RICCA CHEMICAL COMPANY®

# Safety Data Sheet

Classified According to OSHA Hazard Communication Standard (HCS 2024)

## SECTION 1: Identification

### 1.1. Product Identifier

**Trade Name or Designation** Dibutylamine, 0.04 Normal in Toluene

**Product Number** 2549.2

**Other Identifying Product Numbers** 2549.2-1, 2549.2-32

### 1.2. Recommended Use and Restrictions on Use

General Laboratory Reagent

### 1.3. Details of the Supplier of the Safety Data Sheet

**Company** Ricca Chemical Company

**Address** 412 West Fork Drive

Arlington, TX 76012 USA

**Telephone** 888-467-4222

### 1.4. Emergency Telephone Number (24 hours)

| | |
|---|---|
| CHEMTREC (USA) | 800-424-9300 |
| CHEMTREC (International) | 1+ 703-527-3887 |

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## SECTION 2: Hazard(s) Identification

### 2.1. Classification of the Substance or Mixture

| Hazard Class | Category | Hazard Statements | Precautionary Statements |
|---|---|---|---|
| Acute Toxicity - Inhalation (Vapors) | Category 4 | H332 | P261,P271,P304+P340,P312 |
| Flammable Liquids | Category 2 | H225 | P210,P233,P240,P241,P242,P243, P280,P303+P361+P353,P370+P378, P403+P235,P501 |
| Skin Corrosion / Irritation | Category 2 | H315 | P264,P280,P302+P352,P321, P332+P313,P362+P364 |
| Reproductive Toxicity | Category 2 | H361 | P201,P202,P280,P308+P313,P405, P501 |
| Specific Target Organ Toxicity - Single Exposure - Transient Effects | Category 3 - Narcotic Effects | H336 | P261,P271,P304+P340,P312, P403+P233,P405,P501 |
| Specific Target Organ Toxicity - Repeated Exposure | Category 1 | H372 | P260,P264,P270,P314,P501 |
| Aspiration Hazard | Category 1 | H304 | P301+P310,P331,P405,P501 |

### 2.2. GHS Label Elements

**Pictograms:**



**Signal Word:** **Danger**

**Hazard Statements:**

NOTE: Hazard statements may be combined on labels to improve clarity and readability.

| Hazard Number | Hazard Statement |
|---|---|
| H225 | Highly flammable liquid and vapor |
| H304 | May be fatal if swallowed and enters airways |
| H315 | Causes skin irritation |
| H332 | Harmful if inhaled |
| H336 | May cause drowsiness or dizziness |
| H361 | Suspected of damaging fertility or the unborn child |
| H372 | Causes damage to organs through prolonged or repeated exposure |

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### Precautionary Statements:

NOTE: Precautionary statements may be combined or consolidated on labels to improve clarity and readability.

#### Prevention

| Precautionary Number | Precautionary Statement |
|---|---|
| P201 | Obtain special instructions before use. |
| P202 | Do not handle until all safety precautions have been read and understood. |
| P210 | Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. |
| P240 | Ground and bond container and receiving equipment. |
| P241 | Use explosion-proof equipment. |
| P242 | Use non-sparking tools. |
| P243 | Take action to prevent static discharge. |
| P260 | Do not breathe fumes or mist. |
| P264 | Wash hands, arms, and face thoroughly after handling. |
| P270 | Do not eat, drink or smoke when using this product. |
| P271 | Use only outdoors or in a well-ventilated area. |
| P280 | Wear protective gloves and eye protection. |

#### Response

| Precautionary Number | Precautionary Statement |
|---|---|
| P301+P310 | IF SWALLOWED: Immediately call a POISON CENTER or doctor. |
| P303+P361+P353 | IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. |
| P304+P340 | IF INHALED: Remove person to fresh air and keep comfortable for breathing. |
| P308+P313 | If exposed or concerned: Get medical advice or attention. |
| P312 | Call a poison center or doctor if you feel unwell. |
| P331 | Do NOT induce vomiting. |
| P332+P313 | If skin irritation occurs: Get medical advice or attention. |
| P362+P364 | Take off contaminated clothing and wash it before reuse. |
| P370+P378 | In case of fire: Use dry chemical, foam, or carbon dioxide to extinguish. |

