



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
Telex: 26 843 Aldrich MI
FAX: (414) 273-4979

ATTN: SAFETY DIRECTOR

PO BOX 14508

ST LOUIS MO 63175

UNIVERSITY OF WISCONSIN WHITEWATER
P O BOX 296
WHITEWATER WI 53190-0296

DATE: 04/12/93
CUST#: 523216
PO#: Q DI8714

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 #: 31996-1
CAS #: 56-23-5
MF: CCL4
NAME: CARBON TETRACHLORIDE, 99.9%, A.C.S.
REAGENT

SYNONYMS

BENZINFORM * CARBONA * CARBON CHLORIDE * CARBON CHLORIDE (CCL4) *
CARBON TET * CARBON TETRACHLORIDE (ACGIH, DOT, OSHA) * CHLORID UHLICITY
(CZECH) * CZTEROCHLOREK WEGLA (POLISH) * ENT 4,705 * ENT 27164 *
FASCIOLIN * FLUKOIDS * HALON 1040 * METHANE TETRACHLORIDE * METHANE,
TETRACHLOR- * NECATORINA * NECATORINE * PERCHLOROMETHANE * R 10 *
RCRA WASTE NUMBER U211 * R 10 (REFRIGERANT) * TETRACHLOROKOOLSTOF
(DUTCH) * TETRACHLORMETAAN * TETRACHLOROKOHLNSTOFF, TETRA (GERMAN) *
TETRACHLORMETHAN (GERMAN) * TETRACHLOROCARBON * TETRACHLOROMETHANE *
TETRACHLOROMETHANE (OSHA) * TETRACHLORURE DE CARBONE (FRENCH) *
TETRACHLOROMETANO (ITALIAN) * TETRACHLORURO DI CARBONIO (ITALIAN) *
TETRAFINOL * TETRAFORM * TETRASOL * UN 1846 (DOT) * UNIVERM *
VERMOESTRICID *

TOXICITY HAZARDS

RTECS #: FG4900000
CARBON TETRACHLORIDE

IRRITATION DATA

SKN-RBT 4 MG MLD
SKN-RBT 500 MG/24H MLD
EYE-RBT 2200 UG/30S MLD
EYE-RBT 500 MG/24H MLD

XEURAQ MDCC-1715
85JCAE -,91,86
XEURAQ MDCC-1715
85JCAE -,91,86

TOXICITY DATA

IHL-HMN LCLO:1000 PPM
IHL-HMN LCLO:5 PPH/5M
UNR-MAN LDLO:93 MG/KG
ORL-RAT LD50:2350 MG/KG
IHL-RAT LC50:8000 PPM/4H
SKN-RAT LD50:5070 MG/KG
IPR-RAT LD50:1500 MG/KG
ORL-MUS LD50:8263 MG/KG
IHL-MUS LC50:9526 PPM/8H
IPR-MUS LD50:572 MG/KG
SCU-MUS LD50:31 GM/KG
IPR-DDG LD50:1500 MG/KG
ORL-RBT LD50:5760 MG/KG
SKN-RBT LD50:>14937 MG/KG
IVN-RBT LD50:5840 MG/KG

PCOC** -,198,66
TABIA2 3,231,33
85DCAI 2,73,70
ARTODN 54,275,83
NPIRI* 1,16,74
SPEADM 78-1,16,78
XEURAQ MDCC-1715
JPPMAB 3,169,51
JIHTAB 29,382,47
PHMCAA 10,172,68
JPETAB 123,224,58
TXAPA9 10,119,67
GISAAA 33(1),32,68
TXAPA9 7,559,65
ZAPPAN 118,305,74

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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
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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TOXICITY HAZARDS

