

# MATERIAL SAFETY DATA SHEET

# DIMETHOATE 400

FOR CHEMICAL EMERGENCY, SPILL, LEAK, FIRE, EXPOSURE OR ACCIDENT, CALL CHEMTREC - DAY OR NIGHT 1-800-424-9300

## 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

### FORMULATED FOR:

LOVELAND PRODUCTS, INC.  
P.O. Box 1286 • Greeley, CO 80632-1286

24-Hour Emergency Phone: 1-800-424-9300

Medical Emergencies: 1-866-944-8565

U.S. Coast Guard National Response Center: 1-800-424-8802

PRODUCT NAME: DIMETHOATE 400  
CHEMICAL NAME: Dimethoate: (O,O-Dimethyl S-[methylcarbamoylmethyl] phosphorodithioate  
CHEMICAL FAMILY: Organophosphate Insecticide  
EPA REG. NO.: 34704-207  
MSDS Number: 000207-12-LPI

MSDS Revisions: Secs. 1, 4, 7, 8, 13, 14

Date of Issue: 02/27/13

Supersedes: 02/20/09

## 2. HAZARDS IDENTIFICATION SUMMARY

**KEEP OUT OF REACH OF CHILDREN – WARNING - AVISO – Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle (If you do not understand the label, find someone to explain it to you in detail.)** May be fatal if swallowed. Corrosive. Causes substantial but temporary eye injury. Harmful if absorbed through skin. Wear protective eyewear (goggles, face shield, or safety glasses). Do not get in eyes, on clothing, or on skin. Wash thoroughly with soap and water after handling and before eating, drinking, or using tobacco. Remove contaminated clothing and wash clothing before reuse.

This product is clear light amber to yellow liquid with a solvent and slight mercaptan odor.

## 3. COMPOSITION, INFORMATION ON INGREDIENTS

| Chemical Ingredients: | Percentage by Weight: | CAS No.  | TLV (Units)          |
|-----------------------|-----------------------|----------|----------------------|
| Dimethoate            | 43.50                 | 60-51-5  | not listed           |
| Cyclohexanone         | 38.72                 | 108-94-1 | 50 mg/m <sup>3</sup> |
| Inert Ingredients*    | 17.78                 |          |                      |

(\*Contains ingredients that are hazardous according to the OSHA Hazard Communication Standard (29 CFR 1910.1200)

## 4. FIRST AID MEASURES

**If swallowed:** Call a poison control center or doctor immediately for treatment advice. Do not give any liquid to the person. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give anything by mouth to an unconscious person.

**If inhaled:** Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. Call a poison control center or doctor for treatment advice.

**If on skin or clothing:** Take off contaminated clothing. Rinse skin immediately with plenty of water for 15 to 20 minutes. Call a poison control center or doctor for treatment advice.

**If in eyes:** Hold eye open and rinse slowly and gently with water for 15 to 20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.

**FOR A MEDICAL EMERGENCY INVOLVING THIS PRODUCT CALL: 1-866-944-8565.** Have the product label or container with you when calling a poison control center or doctor, or going for treatment.

**Note to Physician:** Contains petroleum distillate. Vomiting may cause aspiration pneumonia. Atropine is antidotal only if symptoms of cholinesterase inhibition are present. Pralidoxime chloride (2-PAM; PROTOPAM chloride) may be effective as an adjunct to atropine. Use only according to label directions.

## 5. FIRE FIGHTING MEASURES

**FLASH POINT (°F/Test Method):** >109°F / >42.8°C (PMCC)

**FLAMMABLE LIMITS (LFL & UFL):** None established

**EXTINGUISHING MEDIA:** Dry chemical, carbon dioxide, foam, water spray or fog.

**HAZARDOUS COMBUSTION PRODUCTS:** Oxides of sulfur, phosphorus-containing compounds, carbon monoxide and other unknown hazardous materials may be formed.

**SPECIAL FIRE FIGHTING PROCEDURES:** Wear self-contained breathing apparatus with full protective clothing. Fight fire from upwind and keep all non-essential personnel out of area.

**UNUSUAL FIRE AND EXPLOSION HAZARDS:** If water is used to fight fire and cool the containers, contain run-off by diking to prevent contamination of water supplies. Containers in fire may burst or explode from excessive heat.

## 6. ACCIDENTAL RELEASE MEASURES

### STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED:

For small spills, absorb with an absorbent material such as pet litter. Sweep up and transfer to containers for possible land application according to label use or for proper disposal. Wash the spill with water containing a strong detergent, absorb with pet litter or other absorbent material, sweep up and place in a chemical container and handle in an approved manner. Check local, state and federal regulations for proper disposal. Flush the area with water to remove any residue. For large spills: contain liquid by diking the area, keep product out of water supplies. If possible, use a pump to pick up liquid, then use absorbent material to absorb any residual liquid. Place both in a chemical container. Flush area with a household bleach and water mixture (1:1) and then absorb the liquid as described above in small spills.