#### Storage

| Precautionary Number | Precautionary Statement |
|---|---|
| P403+P233+P235 | Store in a well-ventilated place. Keep container tightly closed. Keep cool. |
| P405 | Store locked up. |

#### Disposal

| Precautionary Number | Precautionary Statement |
|---|---|
| P501 | Dispose of contents/container to suitable waste stream in accordance with local, state, federal, and international regulations. |

### 2.3. Hazards not Otherwise Classified

No other hazards identified.

### 2.4. Ingredients of Unknown Acute Toxicity

This product does not contain any ingredients of unknown acute toxicity.

## SECTION 3: Composition / Information on Ingredients

### 3.1. Components of Mixture

| Chemical Name (IUPAC) | Common Name and Synonyms | CAS Number | Weight% |
|---|---|---|---|
| methylbenzene | Toluene; phenylmethane | 108-88-3 | 99.43 |
| N-butylbutan-1-amine | Dibutylamine; Di-n-butylamine; N-Butyl-1-butanamine | 111-92-2 | 0.57 |

## SECTION 4: First-Aid Measures

### 4.1. Description of Necessary Measures

**Eye Contact:** May cause irritation with burning and stinging with possible damage to the cornea and conjunctiva.

**Ingestion:** IF SWALLOWED: Immediately call a POISON CENTER or doctor. Aspiration hazard. Do not induce vomiting, vomiting may occur spontaneously. If vomiting occurs, keep head below hips to prevent aspiration into lungs. Call a physician.

**Inhalation:** IF INHALED: Remove person to fresh air and keep comfortable for breathing.

**Skin Contact:** IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. May cause irritation, redness and pain. May be absorbed through skin on prolonged exposure.

### 4.2. Most Important Symptoms and Effects, Acute and Delayed

Suspected of damaging fertility or the unborn child DANGER! Flammable. Keep away from heat, sparks, and open flames. Use with adequate ventilation. Avoid prolonged breathing of vapor or contact with skin. Harmful if swallowed. Do not pipet by mouth. If ingested, do not induce vomiting. Give large quantity of water and call a physician. Wash areas of contact with plenty of water for 15 minutes. For eyes, get medical attention. EYE CONTACT: May cause irritation with burning and stinging with possible damage to the cornea and conjunctiva. SKIN CONTACT: May cause irritation, redness and pain. May be absorbed through skin on prolonged exposure. CHRONIC EFFECTS / CARCINOGENICITY: Chronic exposure may affect kidneys and liver.

### 4.3. Immediate Medical Attention or Special Treatment Needed

Irrigate immediately with large quantity of water for at least 15 minutes. Call a physician if irritation develops. Remove to fresh air. Give artificial respiration if necessary. If breathing is difficult, give oxygen. Flush with plenty of water for at least 15 minutes. Call a physician if irritation develops. Aspiration hazard. Do not induce vomiting, vomiting may occur spontaneously. If vomiting occurs, keep head below hips to prevent aspiration into lungs. Call a physician.

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## SECTION 5: Fire-Fighting Measures

### 5.1. Extinguishing Media

In case of fire: Use dry chemical, foam, or carbon dioxide to extinguish. Carbon dioxide, dry chemical, foam

### 5.2. Specific Hazards Arising from the Substance or Mixture in a Fire

Highly flammable liquid and vapor Flammable liquid. Vapors are heavier than air and may travel to a source of ignition and flash back. Liquid floats on water and may travel to a source of ignition and spread fire.

