

According to EC Regulation 1907/2006/EC

Metam Sodium

Revision Date 01-Jul-2009

Revision Number 5

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

Product Name	Metam Sodium
Synonyms	Sodium N-methyldithiocarbamate
Company/Undertaking Identification	Taminco N.V.
Address	Pantserschipstraat 207 9000 GENT BELGIUM
Telephone	(+32) 9 254 14 11
Telefax	(+32) 9 254 14 10
Emergency Telephone Number	(+32) 9 254 10 36
Use of the Substance/Preparation	Biocides Agrochemical (soil disinfectant)

2. HAZARDS IDENTIFICATION

Most Important Hazards

- Harmful if swallowed.
- Causes burns
- Contact with acids liberates toxic gas.
- May cause sensitization by skin contact
- Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment
- Use of alcoholic beverages may enhance toxic effects

3. COMPOSITION/INFORMATION ON INGREDIENTS

Haz/Non-haz

Chemical Name	CAS-No	Weight %	EINECS	Classification
Metam-sodium	137-42-8	27-42	205-293-0	C, Xn, N R22-31-34-43-50/53

4. FIRST AID MEASURES

General Advice

- If symptoms persist, call a physician
- Show this safety data sheet to the doctor in attendance

Inhalation

- Remove from exposure, lie down
- Move to fresh air
- If breathing is difficult, give oxygen
- If not breathing, give artificial respiration
- Obtain medical attention

Eye Contact

- IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
- If eye irritation persists, consult a specialist

Skin Contact

- Wash off immediately with plenty of water for at least 15 minutes
- Wash off immediately with soap and plenty of water
- Remove/Take off immediately all contaminated clothing

Ingestion

- Drink plenty of water
- Do not induce vomiting
- Treat symptomatically
- If swallowed, seek medical advice immediately and show this container or label
- Never give anything by mouth to an unconscious person

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

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

Extinguishing media which must not be used for safety reasons

- high volume water jet

Specific methods

- The product itself does not burn
- Cool containers / tanks with water spray
- Do not flush into surface water or sanitary sewer system
- Keep product and empty container away from heat and sources of ignition

Special protective equipment for fire-fighters

- In the event of fire, wear self contained breathing apparatus
- Wash/Decontaminate removed clothing before reuse

Specific hazards

- Heating or fire can release toxic gas
- Flammable

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions

- Avoid contact with skin, eyes and clothing
- Wear protective gloves/clothing and eye/face protection
- Evacuate personnel to safe areas
- Keep people away from and upwind of spill/leak

Environmental Precautions

- Remove immediately adhering matter
- Prevent product from entering drains
- Do not flush into surface water or sanitary sewer system
- Toxic to fish

Methods for Clean-up

- Absorb spill with inert material (e.g. dry sand or earth), then place in a chemical waste container

7. HANDLING AND STORAGE

Storage

Technical measures/Precautions

- In accordance with local and national regulations
- Keep container tightly closed
- Keep in a dry, cool place
- Do not re-use empty containers

Incompatible products

- Do not store near acids
- metals

Specific use(s)

- Dispose of as special waste in compliance with local and national regulations
- Keep at temperatures below 35°C

Handling

Technical measures/Precautions

- In accordance with local and national regulations
- Use only in area provided with appropriate exhaust ventilation
- Use spark-proof tools and explosion-proof equipment

Safe Handling Advice

- Avoid contact with skin, eyes and clothing
- Wear personal protective equipment
- Do not breathe vapours/dust
- Use only in an area equipped with a safety shower

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Occupational exposure controls

Engineering Controls

- Local exhaust

Exposure limits

Chemical Name	GOEL	ACGIH TLV
Metam-sodium	N/A	Not listed

Personal Protective Equipment

Eye/face Protection

- Tightly fitting safety goggles
- Face-shield

Hand Protection

- Neoprene gloves
- Choose body protection according to the amount and concentration of the dangerous substance at the work place

Respiratory Protection

- As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear

Skin Protection

- Choose body protection according to the amount and concentration of the dangerous substance at the work place
- Wear suitable protective equipment

- 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	Liquid
Color	yellow tint
Odor	Perceptible :

Important Health Safety and Environmental Information

Boiling Point/Range	97 - 102°C
Flash Point	Not applicable
Viscosity	3.54cSt @ 20°C
Vapor Pressure	0.0575Pa @ 25 °C (99.9%)
Relative density	No information available
Partition Coefficient (n-octanol/water)	log Pow -2.91
pH	7.5 - 10.5 (42% solution)
Water solubility	578.29 g/l (99.9%)
Oxidizing Properties	none
Evaporation Rate	Not applicable
Explosion Limits	Not explosive
Melting Point/Range	Not applicable
Density	1.15 - 1.21 g/mL
Flammability	not auto-flammable
Autoignition Temperature	No data available

10. STABILITY AND REACTIVITY

Conditions to Avoid	<ul style="list-style-type: none">• Heat
Materials to avoid	<ul style="list-style-type: none">• Decomposes by reaction with strong acids• Corrosive in contact with metals
Hazardous Decomposition Products	<ul style="list-style-type: none">• combustible material• Contact with acids liberates toxic gas• Avoid subsoil penetration• MITC vapour can be released during processing• Carbon oxides• nitrogen oxides (NOx)• Sulphur oxides

11. TOXICOLOGICAL INFORMATION

Product Information

Information given is based on data on the components and the toxicology of similar products

11. TOXICOLOGICAL INFORMATION

LD50/oral/rat =	896 mg/kg
LD50/dermal/rat =	> 2000 mg/kg
LC50/inhalation/4h/rat =	2.54 mg/l
Eye irritation	rabbit eye, none
Skin irritation	rabbit skin, Corrosive
Sensitization	Causes sensitization on guinea-pigs
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

Human experience

Human experience	Causes severe burns headache nausea Respiratory disorders Eye irritation
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12. ECOLOGICAL INFORMATION

Ecotoxicity

Toxicity to fish	LC50 : 0.10 - 100mg/l
EC50/48h/daphnia =	1 - 10 mg/l
EC50/72h/algae =	0.56 mg/l
Toxicity to bacteria	IC50 : 4.36 mg/l (3 h)

Mobility

Koc = <50

Persistence/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 from Residues / Unused Products	<ul style="list-style-type: none">• Dispose of in accordance with local regulations• Waste codes should be assigned by the user based on the application for which the product was used• Classified as hazardous waste according to national equivalent of EC-Dir. 91/689; disposal of toxic and hazardous waste
Contaminated Packaging	<ul style="list-style-type: none">• Empty containers should be taken for local recycling, recovery or waste disposal

14. TRANSPORT INFORMATION

Road transport

Class 8
UN-No UN3267
Packing Group III
Proper Shipping Name 3267 - Corrosive liquid, basic, organic, n.o.s

Sea transport

Class 8
UN-No UN3267
Packing Group III
Marine pollutant Marine pollutant
Proper Shipping Name 3267 - Corrosive liquid, basic, organic, n.o.s

Air transport

Class 8
UN-No UN3267
Packing Group III
Proper Shipping Name 3267 - Corrosive liquid, basic, organic, n.o.s

15. REGULATORY INFORMATION

Symbol(s)

- C - Corrosive.
- N - Dangerous for the environment.

**R -phrase(s)**

- R22 - Harmful if swallowed.
- R31 - Contact with acids liberates toxic gas.
- R34 - Causes burns.
- R43 - May cause sensitization by skin contact.
- R50/53 - Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment

S -phrase(s)

- S 1/2 - Keep locked up and out of the reach of children
- S26 - In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
- S36/37/39 - Wear suitable protective clothing, gloves and eye/face protection
- S45 - In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
- S60 - This material and its container must be disposed of as hazardous waste.
- S61 - Avoid release to the environment. Refer to special instructions/safety data sheets.

International Inventories

Chemical Name
Metam-sodium

TSCA	EINECS	DSL	ENCS	AICS
N/A	205-293-0	Present	2-1797	Present

16. OTHER INFORMATION

Text of R phrases mentioned in Section 3

R22 - Harmful if swallowed.

R31 - Contact with acids liberates toxic gas.

R34 - Causes burns.

R43 - May cause sensitization by skin contact.

R50/53 - Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment

Literary Reference

-Taminco Proprietary Studies

-IUCLID CD-ROM, 2000

-TOMES on line

Further information for the safety data sheet

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 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. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release.