

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

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DATE: 09/08/93  
 CUST#: 2-097-94816  
 PO#: UND-41251

M A T E R I A L   S A F E T Y   D A T A   S H E E T                      P A G E   1

SECTION 1. ----- CHEMICAL IDENTIFICATION -----

PRODUCT #: S9887                      NAME: SAND, WHITE QUARTZ

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

CAS #: 14808-60-7

SYNONYMS

AGATE \* AMETHYST \* CELITE \* CHALCEDONY \* CHERTS \* D \* D \* D012 \*  
 FLINT \* FLINTSHOT \* GOLD BOND R \* INSIL \* MIN-U-SIL \* NOVACULITE \*  
 ONYX \* ALPHA-QUARTZ \* QUAZO PURO (ITALIAN) \* SNOWIT \* ROSE QUARTZ \*  
 SAND \* SIL-CC-SIL \* SILICA, CRYSTALLINE QUARTZ (OSHA) \* SILICA FLOUR  
 (POWDERED CRYSTALLINE SILICA) \* SILICA, QUARTZ (ACGIH) \* SILICIC  
 ANHYDRIDE \* SILICON OXIDE, DI- (SAND) \* SILVER BOND B \*

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

LABEL PRECAUTIONARY STATEMENTS

HARMFUL  
 HARMFUL BY INHALATION.  
 CRYSTALLINE SILICA IS ANTICIPATED TO BE CARCINOGENIC.  
 DO NOT BREATHE DUST.

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. 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.

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

EXTINGUISHING MEDIA

NONCOMBUSTIBLE.  
 USE EXTINGUISHING MEDIA APPROPRIATE TO SURROUNDING FIRE CONDITIONS.

SPECIAL FIRE FIGHTING PROCEDURES

FOR FIRES INVOLVING THIS MATERIAL, DO NOT ENTER ANY ENCLOSED OR  
 CONFINED FIRE SPACE WITHOUT PROPER PROTECTIVE EQUIPMENT. THIS MAY  
 INCLUDE SELF-CONTAINED BREATHING APPARATUS TO PROTECT AGAINST THE  
 HAZARDOUS EFFECTS OF THE NORMAL PRODUCTS OF COMBUSTION OR OXYGEN

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DEFICIENCY.

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

WEAR PROTECTIVE EQUIPMENT.  
SWEEP UP, PLACE IN A BAG AND HOLD FOR WASTE 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 - - - - -

NIOSH/MSHA-APPROVED RESPIRATOR IN NONVENTILATED AREAS AND/OR FOR  
EXPOSURE ABOVE THE ACGIH TLV.  
CHEMICAL SAFETY GOGGLES.  
MECHANICAL EXHAUST REQUIRED.  
DO NOT BREATHE DUST.  
AVOID CONTACT WITH EYES, SKIN AND CLOTHING.  
WASH THOROUGHLY AFTER HANDLING.  
HARMFUL DUST.  
KEEP TIGHTLY CLOSED.

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

APPEARANCE AND ODDR  
WHITE TO OFF-WHITE GRANULES

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

INCOMPATIBILITIES  
HYDROGEN FLUORIDE  
HAZARDOUS COMBUSTION OR DECOMPOSITION PRODUCTS  
NATURE OF DECOMPOSITION PRODUCTS NOT KNOWN.

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

ACUTE EFFECTS

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HARMFUL IF INHALED.  
MAY BE HARMFUL IF SWALLOWED.  
MAY BE HARMFUL IF ABSORBED THROUGH THE SKIN.  
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.

CHRONIC EFFECTS  
THIS COMPOUND IS LISTED AS A CARCINOGEN OR POTENTIAL CARCINOGEN  
BY:

IARC MONOGRAPHS  
NATIONAL TOXICOLOGY PROGRAM  
RTECS NO: VV7330000  
SILICA, CRYSTALLINE - QUARTZ  
TOXICITY DATA  
IHL-HMN LCL0:300 UG/M3 /10Y-I  
TARGET ORGAN DATA  
ANYAA9 271,324,76

