



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

DEC 15 1994

ATTN: SAFETY DIRECTOR  
BILL FITZGERALD QF 06524  
UNIVERSITY OF WISCONSIN WHITEWATER  
P O BOX 296  
WHITEWATER WI 53190-0296

DATE: 12/09/94  
CUST#: 523216  
PO#: Q F 06524

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

SECTION 1. CHEMICAL IDENTIFICATION

PRODUCT #: 20221-5 NAME: SODIUM TETRAFLUOROBORATE, 98%

SECTION 2. COMPOSITION/INFORMATION ON INGREDIENTS

CAS #: 13755-29-8  
MF: BF4NA

SYNONYMS  
SODIUM TETRAFLUOROBORATE \* STB \*

SECTION 3. HAZARDS IDENTIFICATION

LABEL PRECAUTIONARY STATEMENTS

CORROSIVE  
CAUSES BURNS.  
HARMFUL BY INHALATION, IN CONTACT WITH SKIN AND IF SWALLOWED.  
IN CASE OF CONTACT WITH EYES, RINSE IMMEDIATELY WITH PLENTY OF  
WATER AND SEEK MEDICAL ADVICE.  
AFTER CONTACT WITH SKIN, WASH IMMEDIATELY WITH PLENTY OF WATER.  
TAKE OFF IMMEDIATELY ALL CONTAMINATED CLOTHING.  
WEAR SUITABLE PROTECTIVE CLOTHING, GLOVES AND EYE/FACE  
PROTECTION.  
PROTECT FROM MOISTURE.  
HANDLE AND STORE UNDER NITROGEN.  
ABSOLUTELY DRY MATERIAL DOES NOT ETCH GLASS.  
DO NOT STORE IN GLASS.

SECTION 4. FIRST-AID MEASURES

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.  
DISCARD CONTAMINATED SHOES.

CONTINUED ON NEXT PAGE

**Holland**  
Aldrich Chemie  
Telephone: 3238991301  
Fax: 3238991311

**Spain**  
Aldrich Quimica  
Apt. de Correos, 161  
28100 Alcobendas, Madrid  
Telephone: 3416619977  
Fax: 3416619642

**Italy**  
Aldrich Chimica  
Via Gallarate, 154  
20151 Milano  
Telephone: 39233417340  
Fax: 39238010737

**Switzerland**  
Aldrich Chemie  
Industriestrasse 25  
CH-9470 Buchs  
Telephone: 41817552723  
Fax: 41817567420

**Belgium**  
Aldrich Chemie  
K. Cardijnplein 8  
B-2880 Bornem  
Telephone: 3238991301  
Fax: 3238991311

**Czech Republic**  
Aldrich, s.r.o.  
Krizikova, 27  
180 00 Prague-8  
Telephone: 42224225285  
Fax: 42224224031

**India**  
Aldrich-India  
B4/158 Safdarjung Enclave  
New Delhi 110 029  
Telephone: 91116886872  
Fax: 91116886873

**France**  
Aldrich-Chimie S.a.r.l.  
L'Isle D'Abeau Cheesnes  
B.P. 701  
38297 St. Quentin Fallavier  
Cedex  
Telephone: 3374822800  
Fax: 3374956808

**Japan**  
Aldrich Japan  
Kyodo Bldg. Shinkanda  
10 Kanda-Mikuracho  
Chiyoda-Ku, Tokyo  
Telephone: 81332580155  
Fax: 81332580157

**Australia**  
Aldrich Chemicals  
Unit 2  
10 Anella Ave.  
Castle Hill, NSW 2154  
Telephone: 6128999977  
Fax: 6128999742

**United Kingdom**  
Aldrich Chemical Co. Ltd.  
The Old Brickyard, New Road  
Gillingham, Dorset SP8 4JL  
Telephone: 44747822211  
Fax: 44747823779

**Brazil**  
Aldrich-Brazil  
Rua Sabara, 566-conj.53  
01239-010 Sao Paulo, SP  
Telephone: 55112311866  
Fax: 55112579079

**Germany**  
Aldrich-Chemie GmbH & Co.KG  
Friedstrasse 2, D-89555 Steinheim  
Telephone: 497329970  
Fax: 4973291939



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

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

CUST#: 523216  
PO#: Q F 06524

PRODUCT #: 202215  
MF: BF4NA

NAME: SODIUM TETRAFLUOROBORATE, 98%

SECTION 5. - - - - - FIRE FIGHTING MEASURES - - - - -

EXTINGUISHING MEDIA  
DRY CHEMICAL POWDER.  
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.

