



**SIGMA-ALDRICH**

ALDRICH CHEMICAL COMPANY, INC.  
P.O. BOX 355  
MILWAUKEE, WISCONSIN 53201, USA

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DATE 05/08/97  
CUST#: 312002  
PO#: SP219616

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- - - - -

CATALOG #: 21561-9  
NAME: SILICON, POWDER, -325 MESH, 99%

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

CAS #: 7440-21-3  
MF: SI  
EC NO: 231-130-8

SYNONYMS

DEFOAMER S-10 \* SILICON (ACGIH:OSHA) \* SILICON POWDER, AMORPHOUS (DOT)  
\* UN1346 (DOT) \*

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

LABEL PRECAUTIONARY STATEMENTS

FLAMMABLE (USA)  
HIGHLY FLAMMABLE (EU)  
IRRITANT  
IRRITATING TO EYES, RESPIRATORY SYSTEM AND SKIN.  
KEEP AWAY FROM SOURCES OF IGNITION - NO SMOKING.  
TAKE PRECAUTIONARY MEASURES AGAINST STATIC DISCHARGES.  
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.  
PROTECT FROM MOISTURE.

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

CONTAMINATION OF THE EYES SHOULD BE TREATED BY IMMEDIATE AND PROLONGED  
IRRIGATION WITH COPIOUS AMOUNTS OF WATER.  
IN CASE OF CONTACT, IMMEDIATELY WASH SKIN WITH SOAP AND COPIOUS  
AMOUNTS OF 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.  
DISCARD CONTAMINATED CLOTHING AND SHOES.

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

EXTINGUISHING MEDIA  
DRY CHEMICAL POWDER.  
DO NOT USE WATER.

SPECIAL FIREFIGHTING PROCEDURES

WEAR SELF-CONTAINED BREATHING APPARATUS AND PROTECTIVE CLOTHING TO

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CATALOG #: 21561-9  
NAME: SILICON, POWDER, -325 MESH, 99%

PREVENT CONTACT WITH SKIN AND EYES.  
FLAMMABLE SOLID.

UNUSUAL FIRE AND EXPLOSIONS HAZARDS  
THIS MATERIAL, LIKE MOST MATERIALS IN POWDER FORM, IS CAPABLE OF  
CREATING A DUST EXPLOSION.  
EMITS TOXIC FUMES UNDER FIRE CONDITIONS.  
REACTS WITH WATER TO LIBERATE FLAMMABLE AND/OR EXPLOSIVE GAS.

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

EVACUATE AREA.  
SHUT OFF ALL SOURCES OF IGNITION.  
WEAR SELF-CONTAINED BREATHING APPARATUS, RUBBER BOOTS AND HEAVY  
RUBBER GLOVES.  
SWEEP UP, PLACE IN A BAG AND HOLD FOR WASTE DISPOSAL.  
USE NONSPARKING TOOLS.  
AVOID RAISING DUST.  
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.  
SAFETY SHOWER AND EYE BATH.  
USE ONLY IN A CHEMICAL FUME HOOD.  
DO NOT BREATHE DUST.  
AVOID ALL CONTACT.  
WASH THOROUGHLY AFTER HANDLING.  
IRRITANT.  
KEEP TIGHTLY CLOSED.  
KEEP AWAY FROM HEAT, SPARKS, AND OPEN FLAME.

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

APPEARANCE AND ODOR  
GREY POWDER

PHYSICAL PROPERTIES  
SPECIFIC GRAVITY: 2.330

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

INCOMPATIBILITIES  
STRONG OXIDIZING AGENTS  
HYDROGEN FLUORIDE  
MOISTURE SENSITIVE

HAZARDOUS COMBUSTION OR DECOMPOSITION PRODUCTS

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NATURE OF DECOMPOSITION PRODUCTS NOT KNOWN.

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

ACUTE EFFECTS

MAY BE HARMFUL BY INHALATION, INGESTION, OR SKIN ABSORPTION.  
CAUSES EYE AND SKIN IRRITATION.  
MATERIAL IS IRRITATING TO MUCOUS MEMBRANES AND UPPER  
RESPIRATORY TRACT.  
TO THE BEST OF OUR KNOWLEDGE, THE CHEMICAL, PHYSICAL, AND  
TOXICOLOGICAL PROPERTIES HAVE NOT BEEN THOROUGHLY INVESTIGATED.

