

Material Certification

Material Type: Silicon Dioxide , SiO(2)		Analysis Type: Typical, % by wt.	
Description: Pieces, 3 – 6 mm size , 50 grams		Purity: 99.99%	
KJLC Part Number: EVMSIO240B		Lot Number: 575455 / 4-17-06	
Ac:	Cu:	N:	Sc:
Ag:	F:	Na:	Se:
Al:	Fe:	Nb:	Si: Matrix
Ar:	Ga:	Ne:	Sm:
As:	Ge:	Ni:	Sn:
At:	H:	O: Matrix	Sr:
Au:	He:	Os:	Ta:
B:	Hf:	P:	Tb:
Ba:	Hg:	Pb:	Te:
Be:	I:	Pd:	Ti: 0.0004
Bi:	In:	Pt:	V:
Br:	Ir:	Ra:	W:
C:	K:	Rb:	Y:
Ca:	Kr:	Re:	Zn:
Cd:	La:	Rh:	Zr:
Cl:	Li:	Rn:	:
Co:	Mg:	Ru:	:
Cr:	Mn:	S:	:
Cs:	Mo:	Sb:	:

Materials Technician: John McElhattan

Date: 4-17-06

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Manufacturers & Distributors of Ultra-High and High Vacuum Equipment and Supplies

MLF-210

MATERIAL SAFETY DATA SHEET

SILICON DIOXIDE

Section I

Kurt J. Lesker Company 1925 Worthington Avenue Clairton, PA 15025 Ph: 412/387-9200 Fax: 412/384-2573		Emergency Phone Numbers KJLC 800/245-1656 Chemtrec 800/424-9300 Poison Center 800/562-8236	
Chemical Name and Synonyms Silicon Dioxide		Date of Last Revision 04/06/06	
Formula SiO ₂	Chemical Family fused silica	Chemical Abstract No. 60676-86-0	
TSCA Listed		Calc. Molecular Wt. 60.08	

Section II Hazardous Ingredients

Hazardous Ingredients	CAS #	%	TLV	OSHA PEL
silicon dioxide	60676-86-0	100	6mg/m ³ /cu.m (total dust 3mg/ m ³ resp. dust)	0.80mg/cu.m crystal silicon

Section III Physical Data

Boiling Point (0°C): 22.30	Density (gmcc): 2.17-2.66 g/cm ³
Vapor Pressure: NA	% Volatile by Volume: NA
Reaction with Water: none	Evaporation Rate (H ₂ O -1): NA
Solubility in Water: insoluble	Melting Point (°C): 1610°C-1728°C
Appearance and Odor: colorless crystalline appearing solid, powder, pieces, no odor	Other Comments

Section IV Fire & Explosion Hazard Data

Flash Point (method) NA	Autoignition Temp. NA	Flammability non-flammable	LEI NA	UEI NA
Extinguishing Media NA				
Special Fire Fighting Procedures None				
Unusual Fire and Explosion Hazards None				

Section V Spill or Leak Process

Steps to be Taken in Case Material is Released or Spilled Sweep or scoop up and remove.
Waste Disposal Method (Consult federal, state or local authorities)

for proper disposal procedures.)
Dispose of with normal refuse.

Section VI Health Hazard Data

Toxicity Data ipr-rat LD ₅₀ : 400mg/kg iun-rabbit LD ₅₀ : 35 mg/kg itr-rat LD ₅₀ : 120mg/kg iun-cat LD ₅₀ : 15mg/kg ipr-mouse LD ₅₀ : 40mg/kg		HMIS Hazard Rating Health: 0 Flammability: 0 Reactivity: 0 Personal Protection: B	
Route(s) of Entry	Inhalation	Skin	Ingestion
	X		
Effects of Overexposure (acute and chronic) Inhalation: A mild irritant. As an amorphous form, this SiO ₂ is not a cause of silicosis. Dermal/Eye Contact: No effect on the skin or eye, and is non-toxic to the skin Other (specify): Non toxic via ingestion.			
Medical Conditions Generally Aggravated by Exposure: ND			
Carcinogenicity	NTP:	IARC Monographs	OSHA Regulations
None			
Emergency and First Aid Procedures Ingestion: Non-toxic Inhalation: Remove to fresh air Skin Contact: Brush off material. Flush with soap and water. Eye Contact: Flush to remove particles.			

Section VII Reactivity Data

Stability Stable: X Unstable:	Conditions Contributing to Instability None
Incompatibility (materials to avoid): None	
Hazardous Decomposition Products - Thermal and Other (list): None	
Hazardous Polymerization May Occur: Will Not Occur: X	Conditions to Avoid

Section VIII Special Protective Information

Respiratory Protection (specify type). Use Only Niosh Approved Equip. Any respirator approved for dusts, fumes, or mists	
Ventilation (always maintain exposure below permissible limits) Local Exhaust: recommended Mechanical (general): Use with adequate ventilation Special: Other:	
Protective Gloves: None needed	Eye Protection: Safety Glasses
Other Protective Equipment/Work Practices Normal laboratory wear.	

Section IX Special Precautions

Precautions to be Taken in Handling and Storing: None

Transportation Requirements

DOT Class: Not classified

UN Number: N.C.

IMCO Class: N.C.

Other:

The above information is accurate to the best of our knowledge. However, since data, safety standards, and government regulations are subject to change and the conditions of handling and use, or misuse are beyond our control, the Kurt J. Lesker Company makes no warranty, either express or implied, with respect to the completeness or continuing accuracy of the information contained herein and disclaims all liability for reliance thereon: User should satisfy himself that he had all current data relevant to his particular use.

ND = NO DATA FOUND

NA = NOT APPLICABLE