

**MATERIAL SAFETY DATA SHEET**

**MSDS NUMBER: M100**

**MSDS DATE: 01/01/11**

**PRODUCT NAME: n-BUTYL ACID PHOSPHATE**

24 HOUR EMERGENCY PHONE: 1-800-424-9300

**I. PRODUCT IDENTIFICATION**

**HMIS HAZARD RATINGS**

**HEALTH HAZARD 3**

**FIRE HAZARD 1**

**REACTIVITY 0**

Based on the National Paint & Coatings Association HMIS rating system.

**SARA/TITLE III HAZARD CATEGORIES (See Section X)**

|                           |     |                             |    |
|---------------------------|-----|-----------------------------|----|
| Immediate (ACUTE) Health: | YES | Reactive Hazard:            | NO |
| Delayed (Chronic) Health: | NO  | Sudden Release of Pressure: | NO |
| Fire Hazard:              | NO  |                             |    |

|                  |                        |            |                |
|------------------|------------------------|------------|----------------|
| MANUFACTURER'S : | IsleChem, LLC          |            |                |
| NAME AND :       | 2801 Long Road         | TELEPHONE: | (716) 773-8100 |
| ADDRESS :        | Grand Island, NY 14072 |            |                |

|                |   |             |   |
|----------------|---|-------------|---|
| CHEMICAL NAME: | Phosphoric Acid<br>Monobutyl/Dibutyl<br>Ester Mixture | CAS NUMBER: | 1623-15-0 (monoester)<br>107-66-4 (diester) |
|----------------|---|-------------|---|

SYNONYMS/COMMON NAMES: Butyl Acid Phosphate  
Dibutyl Acid Phosphate  
Dibutyl Phosphate

CHEMICAL FORMULA:  $C_4H_{11}O_4P \cdot C_8H_{19}O_4P$  mixture

PRODUCT USE: Curing Catalyst, oil additive, pigment dispersion agent and others

|                                     |                                 |
|-------------------------------------|---------------------------------|
| DOT PROPER SHIPPING NAME:           | Butyl Acid Phosphate            |
| DOT HAZARD CLASS:                   | 8                               |
| DOT IDENTIFICATION NUMBER:          | UN1718                          |
| DOT PACKING GROUP:                  | III                             |
| DOT HAZARDOUS SUBSTANCE:            | RQ Phosphoric Acid = 5,000 lbs. |
| DOT MARINE POLLUTANT:               | Not applicable                  |
| ADDITIONAL DESCRIPTION REQUIREMENT: | Not applicable                  |

CAS = Chemical Abstract Service Number  
PEL = OSHA Permissible Exposure Limit  
TLV = ACGIH Threshold Limit Value, Current  
ND = No relevant information found or not available  
CORP = Corporate Exposure Limit  
\* = See Chronic Effects Information  
NA = Not applicable  
IMPORTANT: The information presented herein, while not guaranteed, was prepared by competent technical personnel and is true and accurate to the best of our knowledge. NO WARRANTY, EXPRESS OR IMPLIED IS MADE REGARDING PERFORMANCE, STABILITY, OR OTHERWISE. This information is not intended to be all-inclusive as to the manner and conditions of use, handling and storage. Other factors may involve other or additional safety or performance considerations. While our technical personnel will be happy to respond to questions regarding safe handling use procedures, safe handling and use remains the responsibility of the customer. No suggestions for use are intended as, and nothing herein shall be construed as a recommendation to infringe any existing patents or violate any Federal, State or local laws.

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## **II. HEALTH HAZARD INFORMATION**

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### **EMERGENCY AND FIRST AID PROCEDURES**

#### **EYES:**

OBJECT IS TO FLUSH MATERIAL OUT IMMEDIATELY THEN SEEK MEDICAL ATTENTION. IMMEDIATELY flush eyes with large amounts of water for at least 15 minutes forcibly holding lids apart to ensure complete irrigation of all eye and lid tissue. Washing eyes within one (1) minute is essential to achieve maximum effectiveness. SEEK MEDICAL ATTENTION IMMEDIATELY.

#### **SKIN:**

SEEK MEDICAL ATTENTION IMMEDIATELY. Flush thoroughly with cool water under shower while removing contaminated clothing and shoes. CONTINUE TO FLUSH UNTIL MEDICAL ATTENTION ARRIVES. Discard non-rubber shoes. Wash clothing before reuse.