ORL-GPG LD50:5760 MG/KG
SKN-GPG LD50:>14937 MG/KG
IPR-CKN LD50:4497 MG/KG
IHL-NAM LC50:34500 MG/M3

GISAAA 33(1),32,68
TXAPA9 7,559,65
BVJOA9 127,304,71
GTPZAB 24(3),17,80

REVIEWS, STANDARDS, AND REGULATIONS

ACGIH TLV-SUSPECTED CARCINOGEN 85INAB 5,109,86
ACGIH TLV-TWA 5 PPM (SKIN) 85INAB 5,109,86
IARC CANCER REVIEW:ANIMAL SUFFICIENT EVIDENCE IMEMDT 20,371,79
IARC CANCER REVIEW:ANIMAL SUFFICIENT EVIDENCE IMEMDT 1,53,72
IARC CANCER REVIEW:HUMAN INADEQUATE EVIDENCE IMEMDT 1,53,72
IARC CANCER REVIEW:HUMAN INADEQUATE EVIDENCE IMEMDT 20,371,79
IARC CANCER REVIEW:GROUP 2B IMSUDL 7,143,87
MSHA STANDARD-AIR:TWA 10 PPM (65 MG/M3) (SKIN) DTLVS* 3,43,71
OSHA PEL:8H TWA 10 PPM;CL 25 PPM;PK 200 PPM/5M/4H FEREAC 54,2923,89
OSHA PEL FINAL:8H TWA 2 PPM (12.6 MG/M3) FEREAC 54,2923,89
DEL-ARAB REPUBLIC OF EGYPT:TWA 5 PPM (30 MG/M3);SKIN JANUARY 1993
DEL-AUSTRALIA:TWA 5 PPM (30 MG/M3);SKIN;CARCINOGEN JANUARY 1993
DEL-BELGIUM:TWA 5 PPM (31 MG/M3);SKIN;CARCINOGEN JANUARY 1993
DEL-CZECHOSLOVAKIA:TWA 10 MG/M3;STEL 20 MG/M3 JANUARY 1993
DEL-DENMARK:TWA 2 PPM (13 MG/M3);SKIN JANUARY 1993
DEL-FINLAND:TWA 5 PPM (31 MG/M3);STEL 10 PPM (63 MG/M3);SKIN;
CARCINOGEN JANUARY 1993
DEL-FRANCE:TWA 2 PPM (12 MG/M3);STEL 10 PPM (60 MG/M3) JANUARY 1993
DEL-GERMANY:TWA 10 PPM (65 MG/M3);SKIN;CARCINOGEN JANUARY 1993
DEL-HUNGARY:STEL 10 MG/M3;SKIN;CARCINOGEN JANUARY 1993
DEL-INDIA:TWA 5 PPM (30 MG/M3);SKIN;CARCINOGEN JANUARY 1993
DEL-JAPAN:TWA 10 PPM (63 MG/M3);SKIN;CARCINOGEN JANUARY 1993
DEL-POLAND:TWA 20 MG/M3 JANUARY 1993
DEL-RUSSIA:TWA 10 PPM;STEL 20 MG/M3 JANUARY 1993
DEL-SWEDEN:TWA 2 PPM (13 MG/M3);STEL 3 PPM (19 MG/M3);SKIN;CARCINOGEN
JANUARY 1993
DEL-SWITZERLAND:TWA 5 PPM (30 MG/M3);STEL 10 PPM (60 MG/M3);SKIN
JANUARY 1993
DEL-THAILAND:TWA 10 PPM;STEL 25 PPM JANUARY 1993
DEL-THE NETHERLANDS:TWA 2 PPM (12.6 MG/M3);SKIN JANUARY 1993
DEL-THE PHILLIPPINES:TWA 10 PPM (65 MG/M3);SKIN JANUARY 1993
DEL-UNITED KINGDOM:TWA 10 PPM (65 MG/M3);STEL 20 PPM (130 MG/M3);SKIN
JANUARY 1993
DEL IN BULGARIA, COLOMBIA, JORDAN, KOREA, NEW ZEALAND, SINGAPORE,

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
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Switzerland
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Belgium
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K. Cardijnplein, 8
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Italy
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20151 Milano
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Spain
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Apt. de Correos 161
28100 Alcobendas (Madrid)
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REAGENT