SECTION 6. - - - - - ACCIDENTAL RELEASE MEASURES - - - - -

EVACUATE AREA.  
WEAR SELF-CONTAINED BREATHING APPARATUS, RUBBER BOOTS AND HEAVY  
RUBBER GLOVES.  
ABSORB ON SAND OR VERMICULITE AND PLACE IN CLOSED CONTAINERS FOR  
DISPOSAL.  
VENTILATE AREA AND WASH SPILL SITE AFTER MATERIAL PICKUP IS COMPLETE.

SECTION 7. - - - - - HANDLING AND STORAGE - - - - -  
REFER TO SECTION 8.

SECTION 8. - - - - - EXPOSURE CONTROLS/PERSONAL PROTECTION - - - - -

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.  
FACESHIELD (8-INCH MINIMUM).  
DO NOT GET IN EYES, ON SKIN, ON CLOTHING.  
WASH THOROUGHLY AFTER HANDLING.  
CORROSIVE.  
HARMFUL SOLID.  
KEEP TIGHTLY CLOSED.  
PROTECT FROM MOISTURE.  
HANDLE AND STORE UNDER NITROGEN.

CONTINUED ON NEXT PAGE

**Holland**  
Aldrich Chemie  
Telephone: 3238991301  
Fax: 3238991311

**Spain**  
Aldrich Quimica  
Apt. de Correos, 161  
28100 Alcobendas, Madrid  
Telephone: 3416619977  
Fax: 3416619642

**Italy**  
Aldrich Chimica  
Via Gallarate, 154  
20151 Milano  
Telephone: 39233417340  
Fax: 39238010737

**Switzerland**  
Aldrich Chemie  
Industriestrasse 25  
CH-9470 Buchs  
Telephone: 41817552723  
Fax: 41817567420

**Belgium**  
Aldrich Chemie  
K. Cardijnplein 8  
B-2880 Bornem  
Telephone: 3238991301  
Fax: 3238991311

**Czech Republic**  
Aldrich, s.r.o.  
Krizikova, 27  
180 00 Prague-8  
Telephone: 42224225285  
Fax: 42224224031

**India**  
Aldrich-India  
B4/158 Safdarjung Enclave  
New Delhi 110 029  
Telephone: 91116886872  
Fax: 91116886873

**France**  
Aldrich-Chimie S.a.r.l.  
L'Isle D'Abreau Chesnes  
B.P. 701  
38297 St. Quentin Fallavier  
Cedex  
Telephone: 3374822800  
Fax: 3374956808

**Japan**  
Aldrich Japan  
Kyodo Bldg. Shinkanda  
10 Kanda-Mikuracho  
Chiyoda-Ku, Tokyo  
Telephone: 81332580155  
Fax: 81332580157

**Australia**  
Aldrich Chemicals  
Unit 2  
10 Analla Ave.  
Castle Hill, NSW 2154  
Telephone: 6128999977  
Fax: 6128999742

**United Kingdom**  
Aldrich Chemical Co. Ltd.  
The Old Brickyard, New Road  
Gillingham, Dorset SP8 4JL  
Telephone: 44747822211  
Fax: 44747823779

**Brazil**  
Aldrich-Brazil  
Rua Sabara, 566-conj.53  
01239-010 Sao Paulo, SP  
Telephone: 55112311866  
Fax: 55112579079

**Germany**  
Aldrich-Chemie GmbH & Co.KG  
Friedstrasse 2, D-69555 Steinheim  
Telephone: 497329970  
Fax: 4973291939



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

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

CUST#: 523216  
PO#: Q F 06524

PRODUCT #: 202215  
MF: BF4NA

NAME: SODIUM TETRAFLUOROBORATE, 98%

STORE IN A COOL DRY PLACE.

SECTION 9. --- PHYSICAL AND CHEMICAL PROPERTIES ---

APPEARANCE AND ODOR  
WHITE CRYSTALLINE POWDER  
SPECIFIC GRAVITY: 2.470

SECTION 10. --- STABILITY AND REACTIVITY ---

INCOMPATIBILITIES  
STRONG OXIDIZING AGENTS  
SENSITIVE TO MOISTURE  
DO NOT STORE IN GLASS.  
ABSOLUTELY DRY MATERIAL DOES NOT ETCH GLASS.  
HAZARDOUS COMBUSTION OR DECOMPOSITION PRODUCTS  
HYDROGEN FLUORIDE  
BORON OXIDES.