#### **INHALATION:**

Remove to fresh air. If breathing is difficult, have trained person administer oxygen. If respiration stops, give mouth-to-mouth resuscitation. GET MEDICAL ATTENTION IMMEDIATELY.

#### **INGESTION:**

DO NOT INDUCE VOMITING. This material is not soluble. DO NOT GIVE FLUIDS. If spontaneous vomiting is inevitable, PREVENT ASPIRATION by keeping the victims head below the knees. GET IMMEDIATE MEDICAL ATTENTION. A qualified physician can perform gastric lavage only when the airway (trachea) has been secured to prevent aspiration.

### **ROUTES OF EXPOSURE**

#### **INHALATION:**

Inhalation of vapors may cause irritation to the mucous membranes of the nose and throat and can produce serious chemical burns.

#### **SKIN:**

Exposure may irritate skin and can produce serious burns.

#### **EYE CONTACT:**

May irritate eyes and can produce chemical burns.

#### **INGESTION:**

Can cause irritation and burning of the mouth, throat and gastrointestinal tract.

### **EFFECTS OF OVEREXPOSURE**

#### **ACUTE:**

Irritating and corrosive to the eyes, skin, respiratory and digestive tracts.

#### **CHRONIC:**

No known chronic effects.

#### **TOXICOLOGY DATA:**

Acute Oral LD50 (rat) 3.2 g/kg.

#### **SYNERGISTIC MATERIALS:**

Not Applicable.

### III. IMPORTANT COMPONENTS

**CAS NUMBER / NAME**

107-66-4 Phosphoric acid, dibutyl ester

**EXPOSURE LIMITS**

PEL: 1 ppm; 5 mg/m<sup>3</sup>, TWA  
 STEL 2 ppm; 10 mg/m<sup>3</sup>  
 TLV: 1 ppm; 8.6 mg/m<sup>3</sup>, TWA  
 STEL 2 ppm; 17 mg/m<sup>3</sup>

**PERCENTAGE**

VOL 40-60  
 WT 40-60

**COMMON NAMES:**

DIBUTYL ACID PHOSPHATE

**Listed On (List Legend Below):**

00 12 16 22 27 47 50 51 56 57 58 62 64 75 76 77

1623-15-0 Phosphoric acid, monobutyl ester

**EXPOSURE LIMITS**

PEL: Not Established  
 TLV: Not Established

**PERCENTAGE**

VOL 40-60  
 WT 40-60

**COMMON NAMES:**

**Listed On (List Legend Below):**

00 22 27 40 47 50 51 62 75 76 77

7664-38-2 Phosphoric acid

**EXPOSURE LIMITS**

PEL: 1 mg/m<sup>3</sup>, TWA  
 STEL 3 mg/m<sup>3</sup>  
 TLV: 1 mg/m<sup>3</sup>, TWA  
 STEL 3 mg/m<sup>3</sup>

**PERCENTAGE**

VOL 1-8  
 WT 1-8

**COMMON NAMES:**

ORTHOPHOSPHORIC ACID

**Listed On (List Legend Below):**

00 03 12 13 21 22 24 50 51 56 57 58 60 62 64 70 71 72 75 76 77

All components of this product that are required to be on the TSCA Inventory are listed on the inventory.

