

## Material Safety Data Sheet

Version 3.3  
Revision Date 01/17/2012  
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## 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Ivermectin

Product Number : I8898  
Brand : Sigma

Supplier : Sigma-Aldrich  
3050 Spruce Street  
SAINT LOUIS MO 63103  
USA

Telephone : +1 800-325-5832  
Fax : +1 800-325-5052  
Emergency Phone # (For both supplier and manufacturer) : (314) 776-6555

Preparation Information : Sigma-Aldrich Corporation  
Product Safety - Americas Region  
1-800-521-8956

## 2. HAZARDS IDENTIFICATION

## Emergency Overview

## OSHA Hazards

Target Organ Effect, Highly toxic by ingestion, Irritant, Carcinogen, Teratogen, Reproductive hazard, Mutagen

## Target Organs

Nerves., Liver, Heart, Blood, Central nervous system, Kidney

## GHS Classification

Acute toxicity, Oral (Category 1)  
Skin irritation (Category 3)  
Serious eye damage (Category 1)  
Germ cell mutagenicity (Category 1B)  
Reproductive toxicity (Category 1B)

## GHS Label elements, including precautionary statements

Pictogram



Signal word : Danger

Hazard statement(s)

H300 Fatal if swallowed.  
H316 Causes mild skin irritation.  
H318 Causes serious eye damage.  
H340 May cause genetic defects.  
H360 May damage fertility or the unborn child.

Precautionary statement(s)

P201 Obtain special instructions before use.  
P264 Wash hands thoroughly after handling.  
P280 Wear protective gloves/ eye protection/ face protection.  
P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/ physician.  
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if

P308 + P313

present and easy to do. Continue rinsing.  
IF exposed or concerned: Get medical advice/ attention.

## HMIS Classification

Health hazard: 3  
Chronic Health Hazard: 0  
Flammability: 0  
Physical hazards: 0

## NFPA Rating

Health hazard: 3  
Fire: 0  
Reactivity Hazard: 0

## Potential Health Effects

Inhalation May be harmful if inhaled. Causes respiratory tract irritation.  
Skin May be harmful if absorbed through skin. Causes skin irritation.  
Eyes Causes eye irritation.  
Ingestion May be fatal if swallowed.

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

| Component  | Classification   | Concentration |
|--|--|---------------|
| Ivermectin   |  |               |
| CAS-No. 70288-86-7<br>EC-No. 274-536-0   | Acute Tox. 1; H300   | -             |
| Ethanol  |  |               |
| CAS-No. 64-17-5<br>EC-No. 200-578-6<br>Index-No. 603-002-00-5  | Flam. Liq. 2; Skin Irrit. 2;<br>STOT SE 3; H225, H315,<br>H335 | 5 - 10 %      |
| Formamide  |  |               |
| CAS-No. 75-12-7<br>EC-No. 200-842-0<br>Index-No. 616-052-00-8<br>Registration number 01-2119496064-35-XXXX | Repr. 1B; H360D  | 1 - 5 %       |

For the full text of the H-Statements and R-Phrases mentioned in this Section, see Section 16

## 4. FIRST AID MEASURES

## General advice

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

## If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

## In case of skin contact

Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician.

## In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

## If swallowed

Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

## 5. FIREFIGHTING MEASURES

## Conditions of flammability

Not flammable or combustible.

## Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

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Delivery 0841779496-000010 Purchase Order 802057 K

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Safety

**Special protective equipment for firefighters**

Wear self contained breathing apparatus for fire fighting if necessary.

**Hazardous combustion products**

Hazardous decomposition products formed under fire conditions. - Carbon oxides, nitrogen oxides (NOx)

**6. ACCIDENTAL RELEASE MEASURES****Personal precautions**

Wear respiratory protection. Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.

**Environmental precautions**

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

**Methods and materials for containment and cleaning up**

Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

**7. HANDLING AND STORAGE****Precautions for safe handling**

Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed.

**Conditions for safe storage**

Keep container tightly closed in a dry and well-ventilated place.

Recommended storage temperature: 2 - 8 °C

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION****Components with workplace control parameters**

| Components                         | CAS-No.   | Value | Control parameters       | Basis  |
|------------------------------------|---|-------|--------------------------|--|
| Ethanol                            | 64-17-5   | TWA   | 1,000 ppm                | USA. ACGIH Threshold Limit Values (TLV)  |
| Remarks                            | Upper Respiratory Tract irritation Confirmed animal carcinogen with unknown relevance to humans |       |                          |  |
|                                    |   | TWA   | 1,000 ppm<br>1,900 mg/m3 | USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000                    |
|                                    |   | TWA   | 1,000 ppm<br>1,900 mg/m3 | USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants |
| The value in mg/m3 is approximate. |   |       |                          |  |
|                                    |   | TWA   | 1,000 ppm<br>1,900 mg/m3 | USA. NIOSH Recommended Exposure Limits   |
| Formamide                          | 75-12-7   | TWA   | 10 ppm                   | USA. ACGIH Threshold Limit Values (TLV)  |
| Remarks                            | Skin & eye irritation Liver & kidney damage Danger of cutaneous absorption                      |       |                          |  |
|                                    |   | TWA   | 20 ppm<br>30 mg/m3       | USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000                    |
|                                    |   | STEL  | 30 ppm<br>45 mg/m3       | USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000                    |
|                                    |   | TWA   | 10 ppm<br>15 mg/m3       | USA. NIOSH Recommended Exposure Limits   |
| Potential for dermal absorption    |   |       |                          |  |

**Personal protective equipment****Respiratory protection**

Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

**Hand protection**

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

**Eye protection**

Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

**Skin and body protection**

Complete suit protecting against chemicals. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

**Hygiene measures**

Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

**9. PHYSICAL AND CHEMICAL PROPERTIES****Appearance**

|        |                   |
|--------|-------------------|
| Form   | solid             |
| Colour | no data available |

**Safety data**

|  |                   |
|--|-------------------|
| pH                                     | no data available |
| Melting point/freezing point           | no data available |
| Boiling point                          | no data available |
| Flash point                            | no data available |
| Ignition temperature                   | no data available |
| Autoignition temperature               | no data available |
| Lower explosion limit                  | no data available |
| Upper explosion limit                  | no data available |
| Vapour pressure                        | no data available |
| Density                                | no data available |
| Water solubility                       | no data available |
| Partition coefficient: n-octanol/water | no data available |
| Relative vapour density                | no data available |
| Odour                                  | no data available |
| Odour Threshold                        | no data available |
| Evaporation rate                       | no data available |

**10. STABILITY AND REACTIVITY**

**Chemical stability**

Stable under recommended storage conditions.

**Possibility of hazardous reactions**

no data available

**Conditions to avoid**

no data available

**Materials to avoid**

no data available

**Hazardous decomposition products**

Hazardous decomposition products formed under fire conditions, - Carbon oxides, nitrogen oxides (NOx)

**11. TOXICOLOGICAL INFORMATION****Acute toxicity****Oral LD50**

no data available

**Inhalation LC50**

no data available

**Dermal LD50**

no data available

**Other information on acute toxicity**

no data available

**Skin corrosion/irritation**

no data available

**Serious eye damage/eye irritation**

Eyes: no data available

**Respiratory or skin sensitization**

no data available

**Germ cell mutagenicity**

no data available

**Carcinogenicity**

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

**Reproductive toxicity**

no data available

**Teratogenicity**

no data available

**Specific target organ toxicity - single exposure (Globally Harmonized System)**

no data available

**Specific target organ toxicity - repeated exposure (Globally Harmonized System)**

no data available

**Aspiration hazard**

no data available

**Potential health effects****Inhalation**

May be harmful if inhaled. Causes respiratory tract irritation.

**Ingestion**

May be fatal if swallowed.

**Skin**

May be harmful if absorbed through skin. Causes skin irritation.

**Eyes**

Causes eye irritation.

**Signs and Symptoms of Exposure**

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

**Synergistic effects**

no data available

**Additional Information**

RTECS: Not available

**12. ECOLOGICAL INFORMATION****Toxicity**

no data available

**Persistence and degradability**

no data available

**Bioaccumulative potential**

no data available

**Mobility in soil**

no data available

**PBT and vPvB assessment**

no data available

**Other adverse effects**

no data available

**13. DISPOSAL CONSIDERATIONS****Product**

Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

**Contaminated packaging**

Dispose of as unused product.

**14. TRANSPORT INFORMATION****DOT (US)**

UN number: 2811 Class: 6.1 Packing group: II  
Proper shipping name: Toxic solids, organic, n.o.s. (Ivermectin)  
Reportable Quantity (RQ):  
Marine pollutant: No  
Poison Inhalation Hazard: No

**IMDG**

UN number: 2811 Class: 6.1 Packing group: II EMS-No: F-A, S-A  
Proper shipping name: TOXIC SOLID, ORGANIC, N.O.S. (Ivermectin)  
Marine pollutant: No

**IATA**

UN number: 2811 Class: 6.1 Packing group: II  
Proper shipping name: Toxic solid, organic, n.o.s. (Ivermectin)

## 15. REGULATORY INFORMATION

### OSHA Hazards

Target Organ Effect, Highly toxic by ingestion, Irritant, Carcinogen, Teratogen, Reproductive hazard, Mutagen

### SARA 302 Components

SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

### SARA 313 Components

SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

### SARA 311/312 Hazards

Acute Health Hazard, Chronic Health Hazard

### Massachusetts Right To Know Components

|           | CAS-No. | Revision Date |
|-----------|---------|---------------|
| Ethanol   | 64-17-5 | 2007-03-01    |
| Formamide | 75-12-7 | 2007-03-01    |

### Pennsylvania Right To Know Components

|            | CAS-No.    | Revision Date |
|------------|------------|---------------|
| Ethanol    | 64-17-5    | 2007-03-01    |
| Formamide  | 75-12-7    | 2007-03-01    |
| Ivermectin | 70288-86-7 |               |

### New Jersey Right To Know Components

|            | CAS-No.    | Revision Date |
|------------|------------|---------------|
| Water      | 7732-18-5  |               |
| Ethanol    | 64-17-5    | 2007-03-01    |
| Formamide  | 75-12-7    | 2007-03-01    |
| Ivermectin | 70288-86-7 |               |

### California Prop. 65 Components

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

## 16. OTHER INFORMATION

### Text of H-code(s) and R-phrases mentioned in Section 3

|             |  |
|-------------|--|
| Acute Tox.  | Acute toxicity                                   |
| Flam. Liq.  | Flammable liquids                                |
| H225        | Highly flammable liquid and vapour.              |
| H300        | Fatal if swallowed.                              |
| H315        | Causes skin irritation.                          |
| H335        | May cause respiratory irritation.                |
| H360D       | May damage the unborn child.                     |
| Repr.       | Reproductive toxicity                            |
| Skin Irrit. | Skin irritation                                  |
| STOT SE     | Specific target organ toxicity - single exposure |

### Further Information

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