

SIGMA

CHEMICAL COMPANY



THE WORLD'S FOREMOST MANUFACTURER OF RESEARCH
BIOCHEMICALS AND DIAGNOSTIC REAGENTS

POST OFFICE BOX 14508
SAINT LOUIS, MISSOURI 63178, USA

FAX: USA/CANADA 1-800-325-5052 OUTSIDE USA/CANADA 314-771-5757
TELEX: 910-761-0593 or 434475 ANSWERBACK "SIG OK COLLECT"

TELEPHONE: USA/CANADA 1-800-325-3010
OUTSIDE USA/CANADA call COLLECT 314-771-5750

ATTN: SAFETY DIRECTOR
SCHOOLCRAFT COLLEGE
18600 HAGGERTY ROAD
LIVONIA MI 48152-3932

EMERGENCY PHONE 1-314-771-5765

DATE: 08/29/95
CUST#: 2-043-15940
PO#: 80407

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 #: Z1251 NAME: ZINC, ACS REAGENT, GRANULAR, 20 MESH

SECTION 2. - - - - - COMPOSITION/INFORMATION ON INGREDIENTS - - - - -

CAS #: 7440-66-6
MF: ZN

SYNONYMS

BLUE POWDER * C.I. 77945 * C.I. PIGMENT BLACK 16 * C.I. PIGMENT METAL
6 * EMANAY ZINC DUST * GRANULAR ZINC * JASAD * MERRILLITE * PASCO *
UN1435 (DOT) * UN1436 (DOT) * ZINC DUST * ZINC DUST (UN1436) (DOT) *
ZINC POWDER * ZINC POWDER (UN1436) (DOT) * ZINC ASHES (UN1435) (DOT) *

SECTION 3. - - - - - HAZARDS IDENTIFICATION - - - - -

LABEL PRECAUTIONARY STATEMENTS

CAUTION:
AVOID CONTACT AND INHALATION.

SECTION 4. - - - - - FIRST-AID MEASURES - - - - -

IN CASE OF CONTACT, IMMEDIATELY FLUSH EYES WITH COPIOUS AMOUNTS OF
WATER FOR AT LEAST 15 MINUTES.
FLUSH SKIN WITH WATER.
IF INHALED, REMOVE TO FRESH AIR.

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

EXTINGUISHING MEDIA

USE APPROVED CLASS D EXTINGUISHERS OR SMOTHER WITH DRY SAND, DRY
GROUND LIMESTONE OR DRY CLAY.

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 - - - - -

SWEEP UP, PLACE IN A BAG AND HOLD FOR WASTE DISPOSAL.

CONTINUED ON NEXT PAGE

BRANCH OFFICES AT:

SIGMA-ALDRICH VERTRIEBS GmbH Grünwälder Weg 30 82041 Deisenhofen Deutschland	SIGMA-ALDRICH QUIMICA, S.A. Apt. Correos 161 28100 Alcobendas (Madrid) España	SIGMA-ALDRICH S.r.l. Via Gallarate 154 20151 Milano Italia	SIGMA-ALDRICH PTY., LIMITED Unit 2, 10 Anella Ave. Castle Hill NSW 2154 Australia	SIGMA-ALDRICH CHEMICAL REPRESENTAÇÕES LTDA. Rua Sabara, 566 - Conj. 53 01239-010 São Paulo, SP Brasil	SIGMA-ALDRICH K. Carlsplein, 8 B-2880 Bornem Belgie/Belgique	SIGMA-ALDRICH P.O. Box 260 CH-9470 Buchs Switzerland	SIGMA-ALDRICH QUIMICA, S.A. de C.V. Avenida Pizarro Ajusco No. 130-303 Fraccionamiento Jardines en la Montaña 14210 Mexico, D.F.	SIGMA-ALDRICH CORPORATION New Delhi Location B-4/158, Saldarjung Enclave New Delhi - 110 029 India	SIGMA-ALDRICH 206 Samhan Campus Building 17-3 Yoido-dong Yungseungpo-ku Seoul South Korea
---	--	--	---	--	--	--	--	---	--

SIGMA[®]

