



# DUST BOND®

## SAFETY, HEALTH, & ENVIRONMENTAL INFORMATION

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*D & D Emulsions Incorporated is committed to manufacturing dust suppressants that, when applied, create an environment that is free of fugitive dust without creating secondary safety, health, and environmental concerns to the property owner or applicator.*

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Years ago, a common solution to control fugitive dust was to apply used motor oil. This practice resulted in the contamination of the road surface with heavy metals and volatiles. When environmental researchers discovered this abuse to our environment, regulations were enacted to prohibit the use of waste oil as a dust suppressant. This created a market for an environmentally friendly and economical dust suppressant. DUST BOND® was formulated to fill this need by satisfying the following criteria:

- It had to be effective at suppressing fugitive dust.
- It had to have no adverse impact to the environment.
- It had to be safe to store and apply.
- It had to be cost effective.

D & D Emulsions Incorporated has funded testing by independent laboratories and researched data from tests performed by other laboratories on identical CAS Number specimens, as used in the production of DUST BOND®. These tests show that DUST BOND® is:

- ✓ NON-CORROSIVE
- ✓ NON-FLAMMABLE
- ✓ NON-TOXIC TO DRINKING WATER
- ✓ NON-POLLUTING TO AIR

- ✓ NON-TOXIC  
ORALLY, INHALATION,  
DERMAL, & OCULAR

### **NON-CORROSIVE**

DUST BOND®, when tested as a concentrate, has a PH range of 4.5 to 6.5 and a total acid number of less than 0.5. When tested with carbon steel, the corrosion rate was less than 4.0 mm/year. Corrosion rates of less than 6.5 mm/year are considered non-corrosive. **The U. S. Department of Transportation (DOT) classifies DUST BOND® as a non-corrosive material** and places no regulations or placard requirements for shipping. It is easy to conclude that **DUST BOND® will not contribute to premature deterioration of expensive equipment.**

### **NON-FLAMMABLE**

DUST BOND® Concentrate is an emulsion made from water and a resin from the petroleum refinery stream that remains after the flammables, such as gasoline, fuel oil, etc., have been refined out. In the concentrated form, even before dilution with 80% to 95% water, there is sufficient water to prevent combustion. **The U. S. Department of Transportation (DOT) has classified DUST BOND® as non-flammable**

and non-combustible and places no regulations or placard requirements during shipment. **The National Fire Protection Agency(NFPA) considers DUST BOND® as non-flammable** and makes no recommendations for its use or storage.

### **NON-HAZARDOUS WASTE**

DUST BOND® concentrate, when tested by Toxicity Characteristic Leaching Procedure (TCLP), revealed "no detectable" limits of U. S. Environmental Protection Agency (EPA) regulated chemicals for hazardous waste. **DUST BOND® Concentrate is considered non-hazardous by the EPA and DOT** and has not been assigned a Hazard Class, Hazard Identification Number, or Hazard Waste Number.

### **NON-TOXIC TO DRINKING WATER**

DUST BOND® Concentrate was subjected to VOLATILE COMPOUNDS - Method 8260 testing, as suggested by the Ohio Environmental Protection Agency, Public Drinking Water Division, to determine if it was safe to use within close proximity of a public drinking water source. This revealed acceptable results, as none of the sixty additional volatile compounds searched for exceeded the parts per billion limits of the test. **DUST BOND® is non-toxic to drinking water.**

### **NON-POLLUTING TO AIR**

No solvents are used in the formulation of DUST BOND®. This is evidenced by TCLP which shows that DUST BOND® contains no Volatile Organic Compounds (VOC's) usually found in solvents. DUST BOND® contains none of the substances listed in the

Superfund Amendment & Reauthorization Act (SARA) Title III, sec 313. DUST BOND® contains no Hazardous Air Pollutants (HAP's) and no Ozone Depleting Substances (ODS's) regulated under the Clean Air Act. **DUST BOND® is non-polluting to air.**

### **NON-TOXIC - ORALLY**

The toxicity of an ingested substance is known as the "oral toxicity". This measurement is expressed as a value known as the "LD-50". This stands for the lethal dose 50%, or the amount of a substance, in proportion to the animal's bodyweight, that must be consumed to kill 50% of the test animals in a study. **High LD-50 values indicate lower toxicity or safer products.**

The U.S. Consumer Products Safety Commission (CPSC) rates consumer products with oral LD-50 values of more than 5000 mg/kg as non-toxic. The Occupational Safety and Health Agency (OSHA), in its Hazard Communication Standard (HCS), rates products with oral LD-50 values of more than 500 mg/kg as non-toxic. As further comparison, the Environmental Protection Agency rates pesticides with oral LD-50 values of more than 5000 mg/kg to be a low concern.