### 5.3. Special Protective Equipment and Precautions for Firefighters

Wear full protective clothing and positive pressure self-contained breathing apparatus. Polyvinyl alcohol, Teflon, or Viton barrier recommended.

## SECTION 6: Accidental Release Measures

### 6.1. Personal Precautions, Protective Equipment and Emergency Procedures

Ground and bond container and receiving equipment. Use explosion-proof equipment. Use non-sparking tools. Take action to prevent static discharge. Wear protective gloves and eye protection.

### 6.2. Cleanup and Containment Methods and Materials

Eliminate all ignition sources. Stop or control the leak, if this can be done without undue risk. Use water spray to cool and disperse vapors and protect personnel. Absorb in noncombustible material for proper disposal. Control runoff and isolate discharged material for proper disposal.

## SECTION 7: Handling and Storage

### 7.1. Precautions for Safe Handling and Storage Conditions

Store in a well-ventilated place. Keep container tightly closed. Keep cool. Store locked up. As with all chemicals, wash hands thoroughly after handling. Avoid contact with eyes and skin. Protect from freezing and physical damage. Store in secure, flammable storage area away from all sources of ignition. Empty containers may be hazardous since they retain product residues.

## SECTION 8: Exposure Controls / Personal Protection

### 8.1. Exposure Limits

**U.S. OSHA - Permissible Exposure Limits (PEL) - Time Weighted Averages (TWA)**

| Chemical Name | CAS Number | Exposure Limit |
|---|---|---|
| Toluene | 108-88-3 | 200 ppm TWA |

**U.S. OSHA - Permissible Exposure Limits (PEL) - Ceiling Limits**

| Chemical Name | CAS Number | Exposure Limit |
|---|---|---|
| Toluene | 108-88-3 | 300 ppm Ceiling |

**U.S. OSHA - Permissible Exposure Limits (PEL) - Short Term Exposure Limits (STEL)**

No limits found.

**U.S. OSHA - Specifically Regulated Chemicals**

No limits found.

**ACGIH - Threshold Limit Values - Ceilings (TLV-C)**

No limits found.

**ACGIH - Threshold Limit Values - Short Term Exposure Limits (TLV-STEL)**

No limits found.

**ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)**

| Chemical Name | CAS Number | Exposure Limit |
|---|---|---|
| Toluene | 108-88-3 | 20 ppm TWA |

## 8.2. Engineering Controls

Use only outdoors or in a well-ventilated area. A system of local and/or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limit.

## 8.3. Individual Protective Measures and Personal Protective Equipment

**Respiratory Protection:** Normal room ventilation is adequate. If the exposure limit is exceeded, a full facepiece respirator with organic vapor cartridge may be worn.

**Skin Protection:** Chemical resistant gloves.

**Eye Protection:** Safety glasses or goggles.

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## SECTION 9: Physical and Chemical Properties

### 9.1. Basic Physical and Chemical Properties

| | |
|---|---|
| **Physical State:** | liquid |
| **Color:** | Colorless to slightly yellow |
| **Odor:** | characteristic, model airplane glue |
| **Odor Threshold:** | Data not available. |
| **Melting/Freezing Point:** | -95°C |
| **Boiling Point/Range:** | Approximately 111°C |
| **Flammability:** | Data not available. |
| **Flammability/Explosive Limits:** | Data not available. - 19% (Toluene) |
| **Flash Point:** | 5 °C (calculated) |
| **Auto-Ignition Temperature:** | Data not available. |
| **Decomposition Temperature:** | Data not available. |
| **pH:** | N/A |
| **Kinematic Viscosity:** | Data not available. |
| **Solubility:** | 515 mg/L at 20°C |
| **Vapor Pressure:** | 30 hPa at 20°C |
| **Evaporation Rate:** | 2.24 (butyl acetate = 1) |
| **Relative Density:** | 0.9 |
| **Relative Vapor Density:** | 3.1 |
| **Particle Characteristics:** | Data not available. |
| **Partition Coefficient n-octanol/water, log** | 2.65 |

NOTE: Flash point was calculated according to the method of Gmehling and Rasmussen (Ind. Eng. Chem. Fundament, 21, 186, (1982) ), as allowed by GHS Rev 7, section 2.6.4.2.3.

