist, call a physician.
In case of skin contact	:	Wash off with soap and plenty of water. Wash off immediately with plenty of water for at least 15 minutes. Wash contaminated clothing before re-use. In the case of skin irritation or allergic reactions see a physician.
In case of eye contact	:	Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician. If easy to do, remove contact lens, if worn. Call a physician or poison control center immediately.
If swallowed	:	Seek medical advice. Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person.
Most important symptoms and effects, both acute and delayed	:	Health injuries may be delayed. Liver disorders Kidney disorders Rash Redness Use of alcoholic beverages may enhance toxic effects Harmful if swallowed or if inhaled. Causes severe skin burns and eye damage. May be harmful in contact with skin. Suspected of causing cancer. Suspected of damaging fertility or the unborn child. May cause damage to organs through prolonged or repeated exposure.
Notes to physician	:	General advice for dithiocarbamates Biomonitoring possible at chronical exposure: determination of TTCA in the urine at the end of the workday/week. Bloodtesting for delayed effects: livertests, kidney function, thyroid function

SECTION 5. FIRE-FIGHTING MEASURES

Suitable extinguishing media	:	Carbon dioxide (CO2) Dry chemical Water spray

Unsuitable extinguishing media	:	Do not use a solid water stream as it may scatter and spread fire.
Specific hazards during fire fighting	:	Thermal decomposition can lead to release of irritating gases and vapors.
Hazardous combustion products	:	Nitrogen oxides (NOx) Carbon monoxide Sulfur oxides
Further information	:	Do not allow run-off from fire fighting to enter drains or water courses.
Special protective equipment for fire-fighters	:	Wear an approved positive pressure self-contained breathing apparatus in addition to standard fire fighting gear.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	:	Wear appropriate personal protective equipment. Local authorities should be advised if significant spillages cannot be contained.
Environmental precautions	:	Avoid release to the environment.
Methods and materials for containment and cleaning up	:	Sweep up or vacuum up spillage and collect in suitable container for disposal. Contain spillage, soak up with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and transfer to a container for disposal according to local / national regulations (see section 13).

SECTION 7. HANDLING AND STORAGE

Advice on protection against fire and explosion	:	Keep product and empty container away from heat and sources of ignition. Take precautionary measures against static discharges.
Advice on safe handling	:	Do not breathe vapors or spray mist. Do not get on skin or clothing. Do not get in eyes. Avoid contact with skin, eyes and clothing. Do not swallow. Ensure adequate ventilation. Wash thoroughly after handling.
Conditions for safe storage	:	Store in a well-ventilated place. Keep container tightly closed. Keep out of reach of children.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredients with workplace control parameters
Contains no substances with occupational exposure limit values.

Engineering measures	:	Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain

airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.
Ensure adequate ventilation.

Personal protective equipment

Respiratory protection	:	Wear respiratory protection.
Filter type	:	Filter type ABEK-P
Hand protection		
Remarks	:	Neoprene gloves Rubber gloves The data about break through time/strength of material are standard values! The exact break through time/strength of material has to be obtained from the producer of the protective glove.
Eye protection	:	Wear safety glasses with side shields or goggles. Face-shield Always wear eye protection when the potential for inadvertent eye contact with the product cannot be excluded.
Skin and body protection	:	Complete suit protecting against chemicals
Protective measures	:	Remove respiratory and skin/eye protection only after vapors have been cleared from the area. Ensure that eye flushing systems and safety showers are located close to the working place. Use personal protective equipment as required.
Hygiene measures	:	Handle in accordance with good industrial hygiene and safety practice.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	liquid
Color	:	light yellow
Odor	:	rotten-egg like
pH	:	7.5 - 10.5 Concentration: 690 g/l
Melting point/freezing point	:	No data available
Boiling point/boiling range	:	207 - 216 °F / 97 - 102 °C
Flash point	:	Not applicable
Evaporation rate	:	not determined
Flammability (solid, gas)	:	not auto-flammable
Upper explosion limit / Upper flammability limit	:	not determined
Lower explosion limit / Lower flammability limit	:	not determined

Vapor pressure	:	0.057 Pa (77 °F / 25 °C)
Relative vapor density	:	not determined
Relative density	:	1.278
Density	:	1.28 g/cm3
Solubility(ies)		
Water solubility	:	completely soluble
Partition coefficient: n-octanol/water	:	log Pow: -2.9
Autoignition temperature	:	not determined
Decomposition temperature	:	not determined
Viscosity		
Viscosity, dynamic	:	3.77 mPa,s (68 °F / 20 °C)
Viscosity, kinematic	:	3 mm2/s (68 °F / 20 °C) Method: calculated
Explosive properties	:	Not explosive
Oxidizing properties	:	The substance or mixture is not classified as oxidizing.