SECTION 11. --- TOXICOLOGICAL INFORMATION ---

ACUTE EFFECTS  
HARMFUL IF SWALLOWED, INHALED, OR ABSORBED THROUGH SKIN.  
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.  
TO THE BEST OF OUR KNOWLEDGE, THE CHEMICAL, PHYSICAL, AND  
TOXICOLOGICAL PROPERTIES HAVE NOT BEEN THOROUGHLY INVESTIGATED.

RTECS NO: ED2975000  
BORATE (1-), TETRAFLUORO-, SODIUM

TOXICITY DATA  
SCU-RAT LD50:550 MG/KG  
ONLY SELECTED REGISTRY OF TOXIC EFFECTS OF CHEMICAL SUBSTANCES  
(RTECS) DATA IS PRESENTED HERE. SEE ACTUAL ENTRY IN RTECS FOR  
ZKKOBW 80,17,73

CONTINUED ON NEXT PAGE

**Holland**  
Aldrich Chemie  
Telephone: 3238991301  
Fax: 3238991311

**Spain**  
Aldrich Quimica  
Apt. de Correos, 161  
28100 Alcobendas, Madrid  
Telephone: 3416619977  
Fax: 3416619642

**Italy**  
Aldrich Chimica  
Via Gallarate, 154  
20151 Milano  
Telephone: 39233417340  
Fax: 39238010737

**Switzerland**  
Aldrich Chemie  
Industriestrasse 25  
CH-9470 Buchs  
Telephone: 41817552723  
Fax: 41817567420

**Belgium**  
Aldrich Chemie  
K. Cardijnplein 8  
B-2880 Bornem  
Telephone: 3238991301  
Fax: 3238991311

**Czech Republic**  
Aldrich, s.r.o.  
Krizikova, 27  
180 00 Prague-8  
Telephone: 42224225285  
Fax: 42224224031

**India**  
Aldrich-India  
B4/158 Safdarjung Enclave  
New Delhi 110 029  
Telephone: 91116886872  
Fax: 91116886873

**France**  
Aldrich-Chimie S.a.r.l.  
L'Isle D'Abeau Chesnes  
B.P. 701  
38297 St. Quentin Fallavier  
Cedex  
Telephone: 3374822800  
Fax: 3374956808

**Japan**  
Aldrich Japan  
Kyodo Bldg. Shinkanda  
10 Kanda-Mikuracho  
Chiyoda-Ku, Tokyo  
Telephone: 81332580155  
Fax: 81332580157

**Australia**  
Aldrich Chemicals  
Unit 2  
10 Anella Ave.  
Castle Hill, NSW 2154  
Telephone: 6128999977  
Fax: 6128999742

**United Kingdom**  
Aldrich Chemical Co. Ltd.  
The Old Brickyard, New Road  
Gillingham, Dorset SP8 4JL  
Telephone: 44747822211  
Fax: 44747823779

**Brazil**  
Aldrich-Brazil  
Rua Sabara, 566-conj.53  
01239-010 Sao Paulo, SP  
Telephone: 55112311866  
Fax: 55112579079

**Germany**  
Aldrich-Chemie GmbH & Co.KG  
Riedstrasse 2, D-89555 Steinheim  
Telephone: 497329970  
Fax: 4973291939



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

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

PAGE 4

CUST#: 523216  
PO#: Q F 06524

PRODUCT #: 202215  
MF: BF4NA

NAME: SODIUM TETRAFLUOROBORATE, 98%

COMPLETE INFORMATION.

SECTION 12. ----- ECOLOGICAL INFORMATION -----  
DATA NOT YET AVAILABLE.

SECTION 13. ----- DISPOSAL CONSIDERATIONS -----  
BURY IN A LANDFILL SITE APPROVED FOR THE DISPOSAL OF CHEMICAL  
AND HAZARDOUS WASTES.  
OBSERVE ALL FEDERAL, STATE AND LOCAL ENVIRONMENTAL REGULATIONS.

SECTION 14. ----- TRANSPORT INFORMATION -----  
CONTACT ALDRICH CHEMICAL COMPANY FOR TRANSPORTATION INFORMATION.

SECTION 15. ----- REGULATORY INFORMATION -----

REVIEWS, STANDARDS, AND REGULATIONS

OSHA PEL: 8H TWA 2.5 MG(F)/M3  
FEREAC 54,2923,89  
OSHA PEL FINAL: 8H TWA 2.5 MG(F)/M3  
FEREAC 54,2923,89  
NIOSH REL TO FLUORIDES, INORGANIC-AIR: 10H TWA 2.5 MG(F)/M3  
NIOSH\* DHHS #92-100,92  
NIOSH 1974: HZD A1165; NIS 8; TNF 374; NDS 13; TNE 6927  
NOES 1983: HZD A1165; NIS 15; TNF 501; NDS 31; TNE 15354; TFE 1351  
EPA TSCA CHEMICAL INVENTORY, JUNE 1993

SECTION 16. ----- OTHER INFORMATION -----

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.