Testing was performed with undiluted concentrate on laboratory animals at 16,000 mg/kg. All animals survived. Further testing was considered unnecessary, even though the actual oral LD-50 was not determined, it is obviously somewhat higher than 16,000 mg/kg. **DUST BOND® is non-toxic orally.**

### **NON-TOXIC - INHALATION**

Testing was performed with undiluted concentrate on two groups of laboratory animals at 31,000 ppm for one hour and two groups at 881 ppm for one hour. During the 14 day observation period, all animals exhibited normal weight gains and no anatomical abnormalities were observed. None of the animals died at either dosage. It is reasonable to conclude that **DUST BOND® is non-toxic if inhaled.**

**NON-IRRITANT - DERMAL** Testing was performed with undiluted concentrate on laboratory animals. All had a dorsal area shaved, abraded, and painted with concentrate for 24 hours. Observations at 24 and 72 hours revealed a primary irritation score of 1.0, which is too low to be considered a primary dermal irritant. **DUST BOND® is a dermal non-irritant.**

The International Agency for the Research of Cancer (IARC) has determined that base oils similar to those under the classification CAS number 64742-04-7 or 64742-11-6 may cause carcinogenic effects in laboratory animals through direct contact with their skin for long periods of time. This caution is based on an eighty (80) week skin painting test on laboratory mice. One 25 mg dose was administered two times per week, which resulted in carcinogenic activity by the end of the study. Our emulsified base oils, properly handled as outlined in the Material Safety Data Sheet (MSDS), are not expected to have any harmful effects to humans. **Good hygienic practice makes DUST BOND non-carcinogenic.**

### **NON-IRRITANT OCULAR**

Testing was performed with undiluted concentrate on laboratory animals. Each received .1 ml of concentrate in the left eye. As a control, the right eye was untreated.

Observations at 24, 48, and 72 hours were graded according to Food and Drug Administration Guidelines and revealed only slight ocular reaction. **DUST BOND® is a non-irritant to eyes.**

### **RESOURCES:**

Applied Biological Sciences Laboratory  
Bio Techics Laboratories, Inc.  
International Agency for the Research of Cancer (IARC)  
Martin Environmental, Inc.  
National Environmental Testing Laboratories, Inc.  
National Fire Protection Agency (NFPA)  
National Toxicology Program (NTP)  
Occupational Safety and Health Agency (OSHA)  
Ohio Environmental Protection Agency (Ohio EPA)  
Superfund Amendment & Reauthorization Act (SARA)  
U. S. Consumer Products Safety Commission (CPSC)  
U. S. Department of Health and Human Services  
U. S. Department of Transportation (DOT)  
U. S. Environmental Protection Agency (EPA)



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# MATERIAL SAFETY DATA SHEET

**PRODUCT NAME:**

**DUST BOND®**

**MANUFACTURER:**

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**NFPA CLASSIFICATION**

|              |            |     |
|--------------|------------|-----|
| 0 = LEAST    | HEALTH     | = 1 |
| 1 = SLIGHT   | FIRE       | = 0 |
| 2 = MODERATE | REACTIVITY | = 0 |
| 3 = HIGH     |            |     |
| 4 = EXTREME  |            |     |

**SECTION I - COMPONENT DATA**

| CHEMICAL COMPONENTS   | %WT |
|---|-----|
| Petroleum Resin C.A.S.#64742-04-7 and/or 64742-11-6 and/or 64742-34-3 | 60+ |
| Emulsifiers and Water   | 40  |

**SECTION II - PHYSICAL DATA**

CHEMICAL NAME: Petroleum hydrocarbon in water emulsion.  
 BOILING POINT (°F): 212°  
 VAPOR PRESSURE (mmHg @ 20°C): Same as Water.  
 VAPOR DENSITY (AIR = 1): Same as Water.  
 SOLUBILITY IN WATER: Readily dispersible.  
 SPECIFIC GRAVITY (H<sub>2</sub>O = 1): Approx. 1.  
 VOLATILE (BY WT.): nil.  
 EVAPORATIVE RATE (WATER = 1): Same as Water.  
 pH INFORMATION: 4.5 - 6.5.  
 APPEARANCE AND ODOR: Yellow-brown color, no objectionable odor.

