

# MATERIAL SAFETY DATA SHEET

Dibutylamine

## SECTION 1 . Product and Company Identification

Product Name and Synonym: Dibutylamine  
Product Code: D4337  
Material Uses:  
Manufacturer: Science Stuff  
1104 Newport Ave  
Austin, TX 78753  
(512) 837-6020  
Entry Date : 6/3/2013  
Print Date: 6/4/2013  
24 Hour Emergency Assistance : Chemtrec 800-424-9300  
Canutec 613-996-6666

Health:	3
Flammability:	2
Reactivity:	0
Hazard Rating: Least Slight Moderate High Extreme 0 1 2 3 4 NA=Not Applicable NE=Not Established	

## SECTION 2 HAZARD IDENTIFICATION

Causes severe irritation and burns. Harmful if swallowed. Avoid breathing vapor or dust. Use with adequate ventilation. Avoid contact with eyes, skin, and clothes. Wash thoroughly after handling. Keep container closed.

Physical state: Liquid. [Colorless.]

OSHA/HCS status: This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Emergency overview:

DANGER!  
CAUSES SEVERE EYE AND SKIN BURNS.  
CAUSES RESPIRATORY TRACT BURNS  
HARMFUL IF INHALED, ABSORBED THROUGH SKIN OR SWALLOWED.  
MAY CAUSE DAMAGE TO THE FOLLOWING ORGANS: LUNGS, SKIN, EYE, NOSE, SINUSES, AND THROAT  
FLAMMABLE LIQUID AND VAPOR.  
VAPOR MAY CAUSE FLASH FIRE.

Physical state: Liquid. [Colorless.]

OSHA/HCS status: This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

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IF INHALED, ABSORBED THROUGH SKIN OR SWALLOWED.  
MAY CAUSE DAMAGE TO THE FOLLOWING ORGANS: LUNGS.  
SKIN, EYE,  
FLAMMABLE LIQUID AND VAPOR.  
VAPOR MAY CAUSE FLASH FIRE.  
Do not ingest.  
Keep away from heat, sparks and flame.  
Do not get in eyes or on skin or clothing. Do not breathe vapor or mist.  
Keep container tightly closed and sealed until ready for use. Use only with adequate ventilation. Wash thoroughly after handling.

Routes of entry:

Dermal contact. Eye contact. Inhalation. Ingestion.

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Pre-existing disorders involving any target organs mentioned in this MSDS as being at risk may be aggravated by over-exposure to this product  
Medical conditions aggravated by over-exposure:  
Potential acute health effects:

Eyes: Severely corrosive to eyes. Causes severe burns.  
Skin: Severely corrosive to the skin. Causes severe burns. Toxic in contact with skin.  
Inhalation: Toxic by inhalation. Corrosive to the respiratory system. Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.  
Ingestion: Toxic if swallowed. May cause burns to mouth, throat and stomach.  
Carcinogenicity: No known significant effects or critical hazards.  
Mutagenicity: No known significant effects or critical hazards.  
Teratogenicity/ Reproductive toxicity: No known significant effects or critical hazards.  
Developmental effects: No known significant effects or critical hazards.  
Fertility effects: No known significant effects or critical hazards.  
Target organs: May cause damage to the following organs: lungs, skin, eyes, nose/sinuses, throat.

## SECTION 3 MIXTURE COMPONENTS

SARA 313	Component	CAS Number	Percent Comp.	Dimension	Exposure Limits
<input type="checkbox"/>	Dibutylamine	CAS# 111-92-2	100%	V/V	TXDS: orl-rat LD <sub>50</sub> : 360 mg/Kg

## SECTION 4 FIRST AID MEASURES

Causes severe irritation and burns. Harmful if swallowed. Avoid breathing vapor or dust. Use with adequate ventilation. Avoid contact with eyes, skin, and clothes. Wash thoroughly after handling. Keep container closed.

FIRST AID: CALL A PHYSICIAN. SKIN: In case of contact, immediately flush skin with water for at least 15 minutes while removing contaminated clothing and shoes. Thoroughly clean clothing and shoes before reuse.

EYES: Wash eyes with plenty of water for at least 15 minutes, lifting lids occasionally. Seek Medical Aid. INHALATION: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen

INGESTION: Give several glasses of milk or water. Vomiting may occur spontaneously, but DO NOT INDUCE! Never give anything by mouth to an unconscious person.

## SECTION 5 FIRE FIGHTING MEASURES

Fire Extinguisher Type: Carbon Dioxide, dry chemical powder or appropriate foam  
Fire / Explosion Hazards: Material will burn in a fire.  
Fire Fighting Procedure: Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and clothing.

## SECTION 6 ACCIDENTAL RELEASE MEASURES

Absorb spill with inert material, then place in a chemical waste container. Dispose of in a manner consistent with federal, local law.

Personal precautions: No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personal from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Provide adequate ventilation. Where appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

Environmental precautions: Avoid dispersal of spilled material and runoff

and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Spill: Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see section 13). Use spark-Proof tools and explosion- proof equipment. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see section 1 for emergency contact information and section 13 for waste disposal. Dilute with water and mop up if water- soluble or absorb with an inert dry material and place in an appropriate waste disposal container.

**SECTION 7 HANDLING AND STORAGE**

Store in a cool dry well ventilated area. Keep away from heat and flame. Do not get in eyes, on skin, or on clothing.

**SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION**

Respiratory Protection: NIOSH/MSHA-approved respirator

Ventilation

Local Exhaust

Mechanical

Protective Gloves: Wear appropriate gloves to prevent skin exposure

Eye Protection: Splash Goggles

Other Protective Equipment: Wear appropriate clothing to prevent skin exposure

Product name - United States –

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AIHA WEEL (United States, 1/2008). Absorbed through skin.