LUNGS, THORAX OR RESPIRATION (FIBROSIS, FOCAL)  
LUNGS, THORAX OR RESPIRATION (TUMORS)  
LUNGS, THORAX OR RESPIRATION (BRONCHOGENIC CARCINOMA)  
GASTROINTESTINAL (TUMORS)  
LIVER (OTHER CHANGES)  
BLOOD (LYMPHOMA INCLUDING HODGKIN'S DISEASE)  
TUMORIGENIC (CARCINOGENIC BY RTECS CRITERIA)  
TUMORIGENIC (NEOPLASTIC BY RTECS CRITERIA)  
TUMORIGENIC (EQUIVOCAL TUMORIGENIC AGENT BY RTECS CRITERIA)  
TUMORIGENIC (TUMORS AT SITE OF APPLICATION)  
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 -----  
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 SIGMA CHEMICAL COMPANY FOR TRANSPORTATION INFORMATION.

CONTINUED ON NEXT PAGE

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

REVIEWS, STANDARDS, AND REGULATIONS

ACGIH TLV-TWA 0.1 MG/M<sup>3</sup>, RESPIRABLE DUST      85INAB 5,523,86  
 IARC CANCER REVIEW: ANIMAL SUFFICIENT EVIDENCE      IMEMDT 42,39,87  
 IARC CANCER REVIEW: HUMAN LIMITED EVIDENCE      IMEMDT 42,39,87  
 IARC CANCER REVIEW: GROUP 2A      IMSUDL 7,341,87  
 MSHA STANDARD-RESPIRABLE DUST IN AIR:TWA 10 MG/M<sup>3</sup>/% RESP. SiO<sub>2</sub>+2  
 DTLWS\* 3,33,73  
 MSHA STANDARD-TOTAL DUST IN AIR:TWA 30 MG/M<sup>3</sup>/2(SiO<sub>2</sub>+3)  
 DTLWS\* 3,33,73  
 OSHA PEL: 8H TWA 10 MG(QUARTZ)/M<sup>3</sup>, RESPIRABLE DUST  
 FEREAC 54,2923,89  
 OSHA PEL FINAL: 8H TWA 0.1 MG(QUARTZ)/M<sup>3</sup>, RESPIRABLE DUST  
 FEREAC 54,2923,89  
 OEL-BELGIUM:TWA 0.1 MG/M<sup>3</sup>      JANUARY 1993  
 OEL-DENMARK:TWA 0.1 MG/M<sup>3</sup>      JANUARY 1993  
 OEL-FINLAND:TWA 0.2 MG/M<sup>3</sup>      JANUARY 1993  
 OEL-GERMANY:TWA 0.15 MG/M<sup>3</sup>      JANUARY 1993  
 OEL-RUSSIA:STEL 14 MG/M<sup>3</sup>      JANUARY 1993  
 OEL-SWEDEN:TWA 0.1 MG/M<sup>3</sup>      JANUARY 1993  
 OEL-SWITZERLAND:TWA 0.15 MG/M<sup>3</sup>      JANUARY 1993  
 OEL-THAILAND:TWA 10 MG/M<sup>3</sup>      JANUARY 1993 (RESPIRABLE DUST)  
 OEL-THAILAND:TWA 30 MG/M<sup>3</sup>      JANUARY 1993 (TOTAL DUST)  
 OEL-UNITED KINGDOM:TWA 0.1 MG/M<sup>3</sup>      JANUARY 1993 (RESPIRABLE DUST)  
 OEL-UNITED KINGDOM:TWA 0.3 MG/M<sup>3</sup>      JANUARY 1993 (TOTAL DUST)  
 OEL IN BULGARIA, COLOMBIA, JORDAN, KOREA, NEW ZEALAND, SINGAPORE,  
 VIETNAM CHECK ACGIH TLV  
 NIOSH REL TO SILICA, CRYSTALLINE QUARTZ-AIR:10H CA TWA 0.05 MG/M<sup>3</sup>  
 NIOSH\* DHHS #92-100,92  
 NDHS 1974: HZD 66495; NIS 59; TNE 4077; NOS 82; TNE 81221  
 NDHS 1983: HZD X6478; NIS 2; TNE 135; NOS 10; TNE 8927; TFE 741  
 EPA TSCA CHEMICAL INVENTORY, JUNE 1990  
 EPA TSCA SECTION 8(E) STATUS REPORT 8EHQ-0780-0354  
 EPA TSCA TEST SUBMISSION (TSCATS) DATA BASE, JANUARY 1993  
 NIOSH CURRENT INTELLIGENCE BULLETIN 36, 1981  
 NIOSH ANALYTICAL METHODS: SEE SILICA, CRYSTALLINE (XRD), 7500; (COLOR),  
 7601; (IR), 7602  
 NTP 7TH ANNUAL REPORT ON CARCINOGENS, 1992 : ANTICIPATED TO BE  
 CARCINOGEN  
 OSHA ANALYTICAL METHOD #ID-142  
 OSHA ANALYTICAL METHOD #ID-125G

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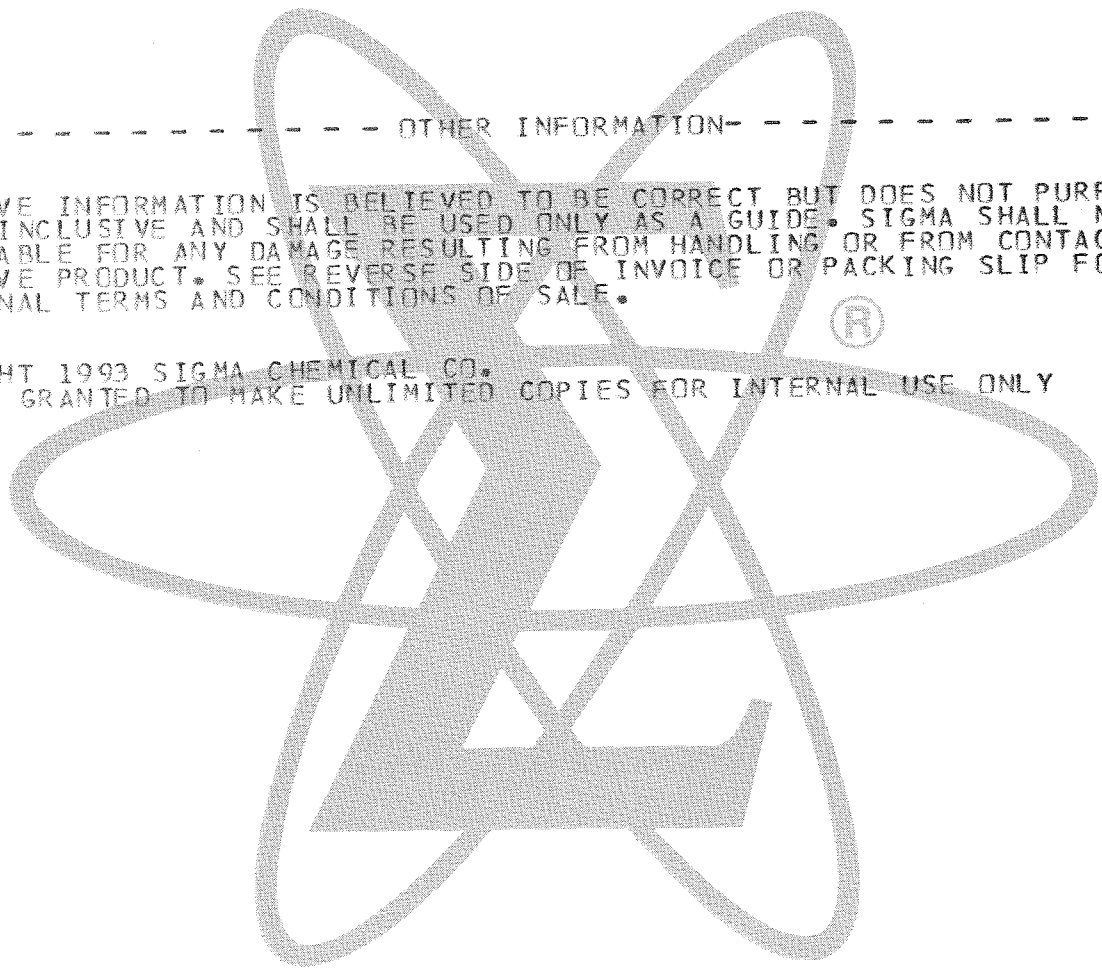
NAME: SAND, WHITE QUARTZ

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

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