CHEMICAL COMPANY

THE WORLD'S FOREMOST MANUFACTURER OF RESEARCH
BIOCHEMICALS AND DIAGNOSTIC REAGENTS



POST OFFICE BOX 14508
SAINT LOUIS, MISSOURI 63178, USA

FAX: USA/CANADA 1-800-325-5052 OUTSIDE USA/CANADA 314-771-5757
TELEX: 910-761-0593 or 434475 ANSWERBACK "SIG OK COLLECT"

TELEPHONE: USA/CANADA 1-800-325-3010
OUTSIDE USA/CANADA call COLLECT 314-771-5750

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#: 2-043-15940

PO#: 80407

PRODUCT #: Z1251
MF: ZN

NAME: ZINC, ACS REAGENT, GRANULAR, 20 MESH

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

ADDITIONAL INFORMATION
ZINC REACTS WITH ACIDS, STRONG ALKALIES, CHLORIDES, CHLORATES, OXIDES,
NITRATES, FLUORINE, CARBON DISULFIDE. THE PRESENCE OF MOISTURE CAN
RESULT IN SPONTANEOUS COMBUSTION.

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

CHEMICAL SAFETY GOGGLES.
COMPATIBLE CHEMICAL-RESISTANT GLOVES.
NIOSH/MSHA-APPROVED RESPIRATOR.
SAFETY SHOWER AND EYE BATH.
MECHANICAL EXHAUST REQUIRED.
AVOID CONTACT AND INHALATION.
WASH THOROUGHLY AFTER HANDLING.
KEEP TIGHTLY CLOSED.
AIR AND MOISTURE SENSITIVE

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

APPEARANCE AND ODOR
SILVER FILINGS
MELTING POINT: 419 C
VAPOR PRESSURE: 1MM 487 C
SPECIFIC GRAVITY: 7.140

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

INCOMPATIBILITIES
AMINES
CADMIUM
PROTECT FROM MOISTURE.
AIR SENSITIVE
CHLORINATED SOLVENTS
SULFUR
STRONG ACIDS
STRONG BASES
HAZARDOUS COMBUSTION OR DECOMPOSITION PRODUCTS

CONTINUED ON NEXT PAGE

BRANCH OFFICES AT:

SIGMA-ALDRICH VERTRIEBS GmbH Grünwälder Weg 30 82041 Deisenhofen Deutschland	SIGMA-ALDRICH QUIMICA, S.A. Apt. Correos 161 28100 Alcobendas (Madrid) España	SIGMA-ALDRICH S.r.l. Krizkova 27 186 00 Praha 8 Česká Republika	SIGMA CHEMIE K. Cardijnplein, 8 B-2880 Bornem België/Belgique	SIGMA CHEMIE P.O. Box 260 CH-9470 Buchs Switzerland	SIGMA-ALDRICH QUIMICA, S.A. de C.V. Avenida Picacho Ajusco No. 130-303 Fraccionamiento Jardines en la Montaña 14210 Mexico, D.F.	SIGMA-ALDRICH CORPORATION New Delhi Location B-4/158, Saldarjung Enclave New Delhi - 110 029 India
SIGMA CHIMIE L'ISLE D'Abeau Chesnes B.P. 701 38297 St. Quentin Fallavier Cedex	SIGMA-ALDRICH S.r.l. Via Gallarate 154 20151 Milano Italia	SIGMA-ALDRICH PTY., LIMITED Unit 2, 10 Anella Ave. Castle Hill NSW 2154 Australia	SIGMA-ALDRICH CHEMICAL REPRESENTAÇÕES LTDA. Rua Sabará, 566 - Conj. 53 01239-010 São Paulo, SP Brasil	SIGMA CHEMICAL CO. LTD. Fancy Road, Poole Dorset BH17 7NH England	SIGMA-ALDRICH Kft. Terep krt. 39 1067 Budapest Hungary	SIGMA-ALDRICH 206 Samhan Campus Building 17-3 Yoido-dong Yungdeungpo-ku Seoul South Korea

SIGMA[®]

CHEMICAL COMPANY

THE WORLD'S FOREMOST MANUFACTURER OF RESEARCH
BIOCHEMICALS AND DIAGNOSTIC REAGENTS



POST OFFICE BOX 14508
SAINT LOUIS, MISSOURI 63178, USA

FAX: USA/CANADA 1-800-325-5052 OUTSIDE USA/CANADA 314-771-5757
TELEX: 910-761-0593 or 434475 ANSWERBACK "SIG OK COLLECT"

TELEPHONE: USA/CANADA 1-800-325-3010
OUTSIDE USA/CANADA call COLLECT 314-771-5750

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

PRODUCT #: Z1251
MF: ZN

NAME: ZINC, ACS REAGENT, GRANULAR, 20 MESH

CUST#: 2-043-15940

PO#: 80407

NATURE OF DECOMPOSITION PRODUCTS NOT KNOWN.

SECTION 11. ----- TOXICOLOGICAL INFORMATION -----

ACUTE EFFECTS

MAY BE HARMFUL BY INHALATION, INGESTION, OR SKIN ABSORPTION.
MAY CAUSE EYE IRRITATION.
MAY CAUSE SKIN IRRITATION.
TO THE BEST OF OUR KNOWLEDGE, THE CHEMICAL, PHYSICAL, AND
TOXICOLOGICAL PROPERTIES HAVE NOT BEEN THOROUGHLY INVESTIGATED.

RTECS NO: ZG8600000

ZINC

IRRITATION DATA

SKN-HMN 300 UG/3D-I MLD 85DKA8 -,127,77
ONLY SELECTED REGISTRY OF TOXIC EFFECTS OF CHEMICAL SUBSTANCES
(RTECS) DATA IS PRESENTED HERE. SEE ACTUAL ENTRY IN RTECS FOR
COMPLETE INFORMATION.

SECTION 12. ----- ECOLOGICAL INFORMATION -----

DATA NOT YET AVAILABLE.

SECTION 13. ----- DISPOSAL CONSIDERATIONS -----

MATERIAL IN THE ELEMENTAL STATE SHOULD BE RECOVERED FOR REUSE OR
RECYCLING.
OBSERVE ALL FEDERAL, STATE AND LOCAL ENVIRONMENTAL REGULATIONS.

SECTION 14. ----- TRANSPORT INFORMATION -----

CONTACT SIGMA CHEMICAL COMPANY FOR TRANSPORTATION INFORMATION.

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

REVIEWS, STANDARDS, AND REGULATIONS

DEL-ARAB REPUBLIC OF EGYPT: TWA 0.1 MG/M3 JAN93
NOHS 1974: HZD T0146; NIS 2; TNF 44; NOS 1; TNE 324
NOHS 1974: HZD 77115; NIS 120; TNF 9450; NOS 90; TNE 118548
NOES 1983: HZD X4242; NIS 46; TNF 3278; NOS 47; TNE 79920; TFE 7874
NOES 1983: HZD X5913; NIS 1; TNF 22; NOS 2; TNE 269; TFE 22

CONTINUED ON NEXT PAGE

BRANCH OFFICES AT:

SIGMA-ALDRICH VERTRIEBS GmbH Grünwälder Weg 30 82041 Dasinghofen Deutschland	SIGMA-ALDRICH QUIMICA, S.A. Apt. Correos 161 28100 Alcobendas (Madrid) España	SIGMA-ALDRICH S.r.l. Krizkova 27 186 00 Praha 8 Ceská Republika	SIGMA CHEMIE K. Carolingplein, 8 B-2880 Bornem België/Belgique	SIGMA CHEMIE P.O. Box 260 CH-9470 Buchs Switzerland	SIGMA-ALDRICH QUIMICA, S.A. de C.V. Avenida Picocho Ajusco No. 130-303 Fraccionamiento Jardines en la Montaña 14210 Mexico, D.F.	SIGMA-ALDRICH CORPORATION New Delhi Location B-4/158, Saldarjung Enclave New Delhi - 110 029 India
SIGMA CHIMIE L'ISLE D'Abeau Chesnes B.P. 701 38297 St. Quentin Fallavier Cedex	SIGMA-ALDRICH S.r.l. Via Gallarate 154 20151 Milano Italia	SIGMA-ALDRICH PTY., LIMITED Unit 2, 10 Anella Ave. Castle Hill NSW 2154 Australia	SIGMA-ALDRICH CHEMICAL REPRESENTAÇÕES LTDA. Rua Sabara, 566 - Conj. 53 01239-010 São Paulo, SP Brasil	SIGMA CHEMICAL CO. LTD. Fancy Road, Poole Dorset BH17 7NH England	SIGMA-ALDRICH Kft. Terep krt. 39 1067 Budapest Hungary	SIGMA-ALDRICH 206 Samhan Campus Building 17-3 Yoko-dong Yungdeungpo-ku Seoul South Korea

SIGMA



CHEMICAL COMPANY

THE WORLD'S FOREMOST MANUFACTURER OF RESEARCH
BIOCHEMICALS AND DIAGNOSTIC REAGENTS

POST OFFICE BOX 14508
SAINT LOUIS, MISSOURI 63178, USA

FAX: USA/CANADA 1-800-325-5052 OUTSIDE USA/CANADA 314-771-5757
TELEX: 910-761-0593 or 434475 ANSWERBACK "SIG OK COLLECT"

TELEPHONE: USA/CANADA 1-800-325-3010
OUTSIDE USA/CANADA call COLLECT 314-771-5750

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

PRODUCT #: Z1251
MF: ZN

NAME: ZINC, ACS REAGENT, GRANULAR, 20 MESH

CUST#: 2-043-15940
PO#: 80407

NOES 1983: HZD X5990; NIS 2; TNF 42; NOS 3; TNE 1007; TFE 321
NOES 1983: HZD X5991; NIS 8; TNF 177; NOS 18; TNE 10589; TFE 3273
NOES 1983: HZD 77115; NIS 211; TNF 23711; NOS 133; TNE 320917; TFE
34194

ATSDR TOXICOLOGY PROFILE (NTIS** PB/90/171414/AS)
EPA GENETOX PROGRAM 1988, INCONCLUSIVE: IN VIVO CYTOGENETICS-HUMAN
LYMPHOCYTE

EPA TSCA SECTION 8(B) CHEMICAL INVENTORY
ON EPA IRIS DATABASE

EPA TSCA TEST SUBMISSION (TSCATS) DATA BASE, APRIL 1995
NIOSH ANALYTICAL METHOD, 1994: ZINC AND COMPOUNDS AS ZN, 7030
NIOSH ANALYTICAL METHOD, 1994: ELEMENTS IN BLOOD OR TISSUE, 8005
NIOSH ANALYTICAL METHOD, 1994: METALS IN URINE, 8310

THIS PRODUCT IS SUBJECT TO SARA SECTION 313 REPORTING REQUIREMENTS -
ZINC COMPOUNDS.

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. SIGMA 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.

COPYRIGHT 1995 SIGMA CHEMICAL CO.
LICENSE GRANTED TO MAKE UNLIMITED PAPER COPIES FOR INTERNAL USE ONLY.

BRANCH OFFICES AT:

SIGMA-ALDRICH VERTRIEBS GmbH Grünwälder Weg 30 12041 Dörsenroten Deutschland	SIGMA-ALDRICH QUIMICA, S.A. Apt. Correos 161 28100 Alcobendas (Madrid) España	SIGMA-ALDRICH S.r.l. Krizkova 27 168 00 Praha 8 Ceska Republika	SIGMA CHEMIE K. Cardinien, 8 B-2880 Bornem Belgie/Belgique	SIGMA CHEMIE P.O. Box 260 CH-9470 Buchs Switzerland	SIGMA-ALDRICH QUIMICA, S.A. de C.V. Avenida Picoacho Ajusco No. 130-303 Fraccionamiento Jardines en la Montaña 14210 Mexico, D.F.	SIGMA-ALDRICH CORPORATION New Delhi Location B-4/158, Sakdaryung Enclave New Delhi - 110 029 India
SIGMA CHIMIE ISLE D'Abeau Chesnes S.P. 701 36297 St Quentin Fallavier Cedex France	SIGMA-ALDRICH S.r.l. Via Gallarate 154 20151 Milano Italia	SIGMA-ALDRICH PTY., LIMITED Unit 2, 10 Anella Ave. Castle Hill NSW 2154 Australia	SIGMA-ALDRICH CHEMICAL REPRESENTACOES LTDA. Rua Sabara, 566 - Conj. 53 01239-010 São Paulo, SP Brasil	SIGMA CHEMICAL CO. LTD. Fancy Road, Poole Dorset BH17 7NH England	SIGMA-ALDRICH KR Terez krt. 39 1067 Budapest Hungary	SIGMA-ALDRICH 206 Samman Campus Building 17-3 Yoido-dong Yungdeungpo-ku Seoul South Korea