CONTINUED ON NEXT PAGE

**Holland**  
Aldrich Chemie  
Telephone: 3238991301  
Fax: 3238991311

**Spain**  
Aldrich Quimica  
Apt. de Correos, 161  
28100 Alcobendas, Madrid  
Telephone: 3418619977  
Fax: 3416619842

**Italy**  
Aldrich Chimica  
Via Gallarate, 154  
20151 Milano  
Telephone: 39233417340  
Fax: 39238010737

**Switzerland**  
Aldrich Chemie  
Industriestrasse 25  
CH-9470 Buchs  
Telephone: 41817552723  
Fax: 41817567420

**Belgium**  
Aldrich Chemie  
K. Cardijnplein 8  
B-2880 Bornem  
Telephone: 3238991301  
Fax: 3238991311

**Czech Republic**  
Aldrich, s.r.o.  
Krizkova, 27  
180 00 Prague-8  
Telephone: 42224225285  
Fax: 42224224031

**India**  
Aldrich-India  
B4/158 Safdarjung Enclave  
New Delhi 110 029  
Telephone: 91116886672  
Fax: 91116886673

**France**  
Aldrich-Chimie S.a.r.l.  
L'Isle D'Abreu Chesnes  
B.P. 701  
38297 St. Quentin Fallavier  
Cedex  
Telephone: 3374822800  
Fax: 3374956808

**Japan**  
Aldrich Japan  
Kyodo Bldg. Shinkanda  
10 Kanda-Mikuracho  
Chiyoda-Ku, Tokyo  
Telephone: 81332580155  
Fax: 81332580157

**Australia**  
Aldrich Chemicals  
Unit 2  
10 Anella Ave.  
Castle Hill, NSW 2154  
Telephone: 6128999977  
Fax: 6128999742

**United Kingdom**  
Aldrich Chemical Co. Ltd.  
The Old Brickyard, New Road  
Gillingham, Dorset SP8 4JL  
Telephone: 44747822211  
Fax: 44747823779

**Brazil**  
Aldrich-Brazil  
Rua Sabara, 566-conj.53  
01239-010 Sao Paulo, SP  
Telephone: 55112311866  
Fax: 55112579079