SECTION 10. STABILITY AND REACTIVITY

Reactivity	:	None reasonably foreseeable.
Chemical stability	:	Stable under normal conditions.
Possibility of hazardous reactions	:	Corrosive in contact with metals MITC vapor can be released during processing
Conditions to avoid	:	Heat, flames and sparks. Take precautionary measures against static discharges.
Incompatible materials	:	Strong acids Metals
Hazardous decomposition products	:	Carbon dioxide (CO2) Nitrogen oxides (NOx) Sulfur oxides MITC vapor can be released during processing

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity

Harmful if swallowed or if inhaled.

Product:

Acute oral toxicity	:	LD50 Oral (Rat): 1,000 mg/kg

Remarks: Harmful if swallowed.

Acute inhalation toxicity : LC50 (Rat): 3.03 mg/l
Exposure time: 4 h

Remarks: Harmful if inhaled.

Acute dermal toxicity : LD50 Dermal (Rat): > 2,000 mg/kg

Remarks: No significant adverse effects were reported

Skin corrosion/irritation
Causes severe burns.

Product:
Species : Rabbit
Result : Corrosive after 3 minutes to 1 hour of exposure

Remarks : Causes severe skin burns.

Serious eye damage/eye irritation
Causes serious eye damage.

Product:
Assessment : Corrosive

Remarks : Causes serious eye damage.

Respiratory or skin sensitization

Skin sensitization
Not classified based on available information.

Respiratory sensitization
Not classified based on available information.

Product:
Result : Does not cause skin sensitization.

Germ cell mutagenicity
Not classified based on available information.

Product:
Germ cell mutagenicity - Assessment : Did not show mutagenic effects in animal experiments.

Carcinogenicity
Suspected of causing cancer.

Product:

Carcinogenicity - Assess- : Limited evidence of carcinogenicity in animal studies

ment

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.

OSHA No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

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.

Reproductive toxicity

Suspected of damaging fertility or the unborn child.

Product:

Reproductive toxicity - Assessment : Possible risk of harm to the unborn child.

STOT-single exposure

Not classified based on available information.

Product:

Remarks : No data available

STOT-repeated exposure

May cause damage to organs through prolonged or repeated exposure.

Product:

Target Organs : Nasal inner lining, Kidney, Liver, Bladder

Aspiration toxicity

Not classified based on available information.

Product:

No aspiration toxicity classification

Experience with human exposure

Product:

Inhalation : Remarks: Harmful if inhaled.
May cause damage to organs through prolonged or repeated exposure.

Skin contact : Symptoms: Causes skin burns.
Symptoms: May cause an allergic skin reaction.

Eye contact : Symptoms: Causes eye burns.

Ingestion : Remarks: Harmful if swallowed.
May cause damage to organs through prolonged or repeated exposure.

Further information

Product:

Remarks : None known.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Product:

Toxicity to fish	:	LC50 (Fish): 0.10 - 300 mg/l Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): 0.1 - 100 mg/l Exposure time: 48 h
Toxicity to algae/aquatic plants	:	EC50 (Selenastrum capricornutum (green algae)): 0.1 - 10 mg/l Exposure time: 72 h
Toxicity to microorganisms	:	IC50 (Bacteria): 10 - 100 mg/l Exposure time: 3 h

Components:

metam potassium:

Toxicity to fish	:	LC50 (Fish): 0.0785 - 108 mg/l Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): 0.166 - 6.34 mg/l Exposure time: 48 h
Toxicity to algae/aquatic plants	:	EC50 (Selenastrum capricornutum (green algae)): 0.117 - 0.556 mg/l Exposure time: 72 h
Toxicity to microorganisms	:	IC50 (Bacteria): 4.36 mg/l Exposure time: 3 h

Persistence and degradability

Product:

Biodegradability	:	Remarks: Not readily biodegradable.

Bioaccumulative potential

Product:

Bioaccumulation	:	Remarks: Bioaccumulation is unlikely.

