

Safety Data Sheet

n-Butanol

SECTION I - IDENTIFICATION



Transchem, Inc.
2141 Palomar Airport Rd. Suite 125
Carlsbad, CA 92011
(800) 783-2436
Chemtel Emergency Response :. (800) 255-3924

PRODUCT NUMBER: NBA
PRODUCT NAME: n-Butanol
CHEMICAL FAMILY:
CAS NUMBER: 71-36-3
DATE PREPARED: 4/20/1998
REVISION NUMBER: 5/29/2014

SECTION II - HAZARDOUS IDENTIFICATION

GHS CLASSIFICATION:

Classification

Flammable Liquids	Category 3
Acute Toxicity, Oral	Category 4
Skin Corrosion/Irritation	Category 2
Serious Eye Damage/Eye Irritation	Category 1
Specific target organ toxicity, single exposure, R	Category 3
Specific target organ toxicity, single exposure, N	Category 3

DANGER!

GHS LABEL:



Hazard Statements

H226	Flammable liquid and vapor
H302	Harmful if swallowed
H315	Causes skin irritation
H318	Causes serious eye damage
H335	May cause respiratory irritation
H336	May cause dizziness or drowsiness

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Precautionary Statements

P210	Keep away from heat/sparks/open flames/hot surface - No smoking.
P233	Keep container tightly closed.
P240	Ground/bond container and receiving equipment.
P241	Use explosion-proof electrical/ventilating/light/equipment, etc.
P242	Use only non-sparking tools.
P243	Take precautionary measures against static discharge.
P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P264	Wash hands 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/protective clothing/eye protection/face protection.
P301+312	IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
P302+352	IF ON SKIN: Wash with soap and water.
P303+361+353	IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+340	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P305+351+338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so - continue rinsing.
P310	Immediately call a POISON CENTER or doctor/physician.
P312	Call a POISON CENTER or a doctor/physician if you feel unwell.
P330	Rinse mouth.
P332+313	If skin irritation occurs: get medical advice/attention.
P362	Take off contaminated clothing and wash before reuse.
P370+378	In case of fire: Use dry sand, dry chemical, or alcohol-resistant foam for extinction.
P403+233	Store in a well ventilated place. Keep container tightly closed.
P403+235	Store in a well ventilated place. Keep cool.
P405	Store locked up.
P501	Dispose of contents/container to an approved waste disposal plant.

SECTION III - COMPOSITION/INFORMATION ON INGREDIENTS

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The precise composition of this product is proprietary information. In the event of a medical emergency, a complete disclosure will be provided to medical personnel.

Component Name	CAS #	Component%	OSHA PEL	ACGIH TLV
1-Butanol	71-36-3	100%	100 ppm	20 ppm

SECTION IV - FIRST AID MEASURES

Contact with eyes: Flush with water for 15 minutes. Seek immediate medical attention.

Skin contact: Wash exposed areas with water and mild soap. Remove contaminated clothing immediately and launder before reuse. If irritations persist, seek immediate medical attention.

Inhalation: Remove victim to fresh air. Administer oxygen or artificial respiration if breathing is affected or stopped. Seek immediate medical attention.

Ingestion: If swallowed. Do not induce vomiting. Seek immediate medical attention. Give large quantities of water. Never give anything by mouth to an unconscious person.

SECTION V - FIREFIGHTING MEASURES

Suitable Extinguishing Media: Water fog, foam, CO₂, dry chemical.

Special Fire Fighting Procedures Use self-contained breathing apparatus and full bunker gear in fire areas. Evacuate all unprotected personnel from area. Keep containers cool with water fog to minimize swelling taking care not to spread flames with water used for cooling.

Unusual Fire Fighting Hazards: Product is flammable and may be ignited by heat, sparks, flames or other sources of ignition (e.g., static electricity, pilot lights or mechanical/electrical equipment). Vapors are heavier than air and may accumulate in low areas. Vapors may travel considerable distances to a source of ignition where they can ignite, flashback or explode. May create vapor/air explosion hazard indoors, outdoors or in sewers. If container is not properly cooled, it can explode in the heat of a fire.

SECTION VI - ACCIDENTAL RELEASE MEASURES

Personal Precautions: Keep all sources of ignition and hot metal surfaces away from spill or release.
Evacuate all unprotected personnel from the area.

Environmental Precautions: Prevent liquid from entering drains, sewers, waterways, ground and surface water or soil.
Contain spill if it can be done with minimal risk.
Notify proper authorities.

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Methods for Cleaning Up: Use foam on spills to minimize vapors.
Using only non-sparking tools and explosion proof equipment, collect spill on absorbent material and put into approved container.

SECTION VII - HANDLING AND STORAGE

Handling and Storage:

- NFPA Class I storage.
- Vent container carefully before opening.
- Bond and ground all equipment when transferring from one vessel to another. The use of explosion-proof equipment is recommended.
- "Empty" containers retain residue and/or vapor and may be dangerous. Do not cut, weld, braze solder, drill, grind or expose such containers to heat, flames, sparks, or other ignition sources.
- Keep containers tightly closed when not in use.
- Avoid prolonged breathing of mist or vapor. Wash thoroughly after handling.