**CAUTION:** Keep spills and cleaning runoff out of municipal sewers and open bodies of water.

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**7. HANDLING AND STORAGE**

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**HANDLING:** Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet. Personnel should use clothing and equipment as outlined below when handling open containers. Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

**STORAGE:** Do not store below temperature of 45°F. Store in safe manner. Store in original container only. Keep container tightly closed when not in use. Reduce stacking height where local conditions can affect package strength. Personnel should use clothing and equipment listed under "PRECAUTIONARY STATEMENT" on the product label when handling open containers. Do not contaminate water, food or feed by storage or disposal.

**Personal Protective Equipment: Mixers, loaders, applicators, flaggers, and other handlers must wear:** Long-sleeved shirt and long pants, shoes plus socks, chemical-resistant gloves, a NIOSH-approved dust mist filtering respirator with MSHA/NIOSH approval number prefix TC-21C or a NIOSH-approved respirator with any R, P, or HE filter, chemical-resistant apron when mixing, loading, cleaning up spills, or equipment. **User Safety Requirements:** Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry. Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them.

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**8. EXPOSURE CONTROLS / PERSONAL PROTECTION**

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**ENGINEERING CONTROLS:** Mixers and loaders supporting aerial application to alfalfa, cotton, soybeans, corn, safflower, sorghum, and wheat must use a closed system that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(4)]. The system must be capable of removing the pesticide from the shipping container and transferring it into mixing tanks and/or application equipment. At any disconnect point, the system must be equipped with a dry disconnect or dry couple shut-off device that is warranted by the manufacturer to minimize drippage to no more than 2 ml per disconnect. **In addition, mixers and loaders must:** wear the personal protective equipment required on the product labeling for mixers / loaders, except no respirator is required; wear protective eyewear, if the system operates under pressure; and be provided and have immediately available for use in an emergency, such as a broken package, spill, or equipment breakdown, chemical resistant footwear and a respirator of the type specified in the PPE section of this labeling.

Pilots must use an enclosed cockpit that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(6)]. Pilots need not wear the PPE required in this labeling for applicators, but must wear at least a long-sleeve shirt, long pants, shoes, and socks. When handlers use closed systems, or enclosed cabs in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides (40 CFR 170.240(d)(4-5)), the handler PPE requirements may be reduced or modified as specified in the WPS.

**RESPIRATORY PROTECTION:** Not normally required, if vapors or mists exceed acceptable levels, wear a NIOSH approved pesticide respirator with cartridges for pesticide vapors.

**EYE PROTECTION:** Chemical goggles or shielded safety glasses.

**SKIN PROTECTION:** Wear protective clothing: long-sleeved shirts and pants, hat, rubber boots with socks. Wear rubber or chemical-resistant gloves.

|                  | OSHA PEL 8 hr TWA            | ACGIH TLV-TWA               |
|------------------|------------------------------|-----------------------------|
| Cyclohexanone    | 200 mg/m <sup>3</sup>        | 50 mg/m <sup>3</sup> (Skin) |
| Xylene           | 435 mg/m <sup>3</sup>        | 434 mg/m <sup>3</sup>       |
| Cumene           | 245 mg/m <sup>3</sup> (Skin) | 246 mg/m <sup>3</sup>       |
| Trimethylbenzene | not listed                   | 123 mg/m <sup>3</sup>       |

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**9. PHYSICAL AND CHEMICAL PROPERTIES**

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|--|-------------------------------|
| <b>APPEARANCE AND ODOR:</b> Clear, light amber to yellow liquid with solvent and mild mercaptan odor.            | <b>SOLUBILITY:</b> Emulsifies |
| <b>SPECIFIC GRAVITY (Water = 1):</b> 1.09 g/ml   | <b>pH:</b> 3.59 (5% solution) |
| <b>VAPOR PRESSURE:</b> Not established   |                               |
| <b>PERCENT VOLATILE (by volume):</b> Not established   |                               |
| <b>Note:</b> These physical data are typical values based on material tested but may vary from sample to sample. |                               |
| Typical values should not be construed as a guaranteed analysis of any specific lot or as specification items.   |                               |

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**10. STABILITY AND REACTIVITY**

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**STABILITY:** Stable

**CONDITIONS TO AVOID:** Excessive heat and ignition sources.

**INCOMPATIBILITY:** Strong oxidizers, acids and bases.

**HAZARDOUS DECOMPOSITION PRODUCTS:** Thermal decomposition – oxides of sulfur, oxides of nitrogen, phosphorus-containing compounds and other unknown hazardous materials may be formed in a fire situation. Incomplete combustion may lead to formation of carbon monoxide and/or other asphyxiants.

**HAZARDOUS POLYMERIZATION:** Will not occur.

**11. TOXICOLOGICAL INFORMATION****Acute Oral LD<sub>50</sub> (rat):** 425 mg/kg**Eye Irritation (rabbit):** Substantial but temporary eye injury**Inhalation LC<sub>50</sub> (rat):** >5.34 mg/L (4 hr).**Carcinogenic Potential:** None listed in OSHA, NTP, IARC or ACGIH**Acute Dermal LD<sub>50</sub> (rabbit):** 2020 mg/kg**Skin Irritation (rabbit):** Slight irritant**Skin Sensitization (guinea pig):** Not established.**12. ECOLOGICAL INFORMATION**

Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Runoff from treated areas may be hazardous to aquatic organisms in neighboring areas. Do not contaminate water by cleaning equipment or disposal of wastes. Dimethoate is highly toxic to bees exposed to direct treatment or to residues on blooming crops or weeds. Do not apply this product or allow it to drift to blooming crops or weeds if bees are visiting the treatment area.

**13. DISPOSAL CONSIDERATIONS**

**PESTICIDE DISPOSAL:** Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

**CONTAINER HANDLING:** Nonrefillable container. Do not reuse this container to hold materials other than pesticides or dilute pesticides (rinsate). After emptying and cleaning, it may be allowable to temporarily hold rinsate or other pesticide-related materials in the container. Contact your state regulatory agency to determine allowable practices in your state. Once cleaned, some agricultural plastic pesticide containers can be taken to a container collection site or picked up for recycling. To find the nearest site, contact your chemical dealer or manufacturer, or contact The Agricultural Container Recycling Council (ACRC) at [www.acrecycle.org](http://www.acrecycle.org). If not recycled, then puncture and dispose of in a sanitary landfill, or incineration, or if allowed by state and local authorities, by burning. If burned, stay out of smoke. Triple rinse or pressure rinse container (or equivalent) promptly after emptying. **(For packages up to 5 gallons): Triple rinse as follows:** Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. **Pressure rinse as follows:** Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 PSI for at least 30 seconds. Drain for 10 seconds after the flow begins to drip. **(For packages greater than 5 gallons or 50 lbs.): Triple rinse as follows:** Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. **Pressure rinse as follows:** Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 PSI for at least 30 seconds. Drain for 10 seconds after the flow begins to drip. **(For square bottom caged totes greater than 55 gals.): Triple rinse or pressure rinse as follows:** Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Fill the container about 1/4 full with water, rinsing down all sides inside the container thoroughly. Recirculate water with the pump for 2 minutes. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. **(For refillable containers):** Refill this container with pesticide only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times.

**14. TRANSPORT INFORMATION**

**DOT Shipping Description:** RQ UN3017, ORGANOPHOSPHORUS PESTICIDE, LIQUID, TOXIC, FLAMMABLE, (DIMETHOATE, CYCLOHEXANONE) 6.1, (3), III ERG GUIDE 131

**U.S. Surface Freight Classification:** INSECTICIDES OR FUNGICIDES, INSECT OR ANIMAL REPELLENTS, NOI, OR VERMIN EXTERMINATORS, ANIMAL OR POULTRY, NOI; POISON (NMFC 102100; CLASS 77.5)

**Consult appropriate ICAO/IATA and IMDG regulations for shipment requirements in the Air and Maritime shipping modes.**

**15. REGULATORY INFORMATION****NFPA & HMIS Hazard Ratings:****NFPA**

|   |              |   |          |
|---|--------------|---|----------|
| 2 | Health       | 0 | Least    |
| 2 | Flammability | 1 | Slight   |
| 1 | Instability  | 2 | Moderate |
|   |              | 3 | High     |
|   |              | 4 | Severe   |

**HMIS**

|   |              |
|---|--------------|
| 2 | Health       |
| 2 | Flammability |
| 1 | Reactivity   |
| G | PPE          |

**SARA Hazard Notification/Reporting****SARA Title III Hazard Category:**

|           |          |
|-----------|----------|
| Immediate | <u>Y</u> |
| Delayed   | <u>Y</u> |

|          |          |
|----------|----------|
| Fire     | <u>Y</u> |
| Reactive | <u>N</u> |

|                            |          |
|----------------------------|----------|
| Sudden Release of Pressure | <u>N</u> |
|----------------------------|----------|

**Reportable Quantity (RQ) under U.S. CERCLA:** Dimethoate (CAS: 60-51-5): 10 pounds; Cyclohexanone (CAS: 108-94-1) 5000 pounds

**SARA, Title III, Section 313:** Dimethoate (CAS: 60-51-5) 43.5%; 1,2,4 Trimethylbenzene (CAS: 95-63-6) 3.2% maximum; Xylene (CAS: 1330-20-7) 0.3% maximum; Cumene (CAS: 98-82-8) 0.2% maximum

**SARA, Title III, Section 302: Threshold Planning Quantity: 500/10000 pounds**

**RCRA Waste Code: P044**

**CA Proposition 65:** Not listed.

**WARNING** – This chemical is a pesticide product registered by the United States 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 (SDS), and for workplace labels of non-pesticide chemicals.

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## 16. OTHER INFORMATION

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**MSDS STATUS:** Sections 1, 4, 7, 8, 13, and 14 revised

**PREPARED BY:** Registrations and Regulatory Affairs

**REVIEWED BY:** Environmental Health and Safety

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