Mobility in soil

Product:

Distribution among environmental compartments	:	Koc: < 50

Other adverse effects

No data available

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues	:	Dispose of in accordance with local regulations.
Contaminated packaging	:	Empty containers should be taken to an approved waste handling site for recycling or disposal.

SECTION 14. TRANSPORT INFORMATION

International Regulations

IATA-DGR

UN/ID No.	:	UN 3267
Proper shipping name	:	Corrosive liquid, basic, organic, n.o.s. (Metam-Potassium 54% in water)
Class	:	8
Packing group	:	II
Labels	:	Corrosive
Packing instruction (cargo aircraft)	:	855
Packing instruction (passenger aircraft)	:	851

IMDG-Code

UN number	:	UN 3267
Proper shipping name	:	CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S. (Metam-Potassium 54% in water, metam potassium)
Class	:	8
Packing group	:	II
Labels	:	8
EmS Code	:	F-A, S-B
Marine pollutant	:	yes

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

Domestic regulation

49 CFR

UN/ID/NA number	:	UN 3267
Proper shipping name	:	Corrosive liquid, basic, organic, n.o.s. (Metam-Potassium 54% in water)
Class	:	8
Packing group	:	II
Labels	:	CORROSIVE
ERG Code	:	153
Marine pollutant	:	no

Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

SECTION 15. REGULATORY INFORMATION

CERCLA Reportable Quantity
This material does not contain any components with a CERCLA RQ.

SARA 304 Extremely Hazardous Substances Reportable Quantity
This material does not contain any components with a section 304 EHS RQ.

SARA 302 Extremely Hazardous Substances Threshold Planning Quantity
This material does not contain any components with a section 302 EHS TPQ.

SARA 311/312 Hazards : Corrosive to Metals
Acute toxicity (any route of exposure)
Carcinogenicity
Reproductive toxicity
Specific target organ toxicity (single or repeated exposure)
Skin corrosion or irritation
Serious eye damage or eye irritation

SARA 313 : The following components are subject to reporting levels established by SARA Title III, Section 313:

metam potassium	137-41-7

California Prop. 65
WARNING: This product can expose you to chemicals including metam potassium, which is/are known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

The ingredients of this product are reported in the following inventories:

TCSI	:	On the inventory, or in compliance with the inventory
TSCA	:	Product contains substance(s) not listed on TSCA inventory.
AIIC	:	On the inventory, or in compliance with the inventory
DSL	:	This product contains the following components that are not on the Canadian DSL nor NDSL. metam potassium
ENCS	:	On the inventory, or in compliance with the inventory
ISHL	:	On the inventory, or in compliance with the inventory
IECSC	:	On the inventory, or in compliance with the inventory

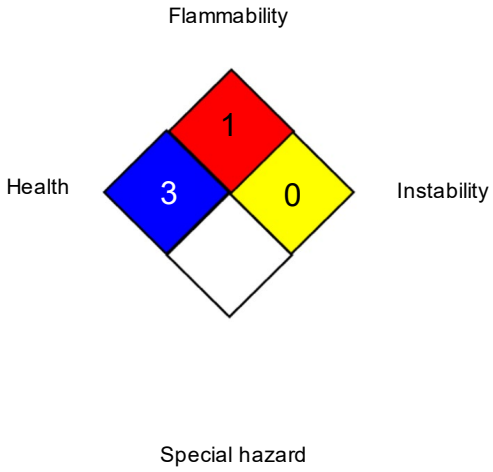
TSCA list
No substances are subject to a Significant New Use Rule.

No substances are subject to TSCA 12(b) export notification requirements.

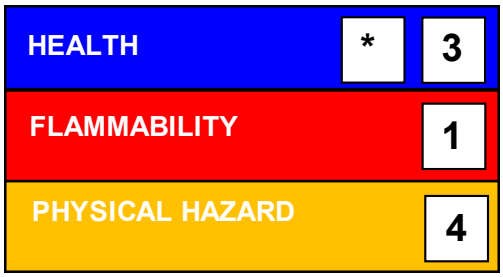
SECTION 16. OTHER INFORMATION

Further information

NFPA 704:



HMIS® IV:



HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. The "*" represents a chronic hazard, while the "/" represents the absence of a chronic hazard.

Full text of other abbreviations

AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concern-

ing the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

Revision Date : 07/18/2024

The information provided in 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 guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered 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 materials or in any process, unless specified in the text.

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