

SAFETY DATA SHEET

Metam CLR 42%



Version	Revision Date:	SDS Number:	Date of last issue: 06/07/2016
1.2	06/21/2017	15000104066	Date of first issue: 10/22/2015
PRD		SDSUS / EN / 0001	

SECTION 1. IDENTIFICATION

Product name : Metam CLR 42%

Product code : 51053-00, P5105301, P5105305

EPA Registration Number : 45728-16

Manufacturer or supplier's details

Company name of supplier : Eastman Chemical Company

Address : 200 South Wilcox Drive
Kingsport TN 37660-5280

Telephone : (423) 229-2000

Emergency telephone number : CHEMTREC: +1-800-424-9300, +1-703-527-3887 CCN7321

Recommended use of the chemical and restrictions on use

Recommended use : Agrochemical (soil disinfectant)

Restrictions on use : None known.

SECTION 2. HAZARDS IDENTIFICATION

GHS classification in accordance with 29 CFR 1910.1200

Acute toxicity (Oral) : Category 4

Acute toxicity (Inhalation) : Category 4

Skin corrosion : Category 1B

Serious eye damage : Category 1

Skin sensitisation : Category 1

Carcinogenicity : Category 2

Reproductive toxicity : Category 2

Specific target organ toxicity - repeated exposure : Category 2

Corrosive to metals : Category 1

GHS label elements

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Hazard pictograms :



Signal word : Danger

Hazard statements : H290 May be corrosive to metals.
H302 Harmful if swallowed.
H332 Harmful if inhaled.
H314 Causes severe skin burns and eye damage.
H317 May cause an allergic skin reaction.
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.
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.
P271 Use only outdoors or in a well-ventilated area.
P272 Contaminated work clothing should not be allowed out of the workplace.
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.
P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.
P363 Wash contaminated clothing before reuse.

Storage:

P403 + P233 Store in a well-ventilated place. Keep container tightly closed.

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P405 Store locked up.

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 sodium	137-42-8	>= 27 - <= 42

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 centre 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
- Notes to physician : General advice for dithiocarbamates
Biomonitoring possible at chronic exposure: determination of TTCA in the urine at the end of the workday/week.
Bloodtesting for delayed effects: liver tests, kidney function, thyroid function

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SECTION 5. FIREFIGHTING 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.
Do NOT use water jet.
- Specific hazards during fire-fighting : Thermal decomposition can lead to release of irritating gases and vapours.
- Hazardous combustion products : Nitrogen oxides (NO_x)
Carbon oxides
Sulphur oxides
- Further information : Do not allow run-off from fire fighting to enter drains or water courses.
- Special protective equipment for firefighters : 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.
- Advice on safe handling : Avoid inhalation of vapour or 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 : Keep tightly closed.

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SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Contains no substances with occupational exposure limit values.

Hazardous components without workplace control parameters

Components	CAS-No.
metam sodium	137-42-8

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 : Rubber gloves Neoprene 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 vapours 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

Colour : light yellow

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pH	:	7.5 - 10.5 Concentration: 510 g/l
Melting point/freezing point	:	No data available
Boiling point/boiling range	:	97 - 102 °C
Flash point	:	Not applicable
Flammability (solid, gas)	:	not auto-flammable
Vapour pressure	:	0.000575 hPa (25 °C)
Density	:	1.15 - 1.21 g/cm ³
Solubility(ies) Water solubility	:	578.29 g/l
Partition coefficient: n-octanol/water	:	log Pow: -2.91
Viscosity Viscosity, kinematic	:	3.54 mm ² /s (20 °C)
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 vapour can be released during processing
Conditions to avoid	:	Heat
Incompatible materials	:	Metals Strong acids and oxidizing agents
Hazardous decomposition products	:	Carbon dioxide (CO ₂) Nitrogen oxides (NO _x) Sulphur oxides MITC vapour can be released during processing

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity

Harmful if swallowed.

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Harmful if inhaled.

Product:

Acute oral toxicity : LD50 Oral (Rat): 896 mg/kg

Remarks: Harmful if swallowed.

Acute inhalation toxicity : LC50 (Rat): 2.54 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

Components:

metam sodium:

Acute oral toxicity : LD50 (Rat): 896 mg/kg

Acute inhalation toxicity : LC50 (Rat): 2.54 mg/l
Exposure time: 4 h

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

Skin corrosion/irritation

Causes severe burns.

Product:

Species: Rabbit

Result: Corrosive after 3 minutes to 1 hour of exposure

Remarks: Causes severe skin burns.

May cause an allergic skin reaction.

Components:

metam sodium:

Species: Rabbit

Result: Corrosive

Serious eye damage/eye irritation

Causes serious eye damage.

Product:

Assessment: Corrosive

Remarks: Causes serious eye damage.

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Respiratory or skin sensitisation

Skin sensitisation

May cause an allergic skin reaction.

Respiratory sensitisation

Not classified based on available information.

Product:

Species: Guinea pig

Result: Causes sensitisation.

Components:

metam sodium:

Species: Guinea pig

Result: Causes sensitisation.

Germ cell mutagenicity

Not classified based on available information.

Product:

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

Components:

metam sodium:

Genotoxicity in vitro : Remarks: In vitro tests did not show mutagenic effects

Carcinogenicity

Suspected of causing cancer.

