

Preparation Date 01-27-2010

Revision date 05-19-2016

Revision number 4

1. Identification of the Substance/Preparation and of the Company/Undertaking**Product identifier****Product name** n-Butyldiethanolamine**Other means of identification****Product code** 51204**Synonyms** None**Recommended use of the chemical and restrictions on use****Recommended use** Additive.**Uses advised against** No information available**Details of the Supplier of the Safety Data Sheet****Supplier Address**Taminco US LLC
3790 Highway 30
St Gabriel, La USA 70776
(800) 223-3258**Manufacturer Address**Taminco US LLC
3790 Highway 30
St Gabriel, La USA 70776
(800) 223-3258**Emergency telephone number**

Emergency Telephone

In case of emergency call CHEMTREC 1-800-424-9300
for international calls 1-703-527-3887**2. Hazards Identification****Classification****OSHA Regulatory Status**

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Serious eye damage/eye irritation	Category 1
Specific target organ toxicity (single exposure)	Category 3

Label Elements**Symbols/Pictograms****Signal Word****DANGER****hazard statements**Causes serious eye damage
May cause respiratory irritation

Precautionary Statement - Prevention

Avoid breathing dust/fume/gas/mist/vapors/spray

Wear protective gloves/protective clothing/eye protection/face protection

Precautionary Statements - Response

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

If eye irritation persists: Get medical advice/attention

Immediately call a POISON CENTER or doctor/physician

Precautionary Statements - Storage

Store in a well-ventilated place. Keep container tightly closed

Hazards Not Otherwise Classified (HNOC)

Not Applicable

3. Composition/information on Ingredients

Chemical name	CAS-No	Weight %	Trade secret
N-Butyldiethanolamine	102-79-4	>99	No

*The exact percentage (concentration) of composition has been withheld as a trade secret.

4. First aid measures**First Aid Measures****General advice**

If symptoms persist, call a physician. Show this material safety data sheet to the doctor in attendance.

Eye contact

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Obtain medical attention.

Skin contact

Take off all contaminated clothing immediately. Wash skin with soap and water. Consult a physician if necessary.

Inhalation

If fumes from reactions are inhaled, move to fresh air immediately. If breathing is difficult, give oxygen. Consult a physician if necessary.

Ingestion

Do NOT induce vomiting. If conscious, drink plenty of water. Never give anything by mouth to an unconscious person. Obtain medical attention.

Protection of First-aiders

Use personal protective equipment.

Most Important Symptoms and Effects, Both Acute and Delayed**Symptoms**

Risk of serious damage to eyes.

Indication of Any Immediate Medical Attention and Special Treatment Needed

Treat symptomatically.

5. Fire-fighting measures**Suitable extinguishing media**Carbon dioxide (CO₂). Dry chemical. Alcohol-resistant foam. Foam.**Unsuitable extinguishing media**

No information available.

Specific hazards arising from the chemical

Vapors are heavier than air and may spread along floors.

Hazardous combustion products Heating or fire can release toxic gas. Carbon oxides. Nitrogen oxides (NOx). and traces of Ammonia.

Explosion data

Sensitivity to Mechanical Impact None.

Sensitivity to Static Discharge None.

Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, NIOSH (approved or equivalent) and full protective gear.

6. Accidental release measures**Personal precautions, protective equipment and emergency procedures**

Avoid contact with skin, eyes and clothing. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. Wear self-contained breathing apparatus and protective suit.

Environmental Precautions

Should not be released into the environment. Remove immediately adhering matter. Prevent product from entering drains. Do not flush into surface water or sanitary sewer system.

Methods and material for containment and cleaning up

Absorb spill with inert material (e.g. dry sand or earth), then place in a chemical waste container. Large spills should be collected mechanically (remove by pumping) for disposal. Prevent further leakage or spillage if safe to do so. Prevent product from entering drains.

7. Handling and Storage**Precautions for Safe Handling**

Use only in area provided with appropriate exhaust ventilation. Wear personal protective equipment. Do not eat, drink or smoke when using this product. Wash hands after handling. Remove contaminated clothing and protective equipment before entering eating areas. Ensure that eyewash stations and safety showers are close to the workstation location. Avoid breathing vapors or mists.

Conditions for safe storage, including any incompatibilities

Keep away from open flames, hot surfaces and sources of ignition. Store in original container. Keep container tightly closed. Keep in a dry, cool and well-ventilated place.

incompatible materials Strong oxidizing agents.

8. Exposure Controls/Personal Protection**Control Parameters**

This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

Appropriate Engineering Controls

Local exhaust.