## SECTION 10: Stability and Reactivity

### 10.1. Reactivity and Chemical Stability

Stable under normal conditions of use and storage.

### 10.2. Possibility of Hazardous Reactions

Data not available.

### 10.3. Conditions to Avoid and Incompatible Materials

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Strong oxidizing agents such as Nitrates, Perchlorates or Sulfuric Acid, heat, sparks, open flame. Will attack some forms of plastics, rubber and coatings.

### 10.4. Hazardous Decomposition Products

Will not occur.

## SECTION 11: Toxicological Information

### 11.1. Information on Toxicological Effects

**Acute Toxicity - Oral Exposure:**

Oral acute toxicity estimate (ATE): 3847 mg/kg(calculated)

| Chemical Name | CAS Number | Toxicity |
|---|---|---|
| Toluene | 108-88-3 | Oral LD50 Rat 4328 mg/kg (Source: Canada_HSA) |
| Dibutylamine | 111-92-2 | Oral LD50 Rat 189 mg/kg (Source: NLM_CIP) |

**Acute Toxicity - Dermal Exposure:**

Not acutely toxic.

| Chemical Name | CAS Number | Toxicity |
|---|---|---|
| Toluene | 108-88-3 | Dermal LD50 Rabbit 12200 mg/kg (Source: Canada_HSA) |
| Dibutylamine | 111-92-2 | Dermal LD50 Rabbit 768 mg/kg (Source: EU_CLH) |

**Acute Toxicity - Inhalation Exposure:**

Inhalation acute toxicity estimate (ATE, vapor): 17.4556 mg/L, 4 h(calculated)

| Chemical Name | CAS Number | Toxicity |
|---|---|---|
| Toluene | 108-88-3 | Inhalation LC50 Rat 19.0 mg/L 4 h (Source: Canada_HSA) |
| Dibutylamine | 111-92-2 | Inhalation LC50 Rat 1.15 mg/L 4 h (vapor, Source: EU_CLH) |

### 11.2 Carcinogenicity:

**International Agency for Research on Cancer (IARC)**

| Chemical Name | CAS Number | Classification |
|---|---|---|
| Toluene | 108-88-3 | Group 3 (Not Classified) - Monograph 71 [1999]; Monograph 47 [1989] |

**National Toxicology Program (NTP)**

| Chemical Name | CAS Number | Classification |
|---|---|---|
| Toluene | 108-88-3 | Male Rat - No Evidence; Female Rat - No Evidence; Male Mice - No Evidence; Female Mice - No Evidence (TR-371) |

**U.S. OSHA specifically regulated carcinogens**

| Chemical Name | CAS Number | Classification |
|---|---|---|
| | No data found. | |

### 11.3 Additional Toxicology Information:

May be fatal if swallowed and enters airways. Causes skin irritation. Harmful if inhaled. May cause drowsiness or dizziness. Suspected of damaging fertility or the unborn child. Causes damage to organs through prolonged or repeated exposure.

