

MATERIAL SAFETY DATA SHEET

Part of Thermo Fisher Scientific

SECTION 1 - PRODUCT AND COMPANY IDENTIFICATION

Product Name:	BCR Quartz Particles		
Product Content:	Crystalline silicon dioxide (silica) powder		
Company Identification:	Microgenics Corporation	Company Phone Number:	(510) 979-5000
Office Address:	46360 Fremont Blvd.	Emergency Phone Number:	(510) 979-5000
City, State, Zip Code:	Fremont, CA 94538	CHEMTREC Phone Number, US:	(800) 424-9300
Country:	USA	CHEMTREC Phone Number, Europe:	(202) 483-7616

SECTION 2 - HAZARD IDENTIFICATION

CAUTION! HARMFUL IF INHALED. OVEREXPOSURE MAY CAUSE LUNG DAMAGE. MAY CAUSE EYE IRRITATION. INHALATION CANCER HAZARD. CONTAINS QUARTZ WHICH CAN CAUSE CANCER. Risk of cancer depends upon duration and level of exposure

SECTION 3 - COMPOSITION/INFORMATION ON INGREDIENTS

Component: Name	CAS Number:	Percentage:	EINECS/ELINCS
Quartz	14808-60-7	100	238-878-4

SECTION 4- FIRST AID MEASURES

EYE CONTACT: Flush thoroughly with water for at least 15 minutes. Get medical attention if irritation develops and persists
 SKIN CONTACT: In case of contact remove clothes, wash area with soap and flush with plenty of water. Get medical attention if irritation develops and persists.
 INHALATION: Remove to fresh air. Flush thoroughly with water for at least 15 minutes. If breathing is difficult, give oxygen, seek medical advice
 INGESTION: Give one to two glasses of water and seek medical advice

SECTION 5- FIRE FIGHTING MEASURES

FLAMMABLE PROPERTIES: Not considered flammable or explosive. NFPA/HMIS Rating (estimated): Health: 3; Flammability: 0; Instability: 1
 PROTECTION FOR FIREFIGHTERS: Use extinguishing media appropriate for surrounding fire (water, foam, vaporizing liquid or multipurpose dry chemical) and NIOSH-approved self-contained breathing apparatus

SECTION 6 - ACCIDENTAL RELEASE MEASURES

Areas covered with spilled particles may be slippery. If material is spilled or released, cordon off the area. Collect material by wiping the spill area with a damp paper towel or disposable wipe, and place materials into an appropriate container. Alternatively, use a vacuum cleaner equipped with a high efficiency particulate air (HEPA) filter. Avoid inhaling fine particle dust. Discard collected material in containers suitable for proper disposal

SECTION 7- HANDLING AND STORAGE

Keep tightly sealed to prevent contamination; store at room temperature in a dry area. Avoid damaging or puncturing containers. When creating aerosols of fine particles use minimal and directional (away from the user) airflow

SECTION 8 - EXPOSURE CONTROL/PERSONAL PROTECTION

Occupational Exposure Limits

Chemical Name – BCR Quartz Particles

OSHA PEL TWA / 8 hour	Cal/OSHA EPLTWA/8 hr	ACGIH TLV TWA / 8 hours	AIHA	NIOSH LDH/TWA
30mg/m ³ (total) % SiO ₂ +2, 10mg/m ³ (resp) % SiO ₂ +2	0.3mg/m ³ (total), 0.1mg/m ³ (resp)	0.025 mg/m ³ (resp) A2-suspected human carcinogen	Not listed	15 mg/m ³ (total), 5 mg/m ³ (resp)

EXPOSURE GUIDELINES: Suspected Human Carcinogen. A system of local and/or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limits. Safety glasses with side shields are suggested

ENGINEERING CONTROLS: Use minimal and directional (away from the user) airflow to minimize worker exposure

SKIN PROTECTION: Wear appropriate protective gloves to prevent skin exposure. No skin irritation expected

RESPIRATORY PROTECTION: Respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149. NIOSH approved full face shield with high efficiency particulate filter

GENERAL HYGIENE CONSIDERATIONS: Wear appropriate protective clothing to prevent skin exposure

SYSTEMIC: Acute: If inhaled in large quantities, may cause lung irritation

Chronic: Excessive inhalation of crystalline silica dust may cause a progressive disabling and sometimes fatal lung disease called silicosis. Symptoms include cough, shortness of breath, wheezing, non-specific chest illness and reduced pulmonary function

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

BOILING POINT:	2230°C	SOLUBILITY IN WATER:	Insoluble	FLASH POINT:	N/A
MELTING POINT:	1610°C	EVAPORATION RATE:	N/A	FLAMMABLE PROPERTIES:	N/A
PHYSICAL STATE:	solid	VAPOR PRESSURE:	10@1732°C	AUTO IGNITION TEMP:	N/A
VAPOR DENSITY:	N/A	pH: N/A	Kow: N/A		
DECOMPOSITION:	N/A	MOLECULAR WEIGHT	60.1	SPECIFIC GRAVITY:	2.62-2.65
APPEARANCE, COLOR, ODOR:		White to gray powder, no odor			