Individual protection measures, such as personal protective equipment

Eye/Face Protection Tightly fitting safety goggles. Face-shield.

Skin and Body Protection Wear suitable protective clothing.

Respiratory protection

In case of insufficient ventilation, wear suitable respiratory equipment. In the case of vapor formation use a respirator with filter model K. For. high concentrations. Use. Self-contained breathing apparatus (EN 133).

General hygiene considerations

When using, do not eat, drink or smoke. Regular cleaning of equipment, work area and clothing.

9. Physical and Chemical Properties

Information on basic physical and chemical properties

Physical state clear color	liquid clear to light yellow	Odor	Slight
Property	VALUES	Remarks • Method	
pH			
Melting point/freezing point	-70 °C / -94 °F		
Boiling Point/Range	283 °C / 541 °F		
flash point	141 °C / 286 °F	Tag Closed Cup	
evaporation rate	No information available		
flammability (solid, gas)			
Flammability limit in air			
Upper flammability limit:	No information available		
Lower flammability limit:	No information available		
vapor pressure	0.01	mmHg @ 25 °C	
vapor density	5.5	g/cm ³	
Specific gravity	0.96-0.98 @ 20 C		
Water solubility	completely soluble		
Solubility in Other Solvents	No information available		
Partition coefficient	Log Pow 0.48		
Autoignition temperature	No information available		
decomposition temperature	No information available		
Kinematic viscosity	No information available		
Dynamic viscosity	100 mPas	@ 15 °C	
Explosive properties	Not explosive		
Oxidizing properties			

OTHER INFORMATION

molecular weight	161.3 g/mol
VOC Content	None
density	0.963-980 g/cm ³ @20C

10. Stability and Reactivity

Reactivity**Chemical stability**

Stable under normal conditions. Hazardous polymerisation does not occur.

Possibility of Hazardous Reactions

None under normal processing.

Conditions to avoid

Temperatures above 50°C. Heat, flames and sparks. Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapors).

incompatible materials

Strong oxidizing agents.

Hazardous decomposition products

Heating or fire can release toxic gas.

11. Toxicological Information

Risk of serious damage to eyes

Product information

LD50/oral/rat = 4250 mg/kg
 LD50/dermal/rabbit = > 2000 mg/kg

Eye irritation corrosive
 Skin irritation Slight irritation
 sensitization Did not cause sensitization on laboratory animals
 Mutagenic effects Not mutagenic in AMES Test
 Specific target organ systemic toxicity (single exposure) No information available
 Specific target organ systemic toxicity (repeated exposure) No information available

Carcinogenicity The table below indicates whether each agency has listed any ingredient as a carcinogen.

Component	ACGIH	IARC	NTP	OSHA
N-Butyldiethanolamine 102-79-4 (>99)	Not Listed	Not Listed	Not Listed	Not Listed

12. Ecological Information**Ecotoxicity**

No information available

Product information

Toxicity to Fish No information available
 Toxicity to daphnia No information available
 Toxicity to Algae No information available
 EC50 / Tox Bacteria : No information available

Persistence/Degradability

No information available.

Bioaccumulative potential**Mobility in Soil**

No information available

Other Adverse Effects

No information available

13. Disposal Considerations**Waste Treatment Methods**

Waste Disposal Method	Should not be released into the environment. Dispose of in accordance with local regulations.
Contaminated packaging	Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport Information

<u>DOT</u>	NOT REGULATED
<u>IATA</u>	NOT REGULATED
<u>IMDG/IMO</u>	NOT REGULATED

15. Regulatory Information

International Inventories

TSCA	Complies
DSL/NDSL	Complies
EINECS/ELINCS	Complies
ENCS	Complies
IECSC	Complies
KECL	Complies
PICCS	Complies
AICS	Complies

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

AICS - Australian Inventory of Chemical Substances

Federal Regulations

SARA TITLE III SECTION 313 INFORMATION:

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

SARA 311/312 Hazardous

Categorization

Acute health hazard	Yes
Chronic health hazard	No
Fire hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

CWA (Clean Water Act)

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

State Regulations**California Proposition 65**

No Data Available

State Right-to-Know**U.S. EPA Label information**

EPA Pesticide registration number Not Applicable

WHMIS Hazard Class D2B Toxic materials

CANADA This product has been classified according to the hazard criteria of the CPR and the MSDS contains all of the information required by the CPR

16. Other Information

<u>NFPA</u>	HEALTH 3	FIRE 1	Instability 0	Physical hazard -
<u>HMIS</u>	HEALTH 3	flammability 1	Physical hazards 0	

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Revision Summary

Not Available

Disclaimer:

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet