



chemists helping chemists in research & industry

aldrich chemical co.

P.O. Box 355, Milwaukee, Wisconsin 53201 USA • (414) 273-3850

ATTN: SAFETY DIRECTOR
SCHOOLCRAFT COLLEGE
PURCHASING DEPT
18600 HAGGERTY RD
LIVONIA
MARGARET JUDD

MI 48152

DATE: 03/10/87
CUST # 938609 P.O. #

M A T E R I A L S A F E T Y D A T A S H E E T

PAGE: 1

IDENTIFICATION

PRODUCT # B8590-0
CAS # 71-36-3

NAME: 1-BUTANOL, 99%

TOXICITY HAZARDS

RTECS # E01400000

BUTYL ALCOHOL

IRRITATION DATA

EYE-HMN 50 PPM
SKN-RBT 405 MG/24H MOD
SKN-RBT 500 MG/24H MOD
EYE-RBT 1620 UG SEV
EYE-RBT 750 UG/24H SEV

JIHTAB 25,282.43
BIOFX# 2-5/69
28ZPAK -,34,72
AJOPAA 29,1363,46
28ZPAK -,35,72

TOXICITY DATA

ORL-RAT LD50:790 MG/KG
IHL-RAT LC50:8000 PPM/4H
IPR-RAT LD50:1122 MG/KG
IVN-RAT LD50:310 MG/KG
ORL-MUS LD50:5200 MG/KG
IPR-MUS LD50:1072 MG/KG
IVN-MUS LD50:377 MG/KG
SKN-RBT LD50:3400 MG/KG
ORL-BWD LD50:2500 MG/KG

SAMJAF 43,795,69
NPRI* 1,10,74
EVHPAZ 61,321,85
EVHPAZ 61,321,85
PSDTAP 9,276,68
OYYAA2 11,371,76
AIPTAK 135,330,62
NPRI* 1,10,74
AECTCV 12,355,83

REVIEWS, STANDARDS, AND REGULATIONS

MSHA STANDARD-AIR:TWA 100 PPM (300 MG/M3) DTLVS* 3,31,71
OSHA STANDARD-AIR:TWA 100 PPM FEREAC 39,23540,74
EPA GENETIC TOXICOLOGY PROGRAM, JANUARY 1984
REPORTED IN EPA TSCA INVENTORY, 1983
"NIOSH MANUAL OF ANALYTICAL METHODS, 3RD ED." SEE: METHOD 1401
MEETS CRITERIA FOR PROPOSED OSHA MEDICAL RECORDS RULE FEREAC 47,30420,82

ONLY SELECTED REGISTRY OF TOXIC EFFECTS OF CHEMICAL SUBSTANCES (RTECS) DATA IS PRESENTED HERE. SEE ACTUAL ENTRY IN RTECS FOR COMPLETE INFORMATION.

HEALTH HAZARD DATA

ACUTE EFFECTS

WARNING
IRRITANT.
CAUSES EYE IRRITATION.
VAPOR OR MIST IS IRRITATING TO THE EYES, MUCOUS MEMBRANES AND UPPER RESPIRATORY TRACT.
HARMFUL IF SWALLOWED, INHALED, OR ABSORBED THROUGH SKIN.
SYMPTOMS OF EXPOSURE MAY INCLUDE BURNING SENSATION, COUGHING, WHEEZING, LARYNGITIS, SHORTNESS OF BREATH, HEADACHE, NAUSEA AND VOMITING.
GASTROINTESTINAL DISTURBANCES
MAY CAUSE NERVOUS SYSTEM DISTURBANCES.

FIRST AID

IN CASE OF CONTACT, IMMEDIATELY FLUSH EYES OR SKIN WITH COPIOUS AMOUNTS OF WATER FOR AT LEAST 15 MINUTES WHILE REMOVING CONTAMINATED CLOTHING AND SHOES.

FIRST AID

IF INHALED, REMOVE TO FRESH AIR. IF NOT BREATHING GIVE ARTIFICIAL RESPIRATION, PREFERABLY MOUTH-TO-MOUTH. IF BREATHING IS DIFFICULT, GIVE OXYGEN.
CALL A PHYSICIAN.

USA
Aldrich Chemical Co., Inc.
940 West Saint Paul Avenue
Milwaukee, Wisconsin 53233
Telephone: (414) 273-3850
Telex: 28 843 Aldrich MI
FAX: (414) 273-4879

Belgium
Aldrich Chemie N.V./S.A.
6 Rue Caporal Glass
B-1030 Brussels
Telephone: (32) 2428750
Telex: 62302 Aldrich B
FAX: (32) 2428750

France
Aldrich-Chimie S.a.r.l.
27, Fossé des Treize
F-67000 Strasbourg
Telephone: (88) 327010
Telex: 650078 Aldrich F
FAX: (88) 327010

Japan
Aldrich Japan
Kyodo Bldg. Shinkanda
16 Kanda-Mikuracho
Chiyoda-Ku, Tokyo
Telephone: (03) 258-0155
FAX: (03) 258-0157

United Kingdom
Aldrich Chemical Co., Ltd.
The Old Brickyard, New Road
Gillingham, Dorset SP6 4JL
Telephone: (07476) 2211
Telex: 417238 Aldrich G
FAX: (07476) 3779

West Germany
Aldrich-Chemie GmbH & Co. KG
D-7924 Steinheim
Telephone: (07329) 87-0
Telex: 714836 Aldri D
FAX: (07329) 87-38



chemists helping chemists in research & industry

aldrich chemical co.

P.O. Box 355, Milwaukee, Wisconsin 53201 USA • (414) 273-3850

M A T E R I A L S A F E T Y D A T A S H E E T

PAGE: 2

CATALOG # B8590-0

NAME: 1-BUTANOL, 99%

WASH CONTAMINATED CLOTHING BEFORE REUSE.

----- PHYSICAL DATA -----

MELTING POINT: -89.5 C
BOILING POINT: 117.7 C
SPECIFIC GRAVITY: 0.810

----- FIRE AND EXPLOSION HAZARD DATA -----

FLASH POINT: 95 F
EXTINGUISHING MEDIA
CARBON DIOXIDE, DRY CHEMICAL POWDER, ALCOHOL OR POLYMER FOAM.
WATER MAY BE EFFECTIVE FOR COOLING, BUT MAY NOT EFFECT EXTINGUISHMENT.
SPECIAL FIRE FIGHTING PROCEDURES
WEAR SELF-CONTAINED BREATHING APPARATUS AND PROTECTIVE CLOTHING TO
PREVENT CONTACT WITH SKIN AND EYES.
USE WATER SPRAY TO COOL FIRE-EXPOSED CONTAINERS.
FLAMMABLE LIQUID.
UNUSUAL FIRE AND EXPLOSION HAZARDS
VAPOR MAY TRAVEL CONSIDERABLE DISTANCE TO SOURCE OF IGNITION AND
FLASH BACK.
CONTAINER EXPLOSION MAY OCCUR UNDER FIRE CONDITIONS.

----- REACTIVITY DATA -----

INCOMPATIBILITIES
ACID CHLORIDES
ACID ANHYDRIDES
OXIDIZING AGENTS
REDUCING AGENTS
STRONG ACIDS
HAZARDOUS COMBUSTION OR DECOMPOSITION PRODUCTS
TOXIC FUMES OF:
CARBON MONOXIDE, CARBON DIOXIDE

----- SPILL OR LEAK PROCEDURES -----

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED
EVACUATE AREA.
SHUT OFF ALL SOURCES OF IGNITION.
WEAR SELF-CONTAINED BREATHING APPARATUS, RUBBER BOOTS AND HEAVY
RUBBER GLOVES.
COVER WITH AN ACTIVATED CARBON ADSORBENT, TAKE UP AND PLACE IN CLOSED
CONTAINERS. TRANSPORT OUTDOORS.
VENTILATE AREA AND WASH SPILL SITE AFTER MATERIAL PICKUP IS COMPLETE.
WASTE DISPOSAL METHOD
BURN IN A CHEMICAL INCINERATOR EQUIPPED WITH AN AFTERBURNER AND
SCRUBBER BUT EXERT EXTRA CARE IN IGNITING AS THIS MATERIAL IS HIGHLY
FLAMMABLE.

OBSERVE ALL FEDERAL, STATE & LOCAL LAWS.

--- PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE --- (R)

WEAR APPROPRIATE OSHA/MSHA-APPROVED RESPIRATOR, CHEMICAL-RESISTANT
GLOVES, SAFETY GOGGLES, OTHER PROTECTIVE CLOTHING.
SAFETY SHOWER AND EYE BATH.
MECHANICAL EXHAUST REQUIRED.
AVOID CONTACT WITH EYES.
AVOID CONTACT AND INHALATION.
AVOID PROLONGED OR REPEATED EXPOSURE.
KEEP TIGHTLY CLOSED.
KEEP AWAY FROM HEAT, SPARKS, AND OPEN FLAME.
STORE IN A COOL DRY PLACE.

USA
Aldrich Chemical Co., Inc.
940 West Saint Paul Avenue
Milwaukee, Wisconsin 53233
Telephone: (414) 273-3850
TWX: (910) 282-3052 Aldrich Mil
Telex: 28 843 Aldrich MI
FAX: (414) 273-4576

Belgium
Aldrich Chemie N.V./S.A.
6 Rue Caporal Claes
B-1030 Brussels
Telephone: (02) 2426750
Telex: 62302 Aldrich B

France
Aldrich-Chimie S.A.r.l.
27, Fossé des Treize
F-67000 Strasbourg
Telephone: (88) 327010
Telex: 890076 Aldrich F
FAX: (88) 75 12 83

Japan
Aldrich Japan
Kyodo Bldg. Shinkanda
10 Kanda-Mikuracho
Chiyoda-Ku, Tokyo
Telephone: (03) 258-0155
FAX: (03) 258-0157

United Kingdom
Aldrich Chemical Co., Ltd.
The Old Brickyard, New Road
Gillingham, Dorset SP6 4JL
Telephone: (07476) 2211
Telex: 417238 Aldrich G
FAX: (07476) 3779

West Germany
Aldrich-Chemie GmbH & Co. KG
D-7924 Steinheim
Telephone: (07329) 87-0
Telex: 714836 Aldrich D
FAX: (07329) 87-39



chemists helping chemists in research & industry

aldrich chemical co.