RTECS #: VW0400000  
SILICON

IRRITATION DATA  
EYE-RBT 3 MG MLD

FAONAU 53A,21,74

TOXICITY DATA

ORL-RAT LD50:3160 MG/KG  
ONLY SELECTED REGISTRY OF TOXIC EFFECTS OF CHEMICAL SUBSTANCES  
(RTECS) DATA IS PRESENTED HERE. SEE ACTUAL ENTRY IN RTECS FOR  
COMPLETE INFORMATION.

FAONAU 53A,21,74

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 ALDRICH CHEMICAL COMPANY FOR TRANSPORTATION INFORMATION.

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

EUROPEAN INFORMATION

HIGHLY FLAMMABLE  
IRRITANT  
R 36/37/38  
IRRITATING TO EYES, RESPIRATORY SYSTEM AND SKIN.  
HIGHLY FLAMMABLE

S 16  
KEEP AWAY FROM SOURCES OF IGNITION - NO SMOKING.  
S 33  
TAKE PRECAUTIONARY MEASURES AGAINST STATIC DISCHARGES.

S 26  
IN CASE OF CONTACT WITH EYES, RINSE IMMEDIATELY WITH PLENTY OF

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WATER AND SEEK MEDICAL ADVICE.  
S 36/37/39  
WEAR SUITABLE PROTECTIVE CLOTHING, GLOVES AND EYE/FACE PROTECTION.

REVIEWS, STANDARDS, AND REGULATIONS

OEL=MAK  
ACGIH TLV-TWA 10 MG/M3, INHALABLE DUST                      DTLVS\* TLV/BEI,96  
MSHA STANDARD-AIR:TWA 10 MG/M3  
DTLWS\* 3,27,73  
OSHA PEL (GEN INDU):8H TWA 15 MG/M3, TOTAL DUST  
CFRGR 29,1910.1000,94  
OSHA PEL (GEN INDU):8H TWA 5 MG/M3, RESPIRABLE FRACTION  
CFRGR 29,1910.1000,94  
OSHA PEL (CONSTRUC):8H TWA 15 MG/M3, TOTAL DUST  
CFRGR 29,1926.55,94  
OSHA PEL (CONSTRUC):8H TWA 5 MG/M3, RESPIRABLE FRACTION  
CFRGR 29,1926.55,94  
OSHA PEL (SHIPYARD):8H TWA 15 MG/M3, TOTAL DUST  
CFRGR 29,1915.1000,93  
OSHA PEL (SHIPYARD):8H TWA 5 MG/M3, RESPIRABLE FRACTION  
CFRGR 29,1915.1000,93  
OEL-AUSTRALIA:TWA 10 MG/M3 JAN93  
OEL-BELGIUM:TWA 10 MG/M3 JAN93  
OEL-DENMARK:TWA 10 MG/M3 JAN93  
OEL-FRANCE:TWA 10 MG/M3 JAN93  
OEL-THE NETHERLANDS:TWA 10 MG/M3 JAN93  
OEL-SWITZERLAND:TWA 4 MG/M3 JAN93  
OEL-UNITED KINGDOM:TWA 10 MG/M3 (TOTAL DUST) JAN93  
OEL-UNITED KINGDOM:TWA 5 MG/M3 (RESP. DUST) JAN93  
OEL IN BULGARIA, COLOMBIA, JORDAN, KOREA CHECK ACGIH TLV  
OEL IN NEW ZEALAND, SINGAPORE, VIETNAM CHECK ACGIH TLV  
NIOSH REL TO SILICON, RESPIRABLE FRACTION-AIR:10H TWA 5 MG/M3  
NIOSH\* DHHS #92-100,92  
NIOSH REL TO SILICON, TOTAL DUST-AIR:10H TWA 10 MG/M3  
NIOSH\* DHHS #92-100,92  
NOHS 1974: HZD 68695; NIS 48; TNF 3856; NOS 66; TNE 99138  
NOES 1983: HZD X4229; NIS 1; TNF 12; NOS 5; TNE 1740; TFE 503  
NOES 1983: HZD X4230; NIS 6; TNF 118; NOS 6; TNE 1962; TFE 112  
NOES 1983: HZD X6495; NIS 1; TNF 19; NOS 2; TNE 2379  
NOES 1983: HZD 68695; NIS 296; TNF 59062; NOS 129; TNE 693583; TFE 28164  
EPA TSCA SECTION 8(B) CHEMICAL INVENTORY  
EPA TSCA SECTION 8(D) UNPUBLISHED HEALTH/SAFETY STUDIES  
EPA TSCA TEST SUBMISSION (TSCATS) DATA BASE, JANUARY 1997

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

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CATALOG #:                      ~~21561-9~~  
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