

**Product Information (203) 740-3471 / Emergency Assistance CHEMTREC 1-800-424-9300  
or 202-483-7616**

## **MATERIAL SAFETY DATA SHEETS**

Part Number/Trade Name: DIMETHYL FORMAMIDE  
This MSDS is valid for all grades that start with catalog number 324

### General Information

|   |  |
|---|--|
| Company's Name: PHARMCO PRODUCTS, INC.      | Safety Data Review Date: 8/23/99           |
| Company's Street: 58 VALE RD.               | Preparer's Company: PHARMCO PRODUCTS, INC. |
| Company's City: BROOKFIELD                  | Preparer's St or P. O. Box: 58 VALE RD.    |
| Company's State: CT                         | Preparer's City: BROOKFIELD                |
| Company's Zip Code: 06804                   | Preparer's State: CT                       |
| Company's Emergency Phone #: (203) 740-3471 | Preparer's Zip Code: 06804                 |
| Company's Info Phone #: (203) 740-3471      |  |
| Date MSDS Revised: Nishant-8/23/99          |  |

### Ingredients/Identity Information

|                                 |                            |
|---------------------------------|----------------------------|
| Ingredient: DIMETHYLFORMAMIDE   | CAS Number: 68-12-2        |
| Ingredient Sequence Number: 01  | OSHA PEL: S, 10 PPM        |
| Percent: 100                    | ACGIH TLV: S, 10 PPM; 9192 |
| NIOSH (RTECS) Number: LQ2100000 |                            |

### Physical/Chemical Characteristics

|   |   |
|---|---|
| APPEARANCE AND ODOR: Liquid, clear, colorless, slight amine odor. | Decomposition Temperature: >662F, >350C       |
| Boiling Point: 307F, 153C   | Evaporation Rate And Ref: <1.0, BUTYL ACETATE |
| Vapor Pressure (MM Hg/70 F): 2.6 MM HG                            | Solubility In Water: COMPLETE                 |
| Vapor Density (Air=1): 2.5  | Percent Volatiles by Volume: 100              |
| Specific Gravity: 0.95  | pH: 8(20%)                                    |
|   | Autoignition Temperature: 833F                |

### Fire and Explosion Hazard Data

Flash Point: 136F/58C TCC  
Lower Explosive Limit: 2.2  
Upper Explosive Limit: 15.2  
EXTINGUISHING MEDIA: Water fog, alcohol resistant foam, dry chemical, CO<sup>2</sup>.  
SPECIAL FIRE FIGHTING PROCEEDURE: Evacuate enclosed areas. Keep personnel upwind, use respiratory equipment.  
UNUSUAL FIRE AND EXPLOSION HAZARDS: Combustible. Vapors heavier than air.

### Reactivity Data

|  |   |
|--|---|
| Stability: NO  | TRIETHYL(SUPP).   |
| Conditions To Avoid (Stability): HALOGENATED COMPS IN PRESENCE OF FE, MGNO*3, ALUMINUM TRIETHY | Hazardous Decomposition Products: TEMPS>662F/350C MAY RELEASE DIMETHYLAMINE & CARBON MONOXIDE |
| Materials To Avoid: HALOGEN COMPOUNDS IN PRESENCE OF FE, MGNO*3 ALUM                           | Hazardous Poly Occur: NO  |

### Health Hazard Data

LD50-LC50 Mixture: ORAL LD50 (RATS) = 2,800 MG/KG  
Route of Entry - Inhalation: YES  
Route of Entry - Skin: YES  
Route of Entry - Ingestion: YES  
Health Hazards Acute and Chronic:  
INHALATION- Irritation of the upper respiratory passages; Abnormal liver function.  
SKIN- Irritation  
EYES- Severe Irritation  
INGESTION- Irritation of the digestive tract.  
Carcinogenicity - NTP: NO  
Carcinogenicity - IARC: NO  
Carcinogenicity - OSHA: NO  
Explanation Carcinogenicity: Not applicable  
Signs/Symptoms of Over-exposure:  
INGESTION- Stomach pain, heartburn, nausea, vomiting or diarrhea.  
SKIN- Rash, swelling, redness, and wrinkling of the skin. May cause headache, or weakness, abdominal discomfort, or abnormal liver function.  
EYES- Discomfort, tearing or blurring of vision.  
INHALATION- Irritation of the upper respiratory system.  
MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Individuals with pre-existing diseases of the liver may have increased susceptibility to the toxicity of excessive exposures.  
EMERGENCY/FIRST AID PROCEEDURE:  
INHALATION - Immediately remove to fresh air. Administer appropriate breathing support measures. SKIN - Immediately flush with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing.  
EYES - Immediately flush with plenty of water for at least 15 minutes.  
INGESTION – **Do not induce vomiting.** Immediately give 2 glasses of water. Call a physician.