CEIL: 5ppm

Consult local authorities for acceptable exposure limits.

Engineering measures: Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

Hygiene measures: Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking, and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Personal Protection

Eyes: Safety eyewear complying with an approved standard should be used

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when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts.

Recommended: splash goggles, face shield

Skin: Personal protective equipment for the body should be selected based on the task being performed and risks involved and should be approved by a specialist before handling this product.

Body recommended: safety apron

Respiratory: Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Hands: Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

Environmental exposure controls: Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

**SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES**

Melting Point:	-59°C	Percent Volatile by Volume:	100%
Boiling Point:	159°C	Evaporation Rate	Information not available
Vapor Pressure:	2 mm Hg	Evaporation Standard	
Vapor Density:	4.46	Auto Ignition Temp	Information not available
Solubility in Water:	Slight	Lower Flamm. Limit in Air	1.1
Appearance /Odors:	Colorless liquid	Upper Flamm. Limit in Air	Information not available
Flash Point:	125°F		
Specific Gravity:	0.76		

**SECTION 10 STABILITY AND REACTIVITY INFORMATION**

Stability:	Stable
Conditions to Avoid:	Avoid contact with incompatible materials, heat, sparks and open flame
Materials to Avoid:	Strong oxidizing agents, Acids
Hazardous Decomposition Products:	Oxides of nitrogen and carbon
Hazardous polymerization:	Will Not Occur
Conditions to Avoid:	None known

**SECTION 11 Toxicological Information**

Toxicity data- United States- Product/ ingredient name:

Dibutylamine			
LD50	770 mg/kg	Dermal	Rabbit
LD50	110 mg/kg	Intraperitoneal	Rat

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LD50	290 mg/kg	Oral	Mouse
LD50	230 mg/kg	Oral	Guinea Pig
LD50	189 mg/kg	Oral	Rat
LD50	494 mg/kg	Subcutaneous	Rat

Specific effects

Carcinogenic effects: No known significant effects or critical hazards.

Mutagenic effects: No known significant effects or critical hazards.

Teratogenicity/Reproductive toxicity: No known significant effects or critical hazards.

### SECTION 12 Ecological Information

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Acute LC50 37 mg/L Fish 96 hours

Acute LC50 5.5 mg/L Fish 96 hours

Acute LC50 37000 to 41000 ug/L Fresh water Fish – Rainbow trout, Donaldson trout –  
Oncorhynchus mykiss 96 hours

Acute LC50 5500 ug/L Fresh water Fish – Rainbow trout, Donaldson trout – Oncorhynchus  
mykiss 96 hours

Environmental effects : No known significant effects or critical hazards.

Other adverse effects : No known significant effects or critical hazards.

### SECTION 13 Disposal Considerations

The information presented only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations. Disposal should be in accordance with applicable regional, national and local laws and regulations.

### SECTION 14 Transport Information

DOT Classification: Di-n-butylamine, 8, (3), UN2248, PG II

DOT Regulations may change from time to time. Please consult the most recent D.O.T. regulations.

### SECTION 15 Regulatory Information

United States

HCS Classification:

Toxic material

Corrosive material

Target organ effects

Combustible liquid

U.S. Federal regulations:

United States inventory (TSCA 8b): listed

TSCA (Toxic Substance Control Act): This product is listed on the TSCA Inventory.

SARA 302/304/311/312 extremely hazardous substances: No products were found.

SARA 302/304 emergency planning and notifications: No products were found.

SARA 302/304/311/312 hazardous chemicals: Dibutylamine

SARA 311/312 MSDS distribution- Chemical inventory- hazard identification: Dibutylamine

Fire Hazard:

Immediate (acute) health hazard, Delayed (chronic) health hazard

Clean Water Act (CWA) 307: No products were found.

Clean Water Act (CWA) 311: No products were found.

Clean Air Act (CAA) 112 accidental release prevention: No products were found.

Clean Air Act (CAA) 112 regulated flammable substance: No products were found.

Clean Air Act (CAA) 112 regulated toxic substance: No products were found.

DEA List I Chemicals : not listed

(Precursor Chemicals)

DEA List II Chemicals : not listed

(essential Chemicals)

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Massachusetts Substance : This material is listed.  
New Jersey Hazardous Substances : This material is not listed.  
Pennsylvania RTK Hazardous Substances : This material is listed.  
Canada  
WHMIS (Canada) : Not controlled under WHMIS (Canada).  
Class D-1A: Material causing immediate and serious toxic effects (Very Toxic)  
Class E: Corrosive material  
Class B-3: Combustible liquid with a flash point between 37.8 C (100 F) and 93.3 C (200 F)  
Canadian lists : CEPA Toxic Substance: This material is not listed.  
Canadian ARET: This material is not listed.  
Canadian NPRI: This material is not listed.  
Alberta Designated Substances: This material is not listed.  
Ontario Designated Substances: This material is not listed.  
Quebec Designated Substances: This material is not listed.  
CEPA DSL/ CEPA NDSL : CEPA DSL:  
This material is listed or exempted.  
This product has been classified in accordance with the hazard criteria of the CPR and the MSDS contains all the information required by the CPR.

**SECTION 16 Additional Information**

Flammability

Health

Reactivity

Revisions

NFPA

0.2

The information herein is believed to be accurate and is offered in good faith for the user's consideration and investigation. No warranty either expressed or implied is made for the completeness or accuracy of the information whether originating from the above mentioned company or not. Users of this material should satisfy themselves by independent investigation of current scientific and medical knowledge that the material can be used safely.