## SECTION 12: Ecological Information

### 12.1. Ecotoxicity

| Chemical Name | CAS Number | Species | Exposure | Toxicity |
|---|---|---|---|---|
| Toluene | 108-88-3 | Freshwater Algae | Acute | EC50 96 h Pseudokirchneriella subcapitata >433 mg/L (IUCLID); EC50 72 h Pseudokirchneriella subcapitata 12.5 mg/L [static] (EPA) |
| Dibutylamine | 111-92-2 | Freshwater Algae | Acute | EC50 96 h Desmodesmus subspicatus 1.16 mg/L (IUCLID); EC50 72 h Desmodesmus subspicatus 16.4 mg/L (IUCLID); EC50 96 h Pseudokirchneriella subcapitata 19 mg/L (IUCLID); EC50 96 h Pseudokirchneriella subcapitata 19 mg/L [static] (EPA) |
| Toluene | 108-88-3 | Freshwater Fish | Acute | LC50 96 h Pimephales promelas 15.22 - 19.05 mg/L [flow-through] (1 day old, EPA); LC50 96 h Pimephales promelas 12.6 mg/L [static] (EPA); LC50 96 h Oncorhynchus mykiss 5.89 - 7.81 mg/L [flow-through] (EPA); LC50 96 h Oncorhynchus mykiss 14.1 - 17.16 mg/L [static] (EPA); LC50 96 h Oncorhynchus mykiss 5.8 mg/L [semi-static] (EPA); LC50 96 h Lepomis macrochirus 11.0 - 15.0 mg/L [static] (EPA); LC50 96 h Oryzias latipes 54 mg/L [static] (EPA); LC50 96 h Poecilia reticulata 28.2 mg/L [semi-static] (EPA); LC50 96 h Poecilia reticulata 50.87 - 70.34 mg/L [static] (EPA) |
| Dibutylamine | 111-92-2 | Freshwater Fish | Acute | LC50 96 h Oncorhynchus mykiss 5.5 mg/L (EPA) |
| Toluene | 108-88-3 | Water Flea | Acute | EC50 48 h Daphnia magna 5.46 - 9.83 mg/L [Static] (EPA); EC50 48 h Daphnia magna 11.5 mg/L (IUCLID) |
| Dibutylamine | 111-92-2 | Water Flea | Acute | EC50 48 h Daphnia magna 66 mg/L (IUCLID) |

## 12.2. Persistence and Degradability

Data not available.

## 12.3. Bioaccumulative Potential

Data not available.

## 12.4. Mobility in soil

Data not available.

## 12.5. Other Adverse Ecological Effects

Data not available.

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## SECTION 13: Disposal Considerations

### 13.1. Waste Treatment Methods

Data not available.

## SECTION 14: Transportation Information

### 14.1 Transportation by Land - Department of Transportation (DOT, United States of America)

**Sizes:** 1 L, 4 L

**UN Number:** UN1294

**Proper Shipping Name:** Toluene Solution

**Hazard Class:** 3

**Packing Group:** II

**Hazard Label(s):**




### 14.2 Transportation by Air - International Air Transport Association (IATA)

**Sizes:** 1 L, 4 L

**UN Number:** UN1294

**Proper Shipping Name:** Toluene Solution

**Hazard Class:** 3

**Packing Group:** II

**Hazard Label(s):**



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### 14.3 Transportation of Dangerous Goods (TDG, Canada)

**Sizes:** 1 L, 4 L

**UN Number:** UN1294

**Proper Shipping Name:** TOLUENE SOLUTION

**Hazard Class:** 3

**Packing Group:** II

**Hazard Label(s):**




## SECTION 15: Regulatory Information

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### 15.01. Occupational Safety and Health Administration (OSHA) Hazards

| Chemical Name | CAS Number | Regulatory Information |
|---|---|---|
| | | No data found. |

### 15.02. Superfund Amendments and Reauthorization Act (SARA) 302 Extremely Hazardous Substances

| Chemical Name | CAS Number | RQ |
|---|---|---|
| | | No data found. |

### 15.03. Superfund Amendments and Reauthorization Act (SARA) 311/312 Hazardous Chemicals

| Chemical Name | CAS Number | Regulatory Information |
|---|---|---|
| Toluene | 108-88-3 | 1000 lb final RQ; 454 kg final RQ |

### 15.04. Superfund Amendments and Reauthorization Act (SARA) 313 Toxics Release Inventory (TRI)

| Chemical Name | CAS Number | List | Regulatory Information |
|---|---|---|---|
| Toluene | 108-88-3 | Emission Reporting | 1.0 % de minimis concentration |

### 15.05. Massachusetts Right-to-Know Substance List

| Chemical Name | CAS Number | Regulatory Information |
|---|---|---|
| Toluene | 108-88-3 | Present |
| Dibutylamine | 111-92-2 | Present |

### 15.06. Pennsylvania Right-to-Know Hazardous Substances

| Chemical Name | CAS Number | Regulatory Information |
|---|---|---|
| Toluene | 108-88-3 | Environmental hazard |
| Dibutylamine | 111-92-2 | Present |

### 15.07. New Jersey Worker and Community Right-to-Know Components

| Chemical Name | CAS Number | Regulatory Information |
|---|---|---|
| Toluene | 108-88-3 | sn 1866 |
| Dibutylamine | 111-92-2 | sn 0632 |

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### 15.08. California Proposition 65

| Chemical Name | CAS Number | Regulatory Information |
|---|---|---|
| Toluene | 108-88-3 | developmental toxicity, 1/1/1991 |

### 15.09. Canada Domestic Substances List / Non-Domestic Substances List (DSL/NDSL)

| Chemical Name | CAS Number | List | Status |
|---|---|---|---|
| Toluene | 108-88-3 | DSL | Present |
| Dibutylamine | 111-92-2 | DSL | Present |

### 15.10. United States of America Toxic Substances Control Act (TSCA) List

| Chemical Name | CAS Number | Status |
|---|---|---|
| Toluene | 108-88-3 | Present (ACTIVE) |
| Dibutylamine | 111-92-2 | Present (ACTIVE) |

### 15.11. European Inventory of Existing Commercial Chemical Substances (EINECS), European List of Notified Chemical Substances (ELINCS), and No Longer Polymers (NLP)

| Chemical Name | CAS Number | List | Number |
|---|---|---|---|
| Toluene | 108-88-3 | EINECS | 203-625-9 |
| Dibutylamine | 111-92-2 | EINECS | 203-921-8 |

### 15.12. China - Inventory of Existing chemical Substances (IECSC)

| Chemical Name | CAS Number | Status |
|---|---|---|
| Toluene | 108-88-3 | Present [16691] |
| Dibutylamine | 111-92-2 | Present [06052] |

### 15.13. Korea - Existing Chemicals Inventory (KECI/KECL)

| Chemical Name | CAS Number | List | Status |
|---|---|---|---|
| Toluene | 108-88-3 | Annex 1 | Present [KE-33936] |
| Dibutylamine | 111-92-2 | Annex 1 | Present [KE-04223] |

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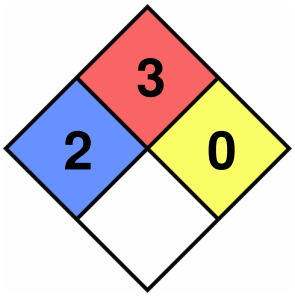
### 15.14. Japan - Existing and New Chemical Substances Inventory (ENCS)

| Chemical Name | CAS Number | MITI No. |
|---|---|---|
| Toluene | 108-88-3 | (3)-2, (3)-60 |
| Dibutylamine | 111-92-2 | (2)-137 |

## SECTION 16: Other Information

### 16.1 National Fire Protection Associate (NFPA) Rating

**Health:** 2
**Flammability:** 3
**Reactivity** 0
**Special Hazard:**




### 16.2 Document Revision

**Last Revision Date:**
2026-05-05

## DISCLAIMER

When handled properly by qualified personnel, the product described herein does not present a significant health or safety hazard. Alteration of its characteristics by concentration, evaporation, addition of other substances, or other means may present hazards not specifically addressed herein and which must be evaluated by the user. The information furnished herein is believed to be accurate and represents the best data currently available to us. No warranty, expressed or implied, is made and RICCA CHEMICAL COMPANY assumes no legal responsibility or liability whatsoever resulting from its use.