### Precautions for Safe Handling and Use

STEPS IF MATERIAL IS RELEASED/SPILLED: Dike spill with sand or earth. Absorb with sand or non-flammable absorbent material and transfer into steel drums for recovery or disposal. Flush away remaining traces with water.  
WASTE DISPOSAL METHOD: Comply with federal, state and local regulations. If approved, can be disposed of by incineration, bio-oxidation or by removal to licensed hazardous material landfill.  
PRECAUTIONS-HANDLING/STORING: Keep container tightly closed and in a cool place. Keep away from fire, sparks & flame. Avoid breathing vapor. Avoid contact with eyes, skin & clothing.  
OTHER PRECAUTIONS: Wash thoroughly after handling.

### Control Measures

RESPIRATORY PROTECTION: Chemical suit with breathing air supply if there is chance of exposure.  
VENTILATION: Provide mechanical (Gen/Local Exhaust) vent to maintain < TLV.  
PROTECTIVE GLOVES: DMF-Resistant.  
EYE PROTECTION: Chemical splash goggles.  
OTHER PROTECTIVE EQUIPMENT: Boots and apron (such as butyl rubber).  
Supplied Safety & Health Data: MSDS DATED: 12/76, DATA SHEET #E-04647.

### Transportation Data

Trans Data Review Date: 86288  
DOT PSN Code: FGT  
DOT Proper Shipping Name: N, N-DIMETHYLFORMAMIDE \*  
DOT Class: 3  
DOT ID Number: UN2265  
DOT Pack Group: III  
DOT Label: FLAMMABLE LIQUID  
IMO PSN Code: FYM  
IMO Proper Shipping Name: N,N-DIMETHYLFORMAMIDE \*  
IMO Regulations Page Number: 3335

IMO UN Number: 2265  
IMO UN Class: 3.3  
IMO Subsidiary Risk Label: -  
IATA PSN Code: JYL  
IATA UN ID Number: 2265  
IATA Proper Shipping Name: N, N-DIMETHYLFORMAMIDE \*  
IATA UN Class: 3  
IATA Label: FLAMMABLE LIQUID

AFI PSN Code: JYL  
AFI Prop. Shipping Name: N,N-DIMETHYLFORMAMIDE \*  
AFI Class: 3  
AFI ID Number: UN2265  
AFI Pack Group: III  
AFI Label: FLAMMABLE LIQUID  
AFI Basic Pac Ref: 7-7  
Additional Trans Data: MMAC-CM,

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Disposal Data

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Landfill Ban Item: YES  
Disposal Supplemental Data: MSDS DATED: 12/76,  
DATA SHEET #E-04647. In case of accidental  
exposure or discharge, consult health and safety file  
for precautions.

1st EPA Hazardous Waste Code New: D001  
1st EPA Hazardous Waste Name New: IGNITIBLE  
1st EPA Hazardous Waste Char New:  
IGNITABILITY  
1st EPA Acute Hazard New: NO

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Label Data

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Label Required: YES  
Technical Review Date: 03OCT94  
Label Status: F  
Common Name: DIMETHYLFORMAMIDE  
Chronic Hazard: YES  
Signal Word: WARNING!  
Acute Health Hazard-Slight: X  
Contact Hazard-Slight: X  
Fire Hazard-Moderate: X  
Reactivity Hazard-Slight: X  
Special Hazard Precautions:  
INHALATION- IRRITATION OF THE UPPER RESPIRATORY PASSAGES; ABNORMAL LIVER  
FUNCTION. IMMEDIATELY REMOVE TO FRESH AIR. ADMINISTER APPROPRIATE  
BREATHING SUPPORT MEASURES.  
SKIN- Immediately flush with plenty of water for at least 15 minutes while removing contaminated clothing and  
shoes. Wash clothing.  
EYES- Immediately flush with plenty of water for at least 15 minutes.  
INGESTION- Do not induce vomiting. Immediately give 2 glasses of water. Call a physician.  
PROTECT EYE: Yes  
PROTECT SKIN: Yes  
PROTECT RESPIRATORY: Yes

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The information contained herein is based on data considered to be accurate. However, no warranty is expressed regarding the accuracy of these data or the results to be obtained from the use thereof. It is the user's obligation to determine the conditions of safe use of the product.