

PRODUCT NAME 1,4 BUTANEDIOL

REVISION NUMBER 6

MANUFACTURER Air Products and Chemicals, Inc.
7201 Hamilton Blvd.,
Allentown, PA 18195-1501
www.airproducts.com/msds

TELEPHONE NUMBER 800-345-3148

EMERGENCY TELEPHONE NUMBER(S)
800-523-9374 (Continental U.S.)
610-481-7711 (Outside Continental U.S.)

EXPIRATION DATE SEPTEMBER 1999

EMERGENCY OVERVIEW

HAZARD/NFPA HEALTH 1 FLAMMABILITY 1 REACTIVITY 0

PHYSICAL FORM Mobile liquid

COLOR Colorless

ODOR Odorless

HAZARD(S) Harmful if swallowed. Mild eye irritant. Mild skin irritant.

EXTINGUISHING MEDIA Ignition will give rise to a Class B fire. In case of large fire use: alcohol foam, water spray. In case of small fire use: carbon dioxide (CO2), dry chemical, dry sand or limestone.

SYNOPSIS CHEMICAL NAME 1,4-BUTANEDIOL

SYNONYMS 1,4-Butanediol 1,4-Butylene Glycol 1,4-Dihydroxybutane 1,4-Methanediol

OSHA (ACGIH) EXPOSURE
TWA
ppm

OSHA N/E
ACGIH N/E

N/E = Not Established

SECTION 3 - HEALTH

ROUTES OF EXPOSURE
Eye Contact
Skin Contact
Ingestion
Skin Absorption

EXPOSURE STANDARDS
No standards established
concentrations

HEALTH HAZARDS
Harmful if swallowed
Mild eye irritation
Mild skin irritation

TARGET ORGANS
Central nervous system
Liver or the biliary tract
Kidney

SIGNS AND SYMPTOMS
Contact with eyes
Contact with skin
Inhalation of mist
Product is absorbed
headache and general

SIGNS AND SYMPTOMS
Repeated and/or
(such as jaundice,
edema, or proteinuria,
narcosis, behavioral
muscular dysfunction

MEDICAL CONDITIONS
Kidney disorder
Liver disorders
Neurological disorders

CONTACT

Hold eyelids apart and immediately flush eyes with plenty of water for at least 15 minutes.

CONTACT

Wash affected area with soap and water. Remove contaminated clothing and shoes.

RESPIRATION

Move patient to fresh air. If breathing has stopped or if unable to breathe, give assisted respiration (e.g. mouth-to-mouth). Supplemental oxygen may be indicated. Prevent aspiration of vomit. Turn victim's head to the side. Seek medical advice.

INGESTION

If swallowed, call a physician immediately. Remove stomach contents by gastric suction or induce vomiting only as directed by medical personnel. Never give anything by mouth to an unconscious person.

SECTION 5 - FIRE AND EXPLOSION DATA

FLASH POINT (closed cup) 155.00 C (311.00 F)

EXPLOSION LIMIT (UEL) No Data

EXPLOSION LIMIT (LEL) No Data

IGNITION TEMPERATURE No Data

HAZARD CLASSIFICATION (OSHA/NFPA)

Class IIIB

EXTINGUISHING MEDIA

Water extinguishment will give rise to a Class B fire. In case of fire use: water spray, alcohol foam. In case of small fire use: carbon dioxide (CO2), dry chemical, dry sand or limestone.

ADDITIONAL FIRE FIGHTING PROCEDURES

Firefighters should wear butyl rubber boots, gloves, and a self-contained breathing apparatus.

ADDITIONAL FIRE AND EXPLOSION HAZARDS

Product may generate toxic or irritating combustion products. Violent reaction and fire may result if product is mixed with water.

OTHER EMERGENCY ADVICE

Wear protective clothing, boots, gloves, and eye protect

SECTION 7 - HANDLING AND STORAGE

STORAGE

Keep away from: oxidizers. Keep in cool, dry, ventilated and in closed containers. Do not store in reactive metal containers. The freezing point of this material is 68F (the melting point is 100F (37C).

HANDLING

Avoid contact with skin or eyes. When handling, do not e. or smoke. Limit steam pressure for heating tank cars, ta and storage tanks to 40 psig to avoid possibility of ove.

OTHER PRECAUTIONS

Emergency showers and eye wash stations should be readily accessible. Adhere to work practice rules established by government regulations (e.g. OSHA).

SECTION 8 - PERSONAL PROTECTION / EXPOSURE CONTROLS

EYE PROTECTION

Chemical safety glasses.

HAND PROTECTION

Neoprene rubber gloves. Nitrile rubber gloves.

RESPIRATORY PROTECTION

Not required under normal conditions in a well-ventilated workplace.

PROTECTIVE CLOTHING

Long sleeved clothing.

ENGINEERING CONTROLS

No specific controls needed.

WORK AND HYGIENIC PRACTICES

Provide readily accessible eye wash stations and safety :

SECTION 9 - TYPICAL PHYSICAL AND CHEMICAL PROPERTIES

GRAVITY (Water = 1)
R WEIGHT

10 - STABILITY AND REACT

STABILITY

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ls (i.e. sodium, calcium
chlorite. Dehydrating Ag
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toxic fumes at elevated
hydes.

S POLYMERIZATION

not occur

NS TO AVOID (if polymeri

11 - TOXICOLOGICAL PROPE

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0.00 mg/kg

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HALATION TOXICITY (LC50,
00 mg/L / 4 hr (No death

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ON EFFECTS DATA

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SUBCHRONIC DATA

12 - ECOLOGICAL INFORMAT

14 - TRANSPORT

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15 - REGULATO

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REGULATIONS

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16 - INTERNATI

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WHMIS TRADE SE

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WHMIS HAZARDOU

None

WHMIS SYMBOLS

None

ECONOMIC COMMUNITY (EEC)
EINECS/ELINCS MASTER INVEN

Included on Inventory.

EEC SYMBOL

HARMFUL (Xn)

EEC RISK (R) PHRASES

Harmful if swallowed (F

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Included on Inventory.

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Included on Inventory.

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Included on Inventory.

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Included on Inventory.