**SECTION III - FIRE & EXPLOSION HAZARD DATA**

FLASH POINT (°F): N/A  
 METHOD USED: C.O.C.  
 FLAMMABILITY LIMITS (% VOL): N/A  
 AUTO-IGNITION TEMPERATURE (°F): N/A  
 LEL: N/A UEL: N/A  
 EXTINGUISHING MEDIA: CO<sub>2</sub>, Foam, Dry Chemical, Waterfog.

**SPECIAL FIRE FIGHTING PROCEDURES:**

Dense smoke may result. Proper protective equipment including self-contained breathing apparatus should be worn.

**SECTION IV - REACTIVITY DATA**

STABILITY (CONDITIONS TO AVOID): Material is stable. Avoid temperature above 180°F and freezing.

INCOMPATIBILITY (MATERIALS TO AVOID): Strong oxidizers such as hydrogen peroxide, bromine and chromic acid.

HAZARDOUS DECOMPOSITION PRODUCTS: Carbon monoxide and carbon dioxide from burning. Oxides of nitrogen and sulfur may also be produced.  
 HAZARDOUS POLYMERIZATION: N/A

**SECTION V - HEALTH HAZARD DATA**

PRIMARY ROUTE(S) OF ENTRY: Skin contact, eyes, inhalation, ingestion.

**EFFECTS OF EXPOSURE:**

INHALATION: Prolonged extreme exposure to high concentrations of mist may cause bronchial or lung irritation.

SKIN CONTACT: IARC has determined that base oils similar to those under the classification CAS number 64742-04-7 or 64742-11-6 or 64742-34-3 may cause carcinogenic effects in laboratory animals through direct contact with their skin for long periods of time. Our emulsified base oils, properly handled as outlined in this MSDS, are not expected to have any harmful effects to humans.

EYE CONTACT: May cause mild irritation.

INGESTION: May cause irritation of the digestive tract.

**EXPOSURE LIMITS:**

| CHEMICAL COMPONENTS (mg/m <sup>3</sup> ) | OSHA PEL (mg/m <sup>3</sup> ) | 8 HOUR/TWA (mg/m <sup>3</sup> ) | NTP LISTED | IARC LISTED |
|--|-------------------------------|---------------------------------|------------|-------------|
| Oil Mist                                 | 5                             | .2                              | NO         | YES         |

**SECTION VI - EMERGENCY & FIRST-AID PROCEDURES**

INHALATION: Remove exposed person to fresh air.

SKIN: Wash exposed area with soap and water.

EYES: Flush with water for 15 minutes. Call physician.

INGESTION: Call physician immediately.

**SECTION VII - SPECIAL HANDLING INFORMATION**

VENTILATION TYPE REQUIRED: Local if necessary to maintain allowable PEL (permissible exposure limit) or TLV (threshold limit value).

RESPIRATORY PROTECTION (specify type): Use NIOSH/MSHA certified respirator with organic vapor cartridge if vapor concentration exceeds permissible exposure limit.

PROTECTIVE GLOVES: Oil resistant.

EYE PROTECTION: Chemical safety goggles.

OTHER PROTECTIVE EQUIPMENT: None.

**SECTION VIII - SPILL, LEAK & DISPOSAL PROCEDURES**

ACTION TO TAKE FOR SPILLS (USE APPROPRIATE SAFETY EQUIPMENT):

Absorb in vermiculite, dry sand, earth, or similar material and dispose of in accordance with Federal, State, and Local regulations.

WASTE DISPOSAL METHOD: Material is not classified as a hazardous waste.

**SECTION IX - SPECIAL PRECAUTIONS:**

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:

Avoid prolonged or repeated contact with skin or breathing of vapors, mists, or fumes.

Launder contaminated clothing before reuse.

Keep containers tightly closed. Avoid strong oxidizers. Eliminate all sources of ignition such as flames or sparks.

**SECTION X - TRANSPORTATION DATA**

D.O.T. INFORMATION: Not regulated.

HAZARDOUS MATERIAL PROPER SHIPPING NAME: N/A

HAZARD CLASS: N/A

IDENTIFICATION NUMBER: N/A

EPA HAZARDOUS WASTE NUMBER: N/A

**SECTION XI - ENVIRONMENTAL/SAFETY REGULATIONS**

SECTION 313 (TITLE III SUPERFUND AMENDMENT AND REAUTHORIZATION ACT): This product does not contain any chemical subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

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