P.O. Box 355, Milwaukee, Wisconsin 53201 USA • (414) 273-3850

M A T E R I A L S A F E T Y D A T A S H E E T

PAGE: 3

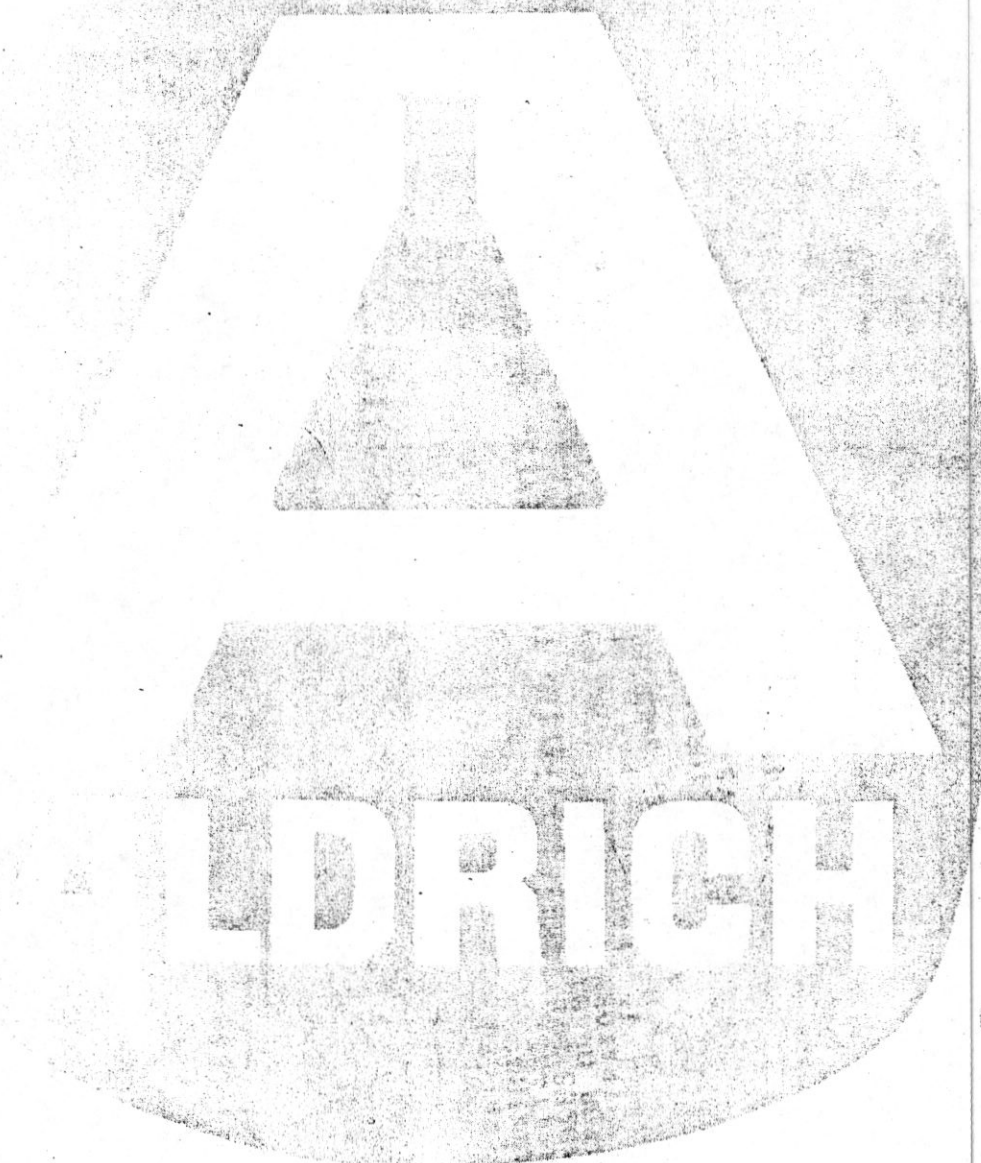
CATALOG # B8590-0

NAME: 1-BUTANOL, 99%

----- ADDITIONAL PRECAUTIONS AND COMMENTS -----

NOT APPLICABLE

THE ABOVE INFORMATION IS BELIEVED TO BE CORRECT BUT DOES NOT PURPORT TO BE ALL INCLUSIVE AND SHALL BE USED ONLY AS A GUIDE. ALDRICH SHALL NOT BE HELD LIABLE FOR ANY DAMAGE RESULTING FROM HANDLING OR FROM CONTACT WITH THE ABOVE PRODUCT. SEE REVERSE SIDE OF INVOICE OR PACKING SLIP FOR ADDITIONAL TERMS AND CONDITIONS OF SALE.



(R)

USA
Aldrich Chemical Co., Inc.
940 West Saint Paul Avenue
Milwaukee, Wisconsin 53233
Telephone: (414) 273-3850
TWX: (910) 862-3052 Aldrichem MI
Telex: 26 843 Aldrich MI
FAX: (414) 273-4870

Belgium
Aldrich Chemie N.V./S.A.
6 Rue Caporal Claes
B-1030 Brussels
Telephone: (02) 3428750
Telex: 62302 Aldrich B

France
Aldrich-Chimie S.r.l.
27, Fossé des Treize
F-67000 Strasbourg
Telephone: (68) 327010
Telex: 660076 Aldrich F
FAX: (68) 75 12 83

Japan
Aldrich Japan
Kyoto Bldg. Shinkanda
10 Kanda-Mitsuracho
Chiyoda-Ku, Tokyo
Telephone: (03) 258-0155
FAX: (03) 258-0157

United Kingdom
Aldrich Chemical Co., Ltd.
The Old Brickyard, New Road
Gillingham, Dorset SP9 4JL
Telephone: (07478) 2211
Telex: 417238 Aldrich G
FAX: (07478) 3779

West Germany
Aldrich-Chemie GmbH & Co. KG
D-7524 Steinheim
Telephone: (07329) 87-0
Telex: 714038 Aldrich D
FAX: (07329) 87-38