TOXICITY HAZARDS

VIETNAM CHECK ACGIH TLV
NIOSH REL TO CARBON TETRACHLORIDE-AIR:CA STEL 2 PPM/60M NIOSH* DHHS
#92-100,92
NOHS 1974: HZD 17490; NIS 73; TNF 5152; NOS 56; TNE 64009
NOES 1983: HZD 17490; NIS 77; TNF 6629; NOS 72; TNE 104174; TFE 20699
ATSDR TOXICOLOGY PROFILE (NTIS** PB/90/168196/AS)
EPA GENETOX PROGRAM 1988, POSITIVE: CARCINOGENICITY-MOUSE/RAT; S
CEREVISIAE GENE CONVERSION
EPA GENETOX PROGRAM 1988, POSITIVE: S CEREVISIAE-HOMOZYGOSIS; S
CEREVISIAE-REVERSION
EPA GENETOX PROGRAM 1988, NEGATIVE: HISTIDINE REVERSION-AMES TEST;
SPERM MORPHOLOGY-MOUSE
EPA TSCA CHEMICAL INVENTORY, JUNE 1990
EPA TSCA SECTION 8(E) STATUS REPORT 8EHQ-0979-0310;8EHQ-0378-0110;
8EHQ-0378-0113
ON EPA IRIS DATABASE
EPA TSCA TEST SUBMISSION (TSCATS) DATA BASE, JANUARY 1993
NIOSH ANALYTICAL METHODS: SEE HYDROCARBONS, HALOGENATED, 1003
NTP 7TH ANNUAL REPORT ON CARCINOGENS, 1992 : ANTICIPATED TO BE
CARCINOGEN

TARGET ORGAN DATA

SENSE ORGANS AND SPECIAL SENSES (MIOSIS)
BEHAVIORAL (SOMNOLENCE)
BEHAVIORAL (TREMOR)
BEHAVIORAL (ANOREXIA, HUMAN)
BEHAVIORAL (COMA)
BEHAVIORAL (ANTIPSYCHOTIC)
LUNGS, THORAX OR RESPIRATION (OTHER CHANGES)
GASTROINTESTINAL (NAUSEA OR VOMITING)
GASTROINTESTINAL (OTHER CHANGES)
LIVER (FATTY LIVER DEGENERATION)
LIVER (LIVER FUNCTION TESTS IMPAIRED)
BLOOD (HEMORRHAGE)
EFFECTS ON FERTILITY (POST-IMPLANTATION MORTALITY)
EFFECTS ON EMBRYO OR FETUS (FETOTOXICITY)
SPECIFIC DEVELOPMENTAL ABNORMALITIES (MUSCULOSKELETAL SYSTEM)
SPECIFIC DEVELOPMENTAL ABNORMALITIES (HOMEOSTASIS)
EFFECTS ON NEWBORN (VIABILITY INDEX)
EFFECTS ON NEWBORN (WEANING OR LACTATION INDEX)

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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Spain
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Apt. de Correos 161
28100 Alcobendas (Madrid)
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Germany
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REAGENT

MF: CCL4

--- TOXICITY HAZARDS ---

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.
VAPOR OR MIST IS IRRITATING TO THE EYES, MUCOUS MEMBRANES AND UPPER RESPIRATORY TRACT.
CAUSES SKIN IRRITATION.
EXPOSURE CAN CAUSE:
STOMACH PAINS, VOMITING, DIARRHEA.
NAUSEA, DIZZINESS AND HEADACHE
DAMAGE TO THE EYES
DAMAGE TO THE LIVER
DAMAGE TO THE KIDNEYS
EXPOSURE TO AND/OR CONSUMPTION OF ALCOHOL
MAY INCREASE TOXIC EFFECTS.

CHRONIC EFFECTS

CARCINOGEN.
MAY ALTER GENETIC MATERIAL.
MAY CAUSE REPRODUCTIVE DISORDERS.
TARGET ORGAN(S):
LIVER, KIDNEYS
NERVES, HEART
MALE REPRODUCTIVE SYSTEM
FEMALE REPRODUCTIVE SYSTEM

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.
CONTAMINATION OF THE EYES SHOULD BE TREATED BY IMMEDIATE AND PROLONGED IRRIGATION WITH COPIOUS AMOUNTS OF WATER.
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.