Product:

Carcinogenicity - Assessment : Limited evidence of carcinogenicity in animal studies

Components:

metam sodium:

Remarks: Limited evidence of a carcinogenic effect.

IARC No component 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 identified as a carcinogen or potential carcinogen by OSHA.

NTP No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen

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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.

STOT - repeated exposure

May cause damage to organs through prolonged or repeated exposure.

Product:

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

Components:

metam sodium:

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

Aspiration toxicity

Not classified based on available information.

Product:

No aspiration toxicity classification

Further information

Product:

Remarks: None known.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Product:

Toxicity to fish	:	LC50 (Fish): 0.10 - 100 mg/l Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): 1 - 10 mg/l Exposure time: 48 h
Toxicity to algae	:	EC50 (Selenastrum capricornutum (green algae)): 0.56 mg/l Exposure time: 72 h
Toxicity to microorganisms	:	IC50 (Bacteria): 4.36 mg/l Exposure time: 3 h

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Components:

metam sodium:

Toxicity to fish : LC50 (Fish): 0.10 - 100 mg/l
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 1 - 10 mg/l
Exposure time: 48 h

Toxicity to algae : EC50 (Selenastrum capricornutum (green algae)): 0.56 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: Readily biodegradable

Bioaccumulative potential

Product:

Bioaccumulation : Remarks: Bioaccumulation is unlikely.

Mobility in soil

Product:

Distribution among environmental compartments : Koc: < 50

Other adverse effects

Product:

Ozone-Depletion Potential : Regulation: 40 CFR Protection of Environment; Part 82 Protection of Stratospheric Ozone - CAA Section 602 Class I Substances
Remarks: This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

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.

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SECTION 14. TRANSPORT INFORMATION

International Regulations

IATA-DGR

UN/ID No. : UN 3267
Proper shipping name : Corrosive liquid, basic, organic, n.o.s.

IATA-DGR

: UN 3267
: Corrosive liquid, basic, organic, n.o.s.
(metam sodium)
(metam sodium)
Class : 8
Packing group : II
Labels : Corrosive
Packing instruction (cargo aircraft) : 855

: 8
: II
: Corrosive
: 855
Packing instruction (passenger aircraft) : 851
: 851

IMDG-Code

UN number : UN 3267

IMDG-Code

UN number : UN 3267
Proper shipping name : CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S.
CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S.
(metam sodium) (metam sodium)

Class : 8
Packing group : II
Labels : 8
EmS Code : F-A, S-B
: 8
: II
: 8
: 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.

National Regulations

49 CFR

UN/ID/NA number : UN 3267

49 CFR

UN/ID/NA number : UN 3267
Proper shipping name : Corrosive liquid, basic, organic, n.o.s. Corrosive liquid, basic,

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organic, n.o.s.
(metam sodium) (metam sodium)
Class : 8
Packing group : II
Labels : Class 8 - Corrosive
ERG Code : 153
: 8
: II
: Class 8 - Corrosive
ERG Code : 153
Marine pollutant : yes(metam sodium)(metam sodium)

SECTION 15. REGULATORY INFORMATION

EPCRA - Emergency Planning and Community Right-to-Know Act

SARA 302 Extremely Hazardous Substances Threshold Planning Quantity

Components	CAS-No.	Component TPQ (lbs)
SARA 311/312 Hazards	: Acute Health Hazard Chronic Health Hazard	
SARA 313	: The following components are subject to reporting levels established by SARA Title III, Section 313:	
	metam sodium	137-42-8 40 %

EPA Labeling Information :

This Chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label:

Danger. Fatal if absorbed through skin. Corrosive. Causes skin burns and irreversible eye damage. Do not get in eyes, on skin, or on clothing. May be fatal if swallowed or inhaled. Do not breathe vapor or spray mist. Prolonged or frequent repeated skin contact may cause allergic reactions in some individuals.

New Jersey Right To Know

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Water	7732-18-5
metam sodium	137-42-8

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

CH INV	: On the inventory, or in compliance with the inventory
DSL	: On the inventory, or in compliance with the inventory
AICS	: On the inventory, or in compliance with the inventory
NZIoC	: On the inventory, or in compliance with the inventory
ENCS	: On the inventory, or in compliance with the inventory
KECI	: Not listed
PICCS	: On the inventory, or in compliance with the inventory
IECSC	: On the inventory, or in compliance with the inventory
TCSI	: On the inventory, or in compliance with the inventory
TSCA	: Not On TSCA 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

Full text of other abbreviations

AICS - Australian Inventory of Chemical Substances; 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

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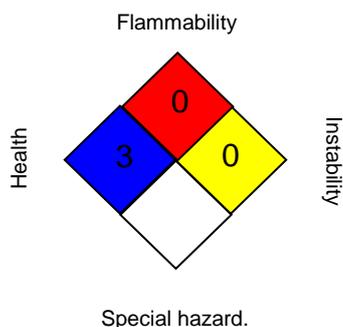
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- No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation 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 concerning 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; 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

Further information

NFPA:



HMIS® IV:

HEALTH	*	3
FLAMMABILITY		0
PHYSICAL HAZARD		0

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.

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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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