



chemists helping chemists in research & industry

aldrich chemical co., inc.

P.O. Box 355, Milwaukee, Wisconsin 53201 USA

Telephone: (414) 273-3850
TWX: (910) 262-3052 Aldrichem I
Telex: 26 843 Aldrich MI
FAX: (414) 273-4979

ATTN: SAFETY DIRECTOR
UNIVERSITY OF NEVADA/RENO

rev: 7/21/1993

4582

CHARLIE FONG
SAFETY AND LOSS CONTROL
ARTEMISIA BUILDING
RENO NV 89557

DATE: 07/21/93
CUST#: 351253
PO#: 1.001857

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 #: 14587-4
CAS #: 124-40-3 NAME: DIMETHYLAMINE, 40 WT. % SOLUTION IN WATER
MF: C2H7N

SYNONYMS

DIMETHYLAMINE (ACGIH, OSHA) * DIMETHYLAMINE, ANHYDROUS (UN1032) (DOT) *
DIMETHYLAMINE, AQUEOUS SOLUTION (UN1160) (DOT) * DMA * METHANAMINE,
N-METHYL- (9CI) * N-METHYLMETHANAMINE * RCRA WASTE NUMBER U092 * UN
1032 (DOT) * UN 1160 (DOT) *

TOXICITY HAZARDS

RTECS #: IP8750000
DIMETHYLAMINE

IRRITATION DATA
EYE-RBT 50 MG/5M

BJIMAG 23,153,66

TOXICITY DATA

ORL-RAT LD50:698 MG/KG	HYSAAV 32(6),329,67
IHL-RAT LC50:4540 PPM/6H	AIHAAP 43,411,82
ORL-MUS LD50:316 MG/KG	HYSAAV 32(6),329,67
IHL-MUS LC50:7650 PPM/2H	AIHAAP 43,411,82
IPR-MUS LD50:>1600 MG/KG	USXXAM #3816470
ORL-RBT LD50:240 MG/KG	HYSAAV 32(6),329,67
ORL-GPG LD50:240 MG/KG	HYSAAV 32(6),329,67
IHL-MAM LC50:3700 MG/M3	TPKVAL 14,80,75

REVIEWS, STANDARDS, AND REGULATIONS

ACGIH TLV-TWA 10 PPM 85INA8 5,206,86
MSHA STANDARD-AIR:TWA 10 PPM (18 MG/M3) DTLVS* 3,88,71
OSHA PEL:8H TWA 10 PPM (18 MG/M3) FEREAC 54,2923,89
OSHA PEL FINAL:8H TWA 10 PPM (18 MG/M3) FEREAC 54,2923,89
OEL-AUSTRALIA:TWA 10 PPM (18 MG/M3) JANUARY 1993
OEL-BELGIUM:TWA 10 PPM (18 MG/M3) JANUARY 1993
OEL-DENMARK:TWA 10 PPM (18 MG/M3) JANUARY 1993
OEL-FINLAND:STEL 10 PPM (18 MG/M3);SKIN JANUARY 1993
OEL-FRANCE:STEL 10 PPM (18 MG/M3) JANUARY 1993
OEL-GERMANY:TWA 10 PPM (18 MG/M3) JANUARY 1993
OEL-HUNGARY:TWA 1 MG/M3;STEL 2 MG/M3;SKIN JANUARY 1993
OEL-JAPAN:TWA 10 PPM (18 MG/M3) JANUARY 1993
OEL-THE NETHERLANDS:TWA 10 PPM (18 MG/M3) JANUARY 1993
OEL-THE PHILIPPINES:TWA 10 PPM (18 MG/M3) JANUARY 1993

CONTINUED ON NEXT PAGE

France
Aldrich-Chimie S.a.r.l.
B.P. 701
38297 Saint Quentin Fallavier
Cedex
Telephone: 74822800
Telex: 308215 Aldrich F
FAX: 74956808

Japan
Aldrich Japan
Kyodo Bldg. Shinkanda
10 Kanda-Mikuracho
Chiyoda-Ku, Tokyo
Telephone: 0332580155
FAX: 0332580157

United Kingdom
Aldrich Chemical Co., Ltd.
The Old Brickyard, New Road
Gillingham, Dorset SP8 4JL
Telephone: 0747822211
Telex: 417238 Aldrich G
FAX: 0747823779

Switzerland
Aldrich Chemie
Industriestrasse 25
P.O. Box 260
CH-9470 Buchs
Telephone: 08569723
FAX: 08567420

Belgium
Aldrich Chemie
K. Cardijnplein, 8
B-2880 Bornem
Telephone: 038991301
FAX: 038991311

Italy
Aldrich Chimica
Via Gallarate, 154
20151 Milano
Telephone: 0233417370
FAX: 0238010737