Not listed as carcinogen - IARC, NTP, OSHA

**LIST LEGEND**

- |                                   |                                   |
|-----------------------------------|-----------------------------------|
| 00 TSCA INVENTORY                 | 56 OSHA PERMISSIBLE EXPOSURE LIM  |
| 03 HAS A CERCLA REPORTABLE QTY    | 57 ACGIH THRESHOLD LIMIT VALUES   |
| 12 PA HAZARDOUS SUBSTANCE         | 58 MASSACHUSETTS RIGHT TO KNOW    |
| 13 PA ENVIRONMENTAL HAZ SUBSTANCE | 60 CLEAN WATER ACT, SEC 311       |
| 16 NJ WORKPLACE HAZ SUBSTANCE LST | 62 WHMIS                          |
| 21 NJ SPECIAL HEALTH HAZ SUB      | 64 NIOSH RECOMMENDED EXPOS LIMITS |
| 22 CANADIAN DOMESTIC SUB LIST     | 70 EUR AGRMT - CARRIAG DANG GOODS |
| 24 NJ DISCHARGE OF HAZ SUBSTANCES | 71 REGS - CARRIAGE OF GOODS/RAIL  |
| 27 TSCA SECTION 8(A) PAIR         | 72 ANNEX I                        |
| 40 NOT PEL/TLV                    | 75 AUSTRALIAN INVENTORY (AICS)    |
| 47 TSCA IUR LIST                  | 76 JAPANESE CHEMICAL INVENTORY    |
| 50 PHILIPPINES INVENTORY (PICCS)  | 77 KOREAN EXIST. CHEMICALS (ECL)  |
| 51 EINECS                         |                                   |



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## VI. PHYSICAL DATA

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|  |   |
|--|---|
| <b>BOILING POINT @ 760 mm Hg:</b>            | Not applicable; decomposition starts at 124°C (225°F) |
| <b>FREEZING POINT:</b>                       | < -60°C   |
| <b>VAPOR PRESSURE:</b>                       | No Data   |
| <b>SPECIFIC GRAVITY (H<sub>2</sub>O=1):</b>  | 1.12  |
| <b>SOLUBILITY IN H<sub>2</sub>O % BY WT:</b> | Insoluble   |
| <b>VAPOR DENSITY (Air=1):</b>                | No Data   |
| <b>APPEARANCE AND ODOR:</b>                  | Clear, colorless liquid                               |
| <b>ODOR THRESHOLD (ppm):</b>                 | No Data   |
| <b>pH:</b>                                   | 2 @ 10 GM/L   |
| <b>DENSITY:</b>                              | 9.3 lb/gal  |
| <b>EVAPORATION RATE:</b>                     | No Data   |
| <b>COEFFICIENT WATER/OIL DISTRIBUTION:</b>   | No Data   |

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## VII. REACTIVITY DATA

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### CONDITIONS CONTRIBUTING TO INSTABILITY:

Avoid exposure to heat or to most metals or plastics, especially at elevated temperatures. Thermal degradation occurs above 255°F.

### INCOMPATIBILITY:

Reacts with alkalis producing heat. Reacts with many metals liberating flammable hydrogen gas.

### HAZARDOUS DECOMPOSITION PRODUCTS:

Thermal degradation produces oxides of Carbon and Phosphorus.

### CONDITIONS CONTRIBUTING TO HAZARDOUS POLYMERIZATION:

Material is not known to polymerize.

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## VIII. HANDLING AND STORAGE

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### HANDLING AND STORAGE PRECAUTIONS:

Store away from heat and separate from alkalis, aluminum, zinc and other metals. Protect from atmospheric moisture. Storage areas for drummed material should have adequate drainage. Storage tanks should be vented and diked. This material is acidic and will attack carbon steel

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## **IX. ENVIRONMENTAL PROCEDURES**

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

Isolate spill and restrict non-essential personnel. Cleanup personnel should use protective measures outlined in section V of this MSDS. Soak up with vermiculite, sand or other absorbent material and place in marked metal container for disposal. Neutralize with soda ash. Flush spill area with large quantities of water after spilled material has been removed. Do not allow contaminated water to enter water ways or sewers.

### **WASTE DISPOSAL METHOD:**

The RCRA characteristic of corrosivity, D002, is exhibited by the unused product if it becomes a waste. Product should be completely removed from container. Material that cannot be used or chemically reprocessed should be disposed of in accordance with all local, state and federal regulations. Incinerate in equipment designed to handle oxides of phosphorus as combustion products or send to a waste disposal firm. Empty containers should be disposed of in a manner meeting government regulations.

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## **X. ADDITIONAL INFORMATION**

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Designated a hazardous chemical by OSHA (29 CFR Sec 1910, Subpart Z). Designated a hazardous material by ACGIH.

OSHA Standard 29 CFR 1910.1200 requires that information be provided to employees regarding the hazards of chemicals by means of a hazard communication program including labeling, material safety data sheets, training and access to written records. We request that you, and it is your legal duty to, make all information in this Material Safety Data Sheet available to your employees.