CONTINUED ON NEXT PAGE

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

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

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

Spain
Aldrich Quimica
Apt. de Correos 161
28100 Alcobendas (Madrid)
Telephone: 3416619977
Telex: 22189 SAQ5-E
FAX: 3416618084

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

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--- HEALTH HAZARD DATA ---

IF SWALLOWED, WASH OUT MOUTH WITH WATER PROVIDED PERSON IS CONSCIOUS.
CALL A PHYSICIAN.
REMOVE AND WASH CONTAMINATED CLOTHING PROMPTLY.

--- PHYSICAL DATA ---

BOILING POINT: 77 C
SPECIFIC GRAVITY: 1.588
VAPOR DENSITY: 5.32
VAPOR PRESSURE: 143 MM @ 30 C
91 MM @ 20 C

APPEARANCE AND ODDR
COLORLESS LIQUID

--- FIRE AND EXPLOSION HAZARD DATA ---

FLASHPOINT NONE

EXTINGUISHING MEDIA

NONCOMBUSTIBLE.

USE EXTINGUISHING MEDIA APPROPRIATE TO SURROUNDING FIRE CONDITIONS.

SPECIAL FIREFIGHTING PROCEDURES

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

UNUSUAL FIRE AND EXPLOSIONS HAZARDS

EMITS TOXIC FUMES UNDER FIRE CONDITIONS.

--- REACTIVITY DATA ---

INCOMPATIBILITIES

ALKALI METALS

FINELY POWDERED METALS

OXIDIZING AGENTS

HAZARDOUS COMBUSTION OR DECOMPOSITION PRODUCTS

CONTINUED ON NEXT PAGE

France
Aldrich-Chimie S.a.r.l.
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38297 Saint Quentin Fallavier
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--- REACTIVITY DATA ---

TOXIC FUMES OF:
PHOSGENE GAS
CARBON MONOXIDE, CARBON DIOXIDE

--- SPILL OR LEAK PROCEDURES ---

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED

EVACUATE AREA.
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

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
GLOVES, SAFETY GOGGLES, OTHER PROTECTIVE CLOTHING.
USE ONLY IN A CHEMICAL FUME HOOD.
SAFETY SHOWER AND EYE BATH.
DO NOT BREATHE VAPOR.
DO NOT GET IN EYES, ON SKIN, ON CLOTHING.
AVOID PROLONGED OR REPEATED EXPOSURE.
READILY ABSORBED THROUGH SKIN.
WASH THOROUGHLY AFTER HANDLING.

TOXIC.
IRRITANT.
CARCINOGEN.
MUTAGEN.
REPRODUCTIVE HAZARD.
KEEP TIGHTLY CLOSED.
STORE IN A COOL DRY PLACE.

LABEL PRECAUTIONARY STATEMENTS

TOXIC
MAY CAUSE CANCER.
MAY CAUSE HERITABLE GENETIC DAMAGE.
TOXIC BY INHALATION, IN CONTACT WITH SKIN AND IF SWALLOWED.

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



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
Telex: 26 843 Aldrich MI
FAX: (414) 273-4979

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

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CUST#: 523216
PO#: Q D18714

PRODUCT #:

NAME: CARBON TETRACHLORIDE, 99.9%, A.C.S.
REAGENT

MF: CCL4

--- PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE ---

IRRITATING TO EYES, RESPIRATORY SYSTEM AND SKIN.
REPRODUCTIVE HAZARD.
TARGET ORGAN(S):
LIVER, KIDNEYS
NERVES, HEART
READILY ABSORBED THROUGH SKIN.
IF YOU FEEL UNWELL, SEEK MEDICAL ADVICE (SHOW THE LABEL WHERE POSSIBLE).
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.
DO NOT BREATHE VAPOR.

REGULATORY INFORMATION

THIS PRODUCT IS SUBJECT TO SARA SECTION 313 REPORTING REQUIREMENTS.

--- ADDITIONAL PRECAUTIONS AND COMMENTS ---

ADDITIONAL INFORMATION

REACTS VIOLENTLY WITH DIMETHYL FORMAMIDE (DMF) ABOVE 65 C.

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.

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ALDRICH

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

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

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

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

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

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

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

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

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