Spain
Aldrich Quimica
Apt. de Correos 161
28100 Alcobendas (Madrid)
Telephone: 3416619977
Telex: 22189 SAQSE
FAX: 3416618084

Germany
Aldrich-Chemie GmbH & Co. KG
W-7924 Steinheim
Telephone: 07329870
Telex: 714838 Aldri D
FAX: 0732987139/239

Australia
Aldrich Chemical
Unit 2
10 Anella Ave.
Castle Hill NSW 2154
Telephone: 028999977
FAX: 028999742



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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

PRODUCT #:

MF: C2H7N

NAME: DIMETHYLAMINE, 40 WT. % SOLUTION IN WATER

CUST#: 351253
PO#: 1.001857

--- TOXICITY HAZARDS ---

DEL-RUSSIA:TWA 10 PPM;STEL 1 MG/M3;SKIN JANUARY 1993
DEL-SWITZERLAND:TWA 10 PPM (18 MG/M3);STEL 20 PPM (36 MG/M3) JANUARY 1993
DEL-UNITED KINGDOM:TWA 10 PPM (18 MG/M3) JANUARY 1993
DEL IN BULGARIA, COLOMBIA, JORDAN, KOREA, NEW ZEALAND, SINGAPORE, VIETNAM CHECK ACCGIH TLV
NIOSH REL TO DIMETHYLAMINE-AIR:10H TWA 10 PPM NIOSH* DHHS #92-100,92
NOHS 1974: HZD 26130; NIS 13; TNF 291; NOS 16; TNE 3174
NOES 1983: HZD X1555; NIS 1; TNF 32; NOS 1; TNE 65; TFE 65
EPA GENETOX PROGRAM 1988, NEGATIVE: HOST-MEDIATED ASSAY
EPA TSCA CHEMICAL INVENTORY, JUNE 1990
ON EPA IRIS DATABASE
EPA TSCA TEST SUBMISSION (TSCATS) DATA BASE, JANUARY 1993
NIOSH ANALYTICAL METHODS: SEE AMINES, ALIPHATIC 2010
OSHA ANALYTICAL METHOD #34

TARGET ORGAN DATA

BEHAVIORAL (EXCITEMENT)
BEHAVIORAL (MUSCLE WEAKNESS)
GASTROINTESTINAL (ULCERATION OR BLEEDING FROM STOMACH)
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

HARMFUL IF SWALLOWED, INHALED, OR ABSORBED THROUGH SKIN.
CAUSES BURNS.
MATERIAL IS EXTREMELY DESTRUCTIVE TO TISSUE OF THE MUCOUS MEMBRANES AND UPPER RESPIRATORY TRACT, EYES AND SKIN.
INHALATION MAY BE FATAL AS A RESULT OF SPASM, INFLAMMATION AND EDEMA OF THE LARYNX AND BRONCHI, CHEMICAL PNEUMONITIS AND PULMONARY EDEMA.
SYMPTOMS OF EXPOSURE MAY INCLUDE BURNING SENSATION, COUGHING, WHEEZING, LARYNGITIS, SHORTNESS OF BREATH, HEADACHE, NAUSEA AND VOMITING.

FIRST AID

CONTINUED ON NEXT PAGE

France
Aldrich-Chimie S.a.r.l.
B.P. 701
38297 Saint Quentin Fallavier
Cedex
Telephone: 74822800
Telex: 308215 Aldrich F
FAX: 74956808

Japan
Aldrich Japan
Kyodo Bldg. Shinkanda
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Switzerland
Aldrich-Chemie
Industriestrasse 25
P.O. Box 260
CH-9470 Buchs
Telephone: 08569723
FAX: 08567420

Italy
Aldrich Chimica
Via Gallarate, 154
20151 Milano
Telephone: 0233417370
FAX: 0238010737

Spain
Aldrich Quimica
Apt. de Correos 161
28100 Akobendas (Madrid)
Telephone: 3416619977
Telex: 22189 SAQS-E
FAX: 3416618084

Germany
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--- HEALTH HAZARD DATA ---

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. ASSURE ADEQUATE FLUSHING OF THE EYES BY SEPARATING THE EYELIDS WITH FINGERS. IF INHALED, REMOVE TO FRESH AIR. IF NOT BREATHING GIVE ARTIFICIAL RESPIRATION. IF BREATHING IS DIFFICULT, GIVE OXYGEN. IF SWALLOWED, WASH OUT MOUTH WITH WATER PROVIDED PERSON IS CONSCIOUS. CALL A PHYSICIAN. WASH CONTAMINATED CLOTHING BEFORE REUSE.

--- PHYSICAL DATA ---

SPECIFIC GRAVITY: 0.898
VAPOR DENSITY: 1.55
VAPOR PRESSURE: 1277 MM @ 20 C
3447 MM @ 52 C

APPEARANCE AND ODOR
COLORLESS LIQUID

--- FIRE AND EXPLOSION HAZARD DATA ---

FLASHPOINT 60 F
AUTOIGNITION TEMPERATURE: 753 F
LOWER EXPLOSION LEVEL: 2.8%
UPPER EXPLOSION LEVEL: 14.4%

EXTINGUISHING MEDIA

WATER SPRAY.
CARBON DIOXIDE, DRY CHEMICAL POWDER OR APPROPRIATE FOAM.

SPECIAL FIREFIGHTING PROCEDURES

WEAR SELF-CONTAINED BREATHING APPARATUS AND PROTECTIVE CLOTHING TO PREVENT CONTACT WITH SKIN AND EYES.
FLAMMABLE.

UNUSUAL FIRE AND EXPLOSIONS HAZARDS

CONTINUED ON NEXT PAGE

France
Aldrich-Chimie S.a.r.l.
B.P. 701
38297 Saint Quentin Fallavier
Cedex
Telephone: 74822800
Telex: 308215 Aldrich F
FAX: 74956808

Japan
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Kyodo Bldg. Shinkanda
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Germany
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--- FIRE AND EXPLOSION HAZARD DATA ---

VAPOR MAY TRAVEL CONSIDERABLE DISTANCE TO SOURCE OF IGNITION AND FLASH BACK.
EMITS TOXIC FUMES UNDER FIRE CONDITIONS.
FORMS EXPLOSIVE MIXTURES IN AIR.
CONTAINER EXPLOSION MAY OCCUR UNDER FIRE CONDITIONS.

--- REACTIVITY DATA ---

INCOMPATIBILITIES

ACIDS
ACID CHLORIDES
ACID ANHYDRIDES
GALVANIZED IRON
ALUMINUM
COPPER, COPPER ALLOYS
TIN
ZINC

HAZARDOUS COMBUSTION OR DECOMPOSITION PRODUCTS
THERMAL DECOMPOSITION MAY PRODUCE CARBON MONOXIDE, CARBON DIOXIDE, AND NITROGEN OXIDES.

--- 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.
ABSORB ON SAND OR VERMICULITE AND PLACE IN CLOSED CONTAINERS FOR DISPOSAL.
USE NONSPARKING TOOLS.

VENTILATE AREA AND WASH SPILL SITE AFTER MATERIAL PICKUP IS COMPLETE.

WASTE DISPOSAL METHOD
DISSOLVE OR MIX THE MATERIAL WITH A COMBUSTIBLE SOLVENT AND BURN IN A CHEMICAL INCINERATOR EQUIPPED WITH AN AFTERBURNER AND SCRUBBER.
OBSERVE ALL FEDERAL, STATE AND LOCAL ENVIRONMENTAL REGULATIONS.

--- PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE ---
WEAR APPROPRIATE NIOSH/MSHA-APPROVED RESPIRATOR, CHEMICAL-RESISTANT

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France
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Castle Hill NSW 2154
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--- PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE ---

GLOVES, SAFETY GOGGLES, OTHER PROTECTIVE CLOTHING.
USE ONLY IN A CHEMICAL FUME HOOD.

SAFETY SHOWER AND EYE BATH.
FACESHIELD (8-INCH MINIMUM).

DO NOT BREATHE VAPOR.

DO NOT GET IN EYES, ON SKIN, ON CLOTHING.

AVOID PROLONGED OR REPEATED EXPOSURE.

WASH THOROUGHLY AFTER HANDLING.

CORROSIVE.

TOXIC.

KEEP TIGHTLY CLOSED.

KEEP AWAY FROM HEAT, SPARKS, AND OPEN FLAME.

STORE IN A COOL DRY PLACE.

LABEL PRECAUTIONARY STATEMENTS

FLAMMABLE (USA DEFINITION)

HIGHLY FLAMMABLE (EUROPEAN DEFINITION)

CORROSIVE

CAUSES BURNS.

HARMFUL BY INHALATION, IN CONTACT WITH SKIN AND IF SWALLOWED.

KEEP AWAY FROM SOURCES OF IGNITION. NO SMOKING.

IN CASE OF CONTACT WITH EYES, RINSE IMMEDIATELY WITH PLENTY OF

WATER AND SEEK MEDICAL ADVICE.

WEAR SUITABLE PROTECTIVE CLOTHING, GLOVES AND EYE/FACE

PROTECTION.

AVOID CONTACT WITH SKIN AND EYES.

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France
Aldrich-Chimie S.a.r.l.
B.P. 701
38297 Saint Quentin Fallavier
Cedex
Telephone: 74822800
Telex: 308215 Aldrich F
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