SECTION 10 - STABILITY AND REACTIVITY

STABILITY: Stable at room temperature in closed containers under normal storage and handling conditions
 INCOMPATIBILITY: fluorine, magnesium, alum, acids, ammonium salts
 HAZARDOUS DECOMPOSITION PRODUCTS: Not known
 HAZARDOUS POLYMERIZATION: Will not occur

SECTION 11 - TOXICOLOGICAL INFORMATION

REPRODUCTIVE AND DEVELOPMENTAL TOXICITY: IARC Cancer Review: Animal Sufficient Evidence, Human Limited Evidence, Group 1 Oral LD50 Rat=500mg/kg
 CARCINOGENICITY: Material is not listed by NTP Group 2, ACGIH, IARC Group 2A and OSHA as a carcinogen. For more information refer to Section 2.
 Hazards id.

Inhalation Human TCLO=16 mppcf/8H/17.9Y-I	Inhalation rat TCLO= 80 mg/m ³ /26W-I	Inhalation rat TCLO= 50 mg/m ³ /6H/71W-I
Inhalation Human LCLo=:300 ug/m ³ /10Y-I	Inhalation rat TCLO= 108 mg/m ³ /6H/3D-I	Intraperitoneal rat TDLo= 45 mg/kg
Intravenous rat LDLo= 90 mg/kg	Inhalation rat TCLO= 58 mg/m ³ /13W-I	Intravenous rat TDLo= 90 mg/kg
Intratracheal rat LDLo= 200 mg/kg	Inhalation mouse TCLO= 1475 ug/m ³ /8H/21W-I	Intraleural rat TDLo= 90 mg/kg
Intravenous mouse LDLo= 40 mg/kg	Inhalation mouse TCLO= 4932 ug/m ³ /24H/39W-C	Intratracheal rat TDLo= 111 mg/kg
Intravenous dog LDLo= 20 mg/kg	Inhalation guinea pig TCLO= 28 mg/m ³ /3W-I	Intratracheal rat TDLo= 100 mg/kg/19W-I
Implant rat TDLo= 900 mg/kg	Implant rat TD= 4554 mg/kg	Micronucleus test Human Lung= 40 ug/cm ²
Implant mouse TDLo= 4000 mg/kg	Intraleural rat TD= 200 mg/kg	Micronucleus test hamster Lung= 160 ug/cm ²
Intraleural hamster TDLo= 83 mg/kg	Intraleural rat TD= 100 mg/kg	Intraleural rat TD= 100 mg/kg
Intraperitoneal rat TD= 90 mg/kg/4W-I	Intraperitoneal rat TD= 450 mg/kg/4W-I	Intraleural rat TD= 100 mg/kg

NOES Hazard Codes CAS#14808-60-7: NOHS=66495, NOES=X6478
 RTECS CAS#14808-60-7=VV7330000

SECTION 12 - ECOLOGICAL INFORMATION

ECOTOXICITY Not regarded as dangerous for the environment LC/EC/IC50 > 100 mg/L
 PERSISTENCE/DEGRADATION *No information found*
 BIOACCUMULATION/ACCUMULATION *No information found*
 MOBILITY IN ENVIRONMENTAL MEDIA Not soluble in water
 ENVIRONMENTAL Not classified as harmful to the environment (OSPAR)
 OTHER ADVERSE EFFECTS *No information found*

SECTION 13 - DISPOSAL CONSIDERATIONS

Dispose of any waste residues according to prescribed federal, state, and local guidelines (e.g., to an appropriately permitted chemical waste incinerator).
 None of the components are on RCRA P& RCRA U Series Wastes list. EWC waste code 18 01 05 discard as chemicals and medicines
 Other Information: According to the European Waste Catalogue, Waste Codes are not product specific, but application specific. Waste codes should be assigned by the user based on the application for which the product was used

SECTION 14 - TRANSPORTATION INFORMATION

HAZARD CLASS: Not classified per US DOT, TDG, UNECE, ADR, ADN, IATA, ICAO, RID, IMDG/IMO, OTIF, Mexico

SECTION 15 - REGULATORY INFORMATION

CAS#14808-60-7

TSCA 8(b)	SARA 302	SARA 313	CERCLA	RCRA 261.33	TSCA 8(d)	TSCA 12(b)	FIFRA	CWC	SARA 311/312	EPICRA	CAA-SNAP	FDA	USDA
yes	no	no	no	no	no	no	yes	no	no	no	no	no	no

Not subject to ITAR and EAR regulations

US State OEL-TWA: - CAS# 14808-60-7 Alaska 0.1 mg/m³, California 0.3 mg/m³ PEL, Hawaii 0.1 mg/m³, Idaho, Indiana, Massachusetts see ACGