



# Material Safety Data Sheet

## SECTAGON 42®

MSDS Number 65700 (Revised: 7/14/09)

6 Pages

**Section 1: CHEMICAL PRODUCT and COMPANY IDENTIFICATION**

- 1.1 Product Name** ..... SECTAGON 42®      EPA REG # 61842-6
- Chemical Family ..... Dithiocarbamate salt solution
- Synonyms ..... Sodium Methylthiocarbamate, Metam Sodium ,  
N-Methylthiocarbamic acid, sodium salt, Carbamodithioic  
Acid, Methyl-, monosodium salt, Vapam
- Formula ..... C<sub>2</sub>-H<sub>4</sub>-N-S<sub>2</sub>.Na
- 1.2 Manufacturer** ..... Tessenderlo Kerley Inc.  
2255 N. 44<sup>th</sup> Street, Suite 300  
Phoenix, Arizona 85008-3279
- Information ..... (602) 889-8300
- 1.3 Emergency Contact** ..... (866) 374-1975 (Tessenderlo Kerley)  
(800) 424-9300 (CHEMTREC)

**Section 2: COMPOSITION, INFORMATION ON INGREDIENTS**

- 2.1 Chemical Ingredients (% by wt.)**
- Sodium methylthiocarbamate (Metam sodium)      CAS #:137-42-8      42.2%
- Inerts      57.8%

(See Section 8 for exposure guidelines)

**Section 3: HAZARDS IDENTIFICATION**

**NFPA:**      Health - 2      Flammability - 0      Reactivity - 1

**EMERGENCY OVERVIEW**

Contact with skin or eyes may result in irritation.  
 Repeated/prolonged skin contact may cause hypersensitivity type dermatitis.  
 Inhalation may cause respiratory irritation.  
 Prolonged exposure to air will result in gradual decomposition, to form methyl  
 Isothiocyanate (MITC), which is poisonous.

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| <b>Section</b> | <b>3:</b> | <b>HAZARDS IDENTIFICATION Cont.</b> |
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### 3.1 POTENTIAL HEALTH EFFECTS

**EYE:** Contact with the eyes by may cause irritation or a burning sensation.

**SKIN CONTACT:** Contact with product may cause skin irritation. Repeated/prolonged skin contact may cause hypersensitivity type dermatitis.

**SKIN ABSORPTION:** Absorption is unlikely to occur.

**INGESTION:** Ingestion of product solution may cause irritation of the gastrointestinal tract to include nausea, vomiting and diarrhea. Sectagon 42<sup>®</sup> is classified as slightly toxic to humans.

**INHALATION:** Inhalation of product mist may cause irritation of the nose, throat and respiratory tract.

**CHRONIC EFFECTS/CARCINOGENICITY:** Not listed as a carcinogen by NTP, IARC or OSHA. See Section 11, Toxicological Information

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| <b>Section</b> | <b>4:</b> | <b>FIRST AID MEASURES</b> |
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**4.1 EYES:** Immediately flush with large quantities of water for 15 minutes. Hold eyelids apart during irrigation to insure thorough flushing of the entire area of the eye and lids. Do not attempt to neutralize with chemical agents or use oils or ointments. Obtain immediate medical attention. Continue flushing if medical help not immediately available.

**4.2 SKIN:** Immediately flush with large quantities of water for 15 minutes. Remove contaminated clothing under a safety shower. Do not neutralize with chemical agents. Obtain medical attention if irritation occurs.

**4.3 INGESTION:** DO NOT INDUCE VOMITING. Give 1 or 2 glasses of water. If vomiting does occur, repeat fluid administration. If unconscious or convulsing, do not 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.

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| <b>Section</b> | <b>5:</b> | <b>FIRE FIGHTING MEASURES</b> |
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### 5.1 FLAMMABLE PROPERTIES

**FLASH POINT:** >200°F (93°C)

**METHOD USED:** Tag CC

### 5.2 FLAMMABLE LIMITS

Do data available. Not classified as a flammable/combustible.

**5.3 EXTINGUISHING MEDIA:** As appropriate for combustibles involved in fire.

**5.4 FIRE & EXPLOSIVE HAZARDS:** Heating will cause the release of MITC and hydrogen sulfide, both highly toxic and flammable gases. It is also conceivable that product breakdown from heating could release carbon disulfide and methylvamine, which are also toxic and flammable.

**Section 5: FIRE FIGHTING MEASURES, Cont.**

Keep containers/storage vessels in fire area cooled with water spray.

**5.5 FIRE FIGHTING EQUIPMENT:** Wear self-contained breathing apparatus, pressure demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

**Section 6: ACCIDENTAL RELEASE MEASURES**

**6.1 Small releases:** Confine and absorb small releases on sand, earth or other inert absorbent (clay, sawdust, straw, kitty litter, etc.). Sweep into open drums. Clean area with baking soda, soda ash (sodium carbonate) or common household detergent and a stiff brush and just enough water to make a slurry. Absorb and sweep into same open drum. Rinse area with water, absorb water and add to open drum. Close drum and dispose of material in accordance with federal and state governmental regulations.

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

**Section 7: HANDLING and STORAGE**

All personnel who handle this product in its end-use application should use this product only in accordance with its pesticide labeling and with the "Worker Protection Standard", 40 CFR 170.

**7.1 Handling:** Avoid contact with eyes. Use only in a well ventilated area. Wash thoroughly after handling. Avoid prolonged or repeated breathing of vapors. Avoid prolonged or repeated contact with the skin.

**7.2 Storage:** Store in cool, dry, well ventilated areas. 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. Do not store at temperatures below 0°F (-18°C) as the product will crystallize at low temperatures. Warm or store at higher temperatures and mix to redissolve crystals before use. (See Section 10.4 for materials of construction)

**Section 8: EXPOSURE CONTROLS, PERSONAL PROTECTION**

All personnel who handle this product in its end-use application should use this product only in accordance with its pesticide labeling and with the "Worker Protection Standard", 40 CFR 170.

**8.1 RESPIRATORY PROTECTION:** Personnel performing direct-contact activities must wear full face mask with SCBA or supplied air system or a cartridge respirator for organic vapors (with prefilter approved for pesticides – MSHA/NIOSH approved Number prefix TC-23C) or a canister approved for pesticides (MSHA/NIOSH approval Number prefix TC-14G), or a NIOSH approved respirator with an organic vapor (OV) cartridge or canister with any N, R, P or HE prefilter.

**8.2 SKIN PROTECTION:** Nitrile rubber gloves and apron should be worn to prevent contact with the liquid. Wash contaminated clothing prior to reuse. Under conditions where above normal levels of MITC may be encountered protective clothing, gloves and boots should be polyethylene as MITC penetrates rubber.

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| <b>Section</b> | <b>8:</b> | <b>EXPOSURE CONTROLS, PERSONAL PROTECTION, Cont.</b> |
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**8.3 EYE PROTECTION:** Chemical goggles and a full face shield.

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| <b>8.4 EXPOSURE GUIDELINES:</b> | OSHA       | ACGIH       |
|                                 | <u>TWA</u> | <u>STEL</u> |
| None                            | NA         | NA          |
|                                 | <u>TLV</u> | <u>STEL</u> |
|                                 | NA         | NA          |

**8.5 ENGINEERING CONTROLS:** Use adequate exhaust ventilation to prevent inhalation of product vapors.

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| <b>Section</b> | <b>9:</b> | <b>PHYSICAL and CHEMICAL PROPERTIES</b> |
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| <b>9.1 APPEARANCE:</b>          | Pale green through colorless to yellow/amber liquid. |
| <b>9.2 ODOR:</b>                | Strong odor, sulfur-like                             |
| <b>9.3 BOILING POINT:</b>       | 230 °F(110 °C)                                       |
| <b>9.4 VAPOR PRESSURE:</b>      | 21 mm Hg @ 77 °F (25°C)                              |
| <b>9.5 VAPOR DENSITY:</b>       | Not determined                                       |
| <b>9.6 SOLUBILITY IN WATER:</b> | Miscible with water                                  |
| <b>9.7 SPECIFIC GRAVITY:</b>    | 1.209 (10.07 lbs/gal @68°F, typical))                |
| <b>9.8 FREEZING POINT:</b>      | Approx. 0 °F (-18 °C)                                |
| <b>9.9 pH:</b>                  | 9.5 – 11.5   |
| <b>9.10 VOLATILE:</b>           | Not determined                                       |
| <b>9.11 Viscosity:</b>          | 3.0 – 5.0 cp.  |

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| <b>Section</b> | <b>10:</b> | <b>STABILITY and REACTIVITY</b> |
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**10.1 STABILITY:** This is a stable material

**10.2 HAZARDOUS POLYMERIZATION:** Will not occur

**10.3 HAZARDOUS DECOMPOSITION PRODUCTS:** Heating this product will evolve methyl isothiocyanate (MITC) and hydrogen sulfide (H<sub>2</sub>S) and potentially carbon disulfide (CS<sub>2</sub>) and methylamine (MMA). Heating to dryness will cause the production of oxides of nitrogen.

**10.4 INCOMPATIBILITY:** Prolonged exposure to air will result in decomposition to form methyl isothiocyanate (MITC) a very toxic and flammable material. Metam sodium solutions are corrosive to copper, zinc, or aluminum or any of their alloys such as brass, or galvanized materials. These materials of construction should not be used in handling systems or storage containers for this product. (SEE Section 7.2, Storage)

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| <b>Section</b> | <b>11:</b> | <b>TOXICOLOGICAL INFORMATION</b> |
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**11.1 ORAL:** Oral-Rat LD<sub>50</sub>: 970 mg/Kg (male); 790 mg/Kg (female)

**11.2 DERMAL:** Dermal-rabbit LD<sub>50</sub> 1050 mg/Kg

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| <b>Section</b> | <b>11:</b> | <b>TOXICOLOGICAL INFORMATION, Cont.</b> |
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**11.3 INHALATION:** Data not available

**11.4 CHRONIC/CARCINOGENICITY:** Laboratory studies have shown some developmental and carcinogenic effects in laboratory animals. Exposure monitoring studies conducted during agricultural applications of metam sodium have shown that human exposure is extremely low; therefore, any potential risk to humans from metam sodium is considered minimal.

**11.5 TERATOLOGY:** Data not available

**11.6 REPRODUCTION:** Data not available

**11.7 MUTAGENICITY:** Data not available

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| <b>Section</b> | <b>12:</b> | <b>ECOLOGICAL INFORMATION</b> |
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Data not available but metam sodium is know to be toxic to fish.

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| <b>Section</b> | <b>13:</b> | <b>DISPOSAL CONSIDERATIONS</b> |
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Sectagon 42<sup>®</sup> by itself is not a listed waste but under spill or release conditions may exhibit characteristics of a hazardous waste in accordance with 40 CFR 261. Purification solids (as from filtering, evaporation, etc,) from the production of dithiocarbamate acid salts are a K161 listed hazardous waste. Dispose of released material in accordance with all federal, state or local regulations.

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| <b>Section</b> | <b>14:</b> | <b>TRANSPORT INFORMATION</b> |
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| <b>14.1 DOT Shipping Name:</b>        | Corrosive liquid, basic, inorganic, n.o.s. |          |
| <b>14.2 DOT Hazard Class:</b>         | 8  |          |
| <b>14.3 UN/NA Number:</b>             | UN3266                                     |          |
| <b>14.4 Packing Group:</b>            | II   |          |
| <b>14.5 DOT Placard:</b>              | Corrosive                                  |          |
| <b>14.6 DOT Label(s):</b>             | Corrosive                                  |          |
| <b>14.7 IMO Shipping Name:</b>        | Corrosive liquid, basic, inorganic, n.o.s. | (UN3266) |
| <b>14.8 RQ (Reportable Quantity):</b> | NA   |          |
| <b>14.9 RR STCC Number:</b>           | 2879979 / 4932060                          |          |
| <b>14.10 DOT/IMO Mark</b>             | Marine Pollutant                           |          |

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| <b>Section</b> | <b>15: REGULATORY INFORMATION</b> |
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| <b>15.1 OSHA:</b>   | This product is listed as a hazardous material under criteria of the Federal OSHA Hazard Communication Standard, 29 CFR 1910.1200. |  |                       |
| <b>15.2 SARA TITLE III:</b>                                       | a.   | <b>EHS</b> (Extremely Hazardous Substance) List: | No                    |
|   | b.   | Section 311/312, (Tier I,II) Categories:         | Immediate (acute) Yes |
|   |  | Fire   | No                    |
|   |  | Sudden release                                   | No                    |
|   |  | Reactivity                                       | No                    |
|   |  | Delayed (chronic)                                | No                    |
|   | c.   | Section 313 (Toxic Release Reporting-Form R):    | Yes                   |
|   |  | <u>Chemical Name</u>                             | <u>CAS Number</u>     |
|   |  | Metam sodium                                     | 137-42-8              |
|   |  | <u>Concentration</u>                             | 42.2%                 |
|   | d.   | <b>TPQ</b> (Threshold Planning Quantity):        | No                    |
| <b>15.3 CERCLA/SUPERFUND:</b>                                     | RQ (Reportable Quantity)   |  | No                    |
| <b>15.4 TSCA</b> (Toxic Substance Control Act) Inventory List:    |  |  | Yes                   |
| <b>15.5 RCRA</b> (Resource Conservation and Recovery Act) Status: |  |  | NA, See Section 13    |
| <b>15.6 WHMIS</b> (Canada) Hazard Classification:                 |  |  | NA                    |
| <b>15.7 DOT</b> Hazardous Material: (See Section 14)              |  |  | Yes                   |
| <b>15.8 CAA</b> Hazardous Air Pollutant (HAP)                     |  |  | No                    |
| <b>15.9 FIFRA</b> Registered pesticide                            |  |  | Yes                   |
|   |  | EPA Reg No. 61842-6                              |                       |
| <b>15.10 Prop 65 (CA)</b>   |  |  | Yes<br>(5/15/98)      |

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| <b>Section</b> | <b>16: OTHER INFORMATION</b> |
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**REVISIONS:** The entire MSDS was reformatted to comply to ANSI Standard Z400.1-1993, by Technical Services-Tessengerlo Kerley, Inc.

Revised 1/2/01 alteration of DOT shipping name and changes to physical specs.  
 Revised Section 8.3, Eye Protection, and company logo, 5/10/02  
 Revised section 8.1, Respiratory protection, 7/19/2005  
 Revised Section 1.3, Emergency Contact, 7/14/09

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| THE INFORMATION PUBLISHED IN THIS MATERIAL SAFETY DATA SHEET HAS BEEN COMPILED FROM OUR EXPERIENCE AND |
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