**Germany**  
Aldrich-Chemie GmbH & Co.KG  
Riedstrasse 2, D-89555 Steinheim  
Telephone: 497329970  
Fax: 4973291939



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 D A S H E E T

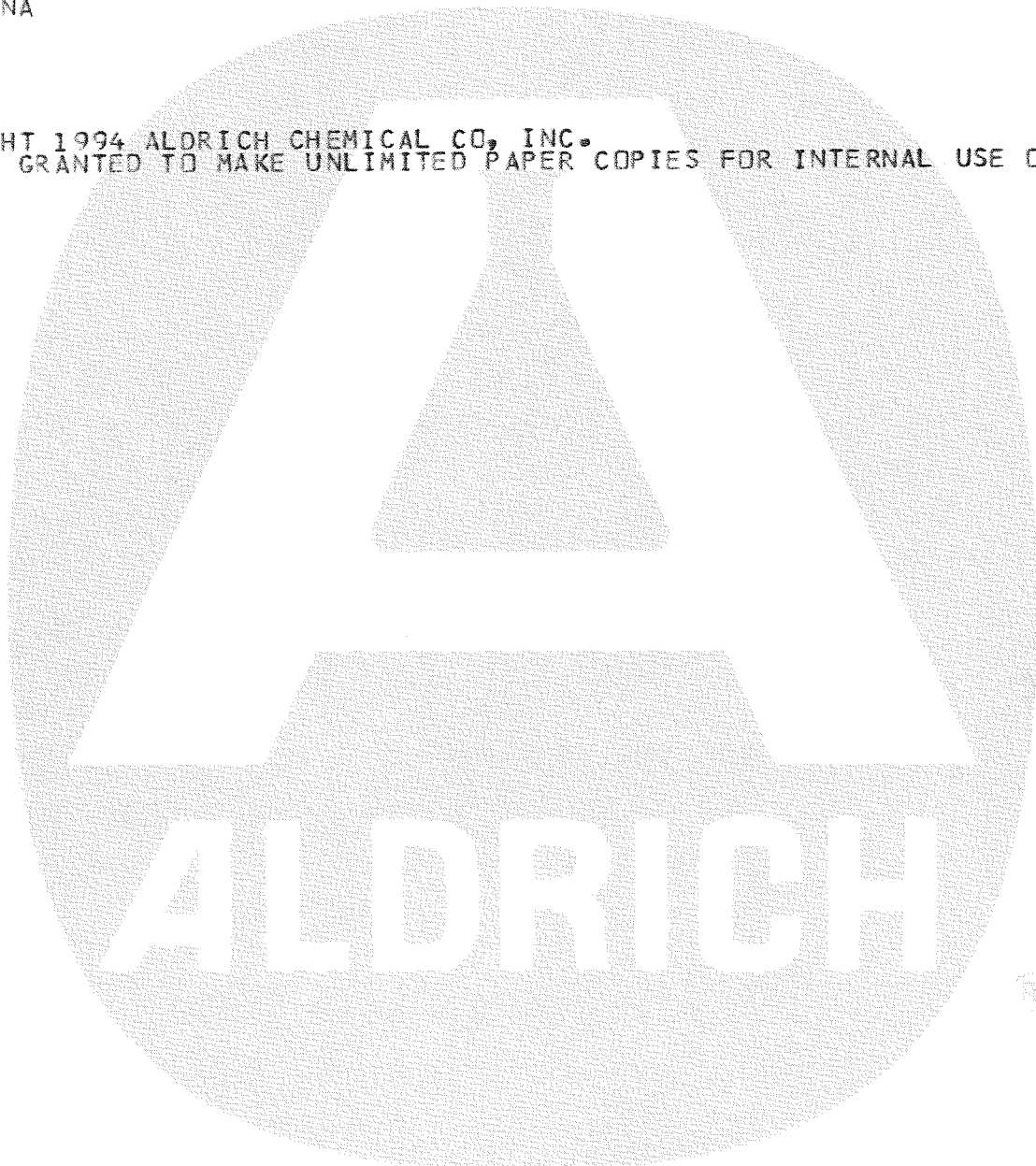
PAGE 5

PRODUCT #: 202215  
MF: BF4NA

NAME: SODIUM TETRAFLUOROBORATE, 98%

CUST#: 523216  
PO#: Q F 06524

COPYRIGHT 1994 ALDRICH CHEMICAL CO., INC.  
LICENSE GRANTED TO MAKE UNLIMITED PAPER COPIES FOR INTERNAL USE ONLY.



**Holland**  
Aldrich Chemie  
Telephone: 3238991301  
Fax: 3238991311

**Spain**  
Aldrich Quimica  
Apt. de Correos, 161  
28100 Alcobendas, Madrid  
Telephone: 3416619977  
Fax: 3416619642

**Italy**  
Aldrich Chimica  
Via Gallarate, 154  
20151 Milano  
Telephone: 39233417340  
Fax: 39238010737

**Switzerland**  
Aldrich Chemie  
Industriestrasse 25  
CH-9470 Buchs  
Telephone: 41817552723  
Fax: 41817567420

**Belgium**  
Aldrich Chemie  
K. Cardijnplein 8  
B-2880 Bornem  
Telephone: 3238991301  
Fax: 3238991311

**Czech Republic**  
Aldrich, s.r.o.  
Krizkova, 27  
180 00 Prague-8  
Telephone: 42224225285  
Fax: 42224224031

**India**  
Aldrich-India  
B4/158 Safdarjung Enclave  
New Delhi 110 029  
Telephone: 91116886872  
Fax: 91116886873

**France**  
Aldrich-Chimie S.a.r.l.  
L'Isle D'Abeau Chesnes  
B.P. 701  
38297 St. Quentin Fallavier  
Cedex  
Telephone: 3374822800  
Fax: 3374956808

**Japan**  
Aldrich Japan  
Kyodo Bldg. Shinkanda  
10 Kanda-Mikuracho  
Chiyoda-Ku, Tokyo  
Telephone: 81332580155  
Fax: 81332580157

**Australia**  
Aldrich Chemicals  
Unit 2  
10 Anella Ave.  
Castle Hill, NSW 2154  
Telephone: 6128999977  
Fax: 6128999742

**United Kingdom**  
Aldrich Chemical Co. Ltd.  
The Old Brickyard, New Road  
Gillingham, Dorset SP8 4JL  
Telephone: 44747822211  
Fax: 44747823779

**Brazil**  
Aldrich-Brazil  
Rua Sabara, 566-conj.53  
01239-010 Sao Paulo,SP  
Telephone: 55112311866  
Fax: 55112579079

**Germany**  
Aldrich-Chemie GmbH & Co.KG  
Riedstrasse 2, D-89555 Steinheim  
Telephone: 497329970  
Fax: 4973291939