To aid our customers in complying with regulatory requirements, SARA Title III hazard categories for this product are indicated in Section I. If the word "YES" appears next to any category, this product may be reportable by you under the requirements of 40 CFR Part 370. Please consult those regulations for details.

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## **XI. PREPARATION INFORMATION**

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For additional Non-Emergency health, safety or environmental information telephone (716) 773-8438, or write to:

IsleChem, LLC  
2801 Long Road  
Grand Island, NY 14072

**For Emergencies: 24 HOUR EMERGENCY PHONE: 1-800-424-9300**

**To request an MSDS: 716-773-8438**

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## WARNING LABEL INFORMATION

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**SIGNAL WORD: DANGER**

**STATEMENT OF HAZARDS:**

ACID CORROSIVE

MAY CAUSE IRRITATION OR BURNS TO THE SKIN, EYES, RESPIRATORY AND DIGESTIVE TRACTS.

**PRECAUTIONARY STATEMENTS:**

Keep container closed.

Insure adequate ventilation or use an approved respirator.

Avoid breathing vapor.

Do not get in eyes, on skin, on clothing.

Wash thoroughly after handling.

Use goggles, impervious clothing and rubber shoes.

Reacts with aluminum, zinc, and other metals liberating flammable hydrogen gas.

**FIRST AID:**

**FOR EYES:**

OBJECT IS TO FLUSH MATERIAL OUT IMMEDIATELY THEN SEEK MEDICAL ATTENTION.

IMMEDIATELY flush eyes with large amounts of water for at least 15 minutes forcibly holding lids apart to ensure complete irrigation of all eye and lid tissue. Washing eyes within one (1) minute is essential to achieve maximum effectiveness. SEEK MEDICAL ATTENTION IMMEDIATELY.

**FOR SKIN:**

SEEK MEDICAL ATTENTION IMMEDIATELY. Flush thoroughly with cool water under shower while removing contaminated clothing and shoes. CONTINUE TO FLUSH UNTIL MEDICAL ATTENTION ARRIVES. Discard non-rubber shoes. Wash clothing before reuse.

**IF INHALED:**

Remove to fresh air. If breathing is difficult, have trained person administer oxygen. If respiration stops, give mouth-to-mouth resuscitation. GET MEDICAL ATTENTION IMMEDIATELY.

**IF SWALLOWED:**

DO NOT INDUCE VOMITING. This material is not soluble. DO NOT GIVE FLUIDS. If spontaneous vomiting is inevitable, PREVENT ASPIRATION by keeping the victims head below the knees. GET IMMEDIATE MEDICAL ATTENTION. A qualified physician can perform gastric lavage only when the airway (trachea) has been secured to prevent aspiration.

**IN CASE OF:**

**SPILL OR LEAK:**

Soak up with vermiculite, sand, earth or other absorbent material and place in marked metal container for disposal. Neutralize with soda ash. Flush spill area with large quantities of water.

**FIRE:**

Use dry chemical, Halon, foam, carbon dioxide or water spray. Use air supplied respirator and full protection equipment. Fire will liberate toxic gases.

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**WARNING LABEL INFORMATION (Continued)**

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**HANDLING AND STORAGE:**

Store in a cool, dry place separate from alkalies, aluminum, zinc and other metals.

**DISPOSAL:**

The RCRA characteristic of corrosivity, D002, is exhibited by the unused product if it becomes a waste. Product should be completely removed from container. Material that cannot be used or chemically reprocessed should be disposed of in accordance with all local, state and federal regulations. Incinerate in equipment designed to handle oxides of phosphorus as combustion products or send to a waste disposal firm. Empty containers should also be disposed of in a manner meeting government regulations.

**INFORMATION REQUIRED BY FEDERAL, STATE OR LOCAL REGULATIONS:**

This product contains:

| CAS#    | NAME                             |
|---------|----------------------------------|
| 107664  | Phosphoric acid, dibutyl ester   |
| 1623150 | Phosphoric acid, monobutyl ester |
| 7664382 | Phosphoric acid                  |

**HMIS RATING SYSTEM:    HEALTH 3                    FLAMMABILITY 1                    REACTIVITY 0**

**FOR INDUSTRIAL USE ONLY**

For additional information, see Material Safety Data Sheet (MSDS) for this product.