SECTION VIII - PRECAUTIONS TO CONTROL EXPOSURE / PERSONAL PROTECTION

EXPOSURE LIMITS:

Component Name	CAS #	OSHA PEL	ACGIH TLV
1-Butanol	71-36-3	100 ppm	20 ppm

Engineering Controls: Adequate local or mechanical ventilation to reduce vapor or mist to below the PEL or TLV.

Monitoring: Follow accepted work practices for handling a flammable material.
Do not eat, drink or smoke in areas where this chemical is used or stored.
Have eye wash stations and safety showers readily available.

Personal Protective Equipment (PPE)

Eye Protection: Goggles or approved OSHA device with side shields; do not wear contact lenses when handling this product.

Skin Protection: Impervious solvent resistant gloves.
Impervious apron and work boots recommend where splashing may occur.

Respiratory Protection: Use the proper respirator in areas where the chemical exposure is unknown or above the OSHA PEL or ACGIH TLV.

SECTION IX - PHYSICAL AND CHEMICAL PROPERTIES

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Appearance	Clear, Colorless Liquid
Odor	Characteristic Alcohol Odor
pH@25°C	-
Melting/Freezing Point	-
Flashpoint	98°F (36°C), TCC
Specific Gravity	0.800 ±0.015
Solubility	7.5% @ 25°C
Auto-Ignition Temperature	-
Decomposition Temperature	-
VOC Content	100% (6.7#/gal)
Odor Threshold	-
Boiling Range	243.9°F
Evaporation Point	0.44 (Butyl Acetate=1)
Flammable Limits - Upper	11.2%
Flammable Limits - Lower	1.4%
Vapor Pressure	4.2 mmHg @ 20°C
Vapor Density (Air=1)	2.6(Air=1)
Viscosity	-

SECTION X - STABILITY AND REACTIVITY

Stability: Stable

Conditions to Avoid: Extreme heat and ignition sources.

Hazardous Decomposition/Byproducts: CO, CO₂, and noxious smoke under extreme fire conditions

Hazardous Polymerization: Will not occur.

Polymerization Conditions to Avoid: None

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SECTION XI - TOXICOLOGICAL INFORMATION

Likely Route of Exposure: Contact and inhalation; ingestion possible.

Inhalation: May cause irritation to the upper respiratory tract and CNS depression. Low to moderate degree of toxicity by inhalation.

Eye Contact: Causes eye irritation including stinging, watering and redness which may result in corneal injury.

Skin Contact: Contact may cause mild skin irritation including redness, burning and drying/cracking of the skin. Repeated or prolonged contact with large amounts of this material may result in absorption through the skin to produce toxic effects.

Ingestion: Aspiration hazard. Can enter the lungs during swallowing or vomiting and cause chemical pneumonia and edema. Moderate to high degree of toxicity by ingestion. May be harmful or fatal if swallowed.

Toxicity:

Component Name	LD50	LC50
1-Butanol	Oral - Rat - 790 mg/kg; Dermal - Rabbit - 3,400 mg/kg	Inhalation - Rat - 4 h - 8000 ppm

Reproductive Effects	Teratogenicity	Mutagenicity	Embryotoxicity	Sensitization to Product	Synergistic Products
Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable

SECTION XII - ECOLOGICAL INFORMATION

Ecotoxicity: Information not available.

Mobility: Information not available.

Degradability: Information not available.

BioAccumulation: Information not available.

SECTION XIII - WASTE DISPOSAL CONSIDERATIONS

Follow Federal, state, and local regulations.

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SECTION XIV - TRANSPORT INFORMATION

DOT SHIPPING INFORMATION

Proper Shipping Name: Butanols

Contains:

Hazard Class and Label: 3

Identification Number: UN 1120

Packaging Group: III

SECTION XV - REGULATORY INFORMATION

TSCA STATUS:..... The components of this product are listed on the TSCA Inventory

SARA TITLE III SECTION 302/304 EXTREMELY HAZARDOUS SUBSTANCE:

No chemicals in this material are subject to the reporting requirements.

SARA TITLE III SECTION 311/312 HAZARD CATEGORIZATION:

Acute	Chronic	Fire	Pressure	Reactive
X	X	X	N/A	N/A

SARA TITLE III SECTION 313 SUPPLIER INFORMATION:

Component Name	CAS #	% by wt.
1-Butanol	71-36-3	100%

CERCLA SECTION 102(a) HAZARDOUS SUBSTANCE:

Component Name	CAS #	% by wt.	RQ (lbs.)
1-Butanol	71-36-3	100%	5,000

SECTION XVI - OTHER INFORMATION

HMIS Health: 2

HMIS Flammability: 3

HMIS Reactivity: 0

Additional:

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Specification Information

Department issuing data sheet: Compliance

Email address: compliance@transcheminc.com

Training necessary: Follow all Federal, State and local regulations.

Disclaimer:

Seller and manufacturer disclaim any implied or expressed warranties, including warranties of merchantability or fitness of this product for any particular purpose. In no event shall seller be liable for any claim for incidental or consequential damages arising out of or in connection with the sale, delivery, transportation or use of this product. Seller's and manufacturer's liability in all events is limited to, and shall not exceed the purchase price paid for this product.