

# SAFETY DATA SHEET

## 1. PRODUCT

### 1.1 Product identifiers

Name: Dimethoate

CAS-No.: 60-51-5

### 1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses : Laboratory chemicals, Manufacture of substances

## 2. HAZARDS IDENTIFICATION

### 2.1 Classification of the substance or mixture

#### GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)


Acute toxicity, Oral (Category 4), H302

Acute toxicity, Dermal (Category 4), H312

Acute aquatic toxicity (Category 2), H401

For the full text of the H-Statements mentioned in this Section, see Section 16.

### 2.2 GHS Label elements, including precautionary statements

|                            |   |
|----------------------------|---|
| Pictogram                  |    |
| Signal word                | Warning   |
| Hazard statement(s)        | H302 + H312 Harmful if swallowed or in contact with skin<br>H401 Toxic to aquatic life.   |
| Precautionary statement(s) | P264 Wash skin thoroughly after handling.<br>P270 Do not eat, drink or smoke when using this product.<br>P273 Avoid release to the environment.<br>P280 Wear protective gloves/ protective clothing.<br>P301 + P312 IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell.<br>P302 + P352 IF ON SKIN: Wash with plenty of soap and water.<br>P312 Call a POISON CENTER or doctor/ physician if you feel unwell.<br>P322 Specific measures (see supplemental first aid instructions on this label).<br>P330 Rinse mouth.<br>P363 Wash contaminated clothing before reuse.<br>P501 Dispose of contents/ container to an approved waste disposal plant. |

### 2.3 Hazards not otherwise classified (HNOC) or not covered by GHS

No data available

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

### 3.1 Substances

Formula:  $C_5H_{12}NO_3PS_2$   
Molecular weight: 229.26 g/mol  
CAS-No.: 60-51-5  
EC-No.: 200-480-3

#### Hazardous components

| Component         | Classification                                   | Concentration |
|-------------------|--|---------------|
| <b>Dimethoate</b> |  |               |
|                   | Acute Tox. 4; Aquatic Acute 2; H302 + H312, H401 | <= 100 %      |

For the full text of the H-Statements mentioned in this Section, see Section 16.

## 4. FIRST AID MEASURES

### 4.1 Description of first aid measures

|   |
|---|
| <b>General advice</b>   |
| Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.       |
| <b>If inhaled</b>   |
| If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician. |
| <b>In case of skin contact</b>  |
| Wash off with soap and plenty of water. Consult a physician.  |
| <b>In case of eye contact</b>   |
| Flush eyes with water as a precaution.  |
| <b>If swallowed</b>   |
| Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.             |

### 4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

### 4.2 Indication of any immediate medical attention and special treatment needed

No data available

## 5. FIREFIGHTING MEASURES

### 5.1 Extinguishing media

#### Suitable extinguishing media

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

### 5.2 Special hazards arising from the substance or mixture

Carbon oxides, Nitrogen oxides (NO<sub>x</sub>), Sulphur oxides, Oxides of phosphorus

### 5.3 Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

### 5.4 Further information

No data available

## 6. ACCIDENTAL RELEASE MEASURES

### 6.1 Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Avoid breathing dust.

For personal protection see section 8.

### 6.2 Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

### 6.3 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.

## 6.4 Reference to other sections

For disposal see section 13.

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## 7. HANDLING AND STORAGE

### 7.1 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.

For precautions see section 2.2.

### 7.2 Conditions for safe storage, including any incompatibilities

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

Recommended storage temperature 2 - 8 °C

### 7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

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## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1 Control parameters

#### Components with workplace control parameters

Contains no substances with occupational exposure limit values.

### 8.2 Exposure controls

#### Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

#### Personal protective equipment

|                                   |   |
|-----------------------------------|---|
| Eye/face protection               | Safety glasses with side-shields conforming to EN166 Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).  |
| Skin 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.        |
| 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.   |
| Respiratory protection            | For nuisance exposures use type P95 (US) or type P1 (EU EN 143) particle respirator. For higher level protection use type OV/AG/P99 (US) or type ABEK-P2 (EU EN 143) respirator cartridges. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). |
| Control of environmental exposure | Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.  |

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## 9. PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 Information on basic physical and chemical properties

|   |  |
|---|--|
| Appearance                              | Form: solid  |
| Odour                                   | characteristic   |
| Odour Threshold                         | No data available  |
| pH                                      | No data available  |
| Melting point/freezing point            | Melting point/freezing point: 45 - 47 °C (113 - 117 °F) - Decomposes on heating. |
| Initial boiling point and boiling range | 117 °C (243 °F) at 0.1 hPa (0.1 mmHg)  |

|  |   |
|--|---|
| Flash point                                  | 107 °C (225 °F) - closed cup                                  |
| Evaporation rate                             | No data available   |
| Flammability (solid, gas)                    | No data available   |
| Upper/lower flammability or explosive limits | No data available   |
| Vapour pressure                              | 0.000 hPa (0.000 mmHg) at 20 °C (68 °F)                       |
| Vapour density                               | No data available   |
| Relative density                             | 1.24 - 1.27 g/cm <sup>3</sup> at 20 °C (68 °F)                |
| Water solubility                             | 23.5 g/l at 20 °C (68 °F) - OECD Test Guideline 105 - soluble |
| Partition coefficient: n-octanol/water       | log Pow: 0.704 at 20 °C (68 °F)                               |
| Auto-ignition temperature                    | No data available   |
| Decomposition temperature                    | No data available   |
| Viscosity                                    | No data available   |
| Explosive properties                         | No data available   |
| Oxidizing properties                         | No data available   |

## 9.2 Other safety information

No data available

## 10. STABILITY AND REACTIVITY

### 10.1 Reactivity

No data available

### 10.2 Chemical stability

Stable under recommended storage conditions.

### 10.3 Possibility of hazardous reactions

No data available

### 10.4 Conditions to avoid

No data available

### 10.5 Incompatible materials

Strong oxidizing agents

### 10.6 Hazardous decomposition products

Other decomposition products - No data available

In the event of fire: see section 5

## 11. TOXICOLOGICAL INFORMATION

### 11.1 Information on toxicological effects

|   |
|---|
| <p><b>Acute toxicity</b></p> <p>LD50 Oral - Rat - 387 mg/kg<br/> LC50 Inhalation - Rat - 4 h - &gt; 1,553 mg/l<br/> LD50 Dermal - Rabbit - &gt; 1,000 mg/kg<br/> Remarks: Behavioral:Excitement.<br/> No data available</p> |
| <p><b>Skin corrosion/irritation</b></p> <p>Skin - Rabbit<br/> Result: No skin irritation</p>  |
| <p><b>Serious eye damage/eye irritation</b></p> <p>Eyes - Rabbit<br/> Result: No eye irritation</p>   |
| <p><b>Respiratory or skin sensitisation</b></p> <p>Buehler Test - Guinea pig<br/> Result: Did not cause sensitisation on laboratory animals.</p>  |

|  |  |
|--|--|
| <b>Germ cell mutagenicity</b>  |  |
| <p>Mouse<br/>S. typhimurium<br/>Host-mediated assay<br/>Human<br/>lymphocyte<br/>Cytogenetic analysis<br/>Human<br/>lymphocyte<br/>Sister chromatid exchange<br/>Human<br/>lymphocyte<br/>Micronucleus test<br/>Human<br/>fibroblast<br/>Unscheduled DNA synthesis<br/>Rat<br/>Cytogenetic analysis<br/>Rat<br/>Micronucleus test<br/>Mouse<br/>Cytogenetic analysis<br/>Mouse<br/>Unscheduled DNA synthesis</p>   |  |
| <b>Carcinogenicity</b>   |  |
| <p>Carcinogenicity - Rat - Oral<br/>Tumorigenic: Carcinogenic by RTECS criteria. Liver: Tumors. Blood: Tumors.<br/>Carcinogenicity - Rat - Intramuscular<br/>Tumorigenic: Carcinogenic by RTECS criteria. Liver: Tumors. Blood: Tumors.<br/>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.<br/>ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.<br/>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.<br/>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.</p>   |  |
| <b>Reproductive toxicity</b>   |  |
| <p>No data available<br/>Reproductive toxicity - Rat - Oral<br/>Maternal Effects: Other effects. Effects on Embryo or Fetus: Fetotoxicity (except death, e.g., stunted fetus). Effects on Embryo or Fetus: Other effects to embryo.<br/>Reproductive toxicity - Mouse - Oral<br/>Effects on Fertility: Female fertility index (e.g., # females pregnant per # sperm positive females; # females pregnant per # females mated). Effects on Fertility: Other measures of fertility Effects on Newborn: Weaning or lactation index (e.g., # alive at weaning per # alive at day 4).<br/>No data available<br/>Developmental Toxicity - Mouse - Oral<br/>Specific Developmental Abnormalities: Musculoskeletal system.<br/>Developmental Toxicity - Mouse - Intraperitoneal<br/>Effects on Embryo or Fetus: Fetal death.<br/>Developmental Toxicity - Rat - Oral<br/>Specific Developmental Abnormalities: Musculoskeletal system.<br/>Developmental Toxicity - Mouse - Oral<br/>Effects on Embryo or Fetus: Fetotoxicity (except death, e.g., stunted fetus).</p> |  |
| <b>Specific target organ toxicity -single exposure</b>   |  |
| No data available  |  |
| <b>Specific target organ toxicity -repeated exposure</b>   |  |
| No data available  |  |
| <b>Aspiration hazard</b>   |  |
| No data available  |  |
| <b>Additional Information</b>  |  |
| <p>RTECS: TE1750000<br/>Nausea, Vomiting, Weakness, Dizziness, Vertigo, Headache, Sweating, loss of appetite, To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.<br/>Stomach - Irregularities - Based on Human Evidence<br/>Stomach - Irregularities - Based on Human Evidence</p>  |  |

## 12. ECOLOGICAL INFORMATION

### 12.1 Toxicity

|                  |  |
|------------------|--|
| Toxicity to fish | static test LC50 - Salmo gairdneri - 7.5 mg/l - 96 h |
|------------------|--|

|   |  |
|---|--|
| Toxicity to daphnia and other aquatic invertebrates | Immobilization EC50 - Daphnia magna (Water flea) - 5.4 mg/l - 48 h (OECD Test Guideline 202)<br>Immobilization NOEC - Daphnia magna (Water flea) - 0.6 mg/l - 48 h (OECD Test Guideline 202) |
| Toxicity to algae                                   | Growth inhibition EC50 - Scenedesmus capricornutum (fresh water algae) - 282.3 mg/l - 72 h (OECD Test Guideline 201)   |
| Toxicity to bacteria                                | No data available  |

## 12.2 Persistence and degradability

|                  |  |
|------------------|--|
| Biodegradability | anaerobic - Exposure time 14.5 d<br>Result: 50 % - Readily biodegradable |
|------------------|--|

## 12.3 Bioaccumulative potential

|                 |   |
|-----------------|---|
| Bioaccumulation | Cyprinus carpio (Carp) - 42 d at 25 °C - 2 mg/l<br>Bioconcentration factor (BCF): 0.4 - 0.8 |
|-----------------|---|

## 12.4 Mobility in soil

No data available

## 12.5 Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

## 12.6 Other adverse effects

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

Toxic to aquatic life.

## 13. DISPOSAL CONSIDERATIONS

### 13.1 Waste treatment methods

|  |
|--|
| <b>Product</b>   |
| 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. |
| <b>Contaminated packaging</b>  |
| Dispose of as unused product.  |

## 14. TRANSPORT INFORMATION

### DOT (US)

UN number: 2811 Class: 6.1 Packing group: III

Proper shipping name: Toxic solids, organic, n.o.s. (Dimethoate)

Reportable Quantity (RQ): 10 lbs

Marine pollutant:yes

Poison Inhalation Hazard: No

### IMDG

UN number: 2811 Class: 6.1 Packing group: III EMS-No: F-A, S-A

Proper shipping name: TOXIC SOLID, ORGANIC, N.O.S. (Dimethoate)

Marine pollutant:yes

### IATA

UN number: 2811 Class: 6.1 Packing group: III

Proper shipping name: Toxic solid, organic, n.o.s. (Dimethoate)

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## 15. REGULATORY INFORMATION

### SARA 302 Components

The following components are subject to reporting levels established by SARA Title III, Section 302:

| Component  | CAS-No. | Revision Date |
|------------|---------|---------------|
| Dimethoate | 60-51-5 | 2007-07-01    |

### SARA 313 Components

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

| Component  | CAS-No. | Revision Date |
|------------|---------|---------------|
| Dimethoate | 60-51-5 | 2007-07-01    |

### SARA 311/312 Hazards

Acute Health Hazard, Chronic Health Hazard

### Massachusetts Right To Know Components

| Component  | CAS-No. | Revision Date |
|------------|---------|---------------|
| Dimethoate | 60-51-5 | 2007-07-01    |

### Pennsylvania Right To Know Components

| Component  | CAS-No. | Revision Date |
|------------|---------|---------------|
| Dimethoate | 60-51-5 | 2007-07-01    |

### New Jersey Right To Know Components

| Component  | CAS-No. | Revision Date |
|------------|---------|---------------|
| Dimethoate | 60-51-5 | 2007-07-01    |

### 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.

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## 16. OTHER INFORMATION

### Full text of H-Statements referred to under sections 2 and 3.

Acute Tox. Acute toxicity

Aquatic Acute Acute aquatic toxicity

H302 Harmful if swallowed.

H302 + H312 Harmful if swallowed or in contact with skin

H312 Harmful in contact with skin.

### HMIS Rating

Health hazard: 2

Chronic Health Hazard: \*

Flammability: 1

Physical Hazard 0

### NFPA Rating

Health hazard: 2

Fire Hazard: 1

Reactivity Hazard: 0

Health hazard: 1

Fire Hazard: 1

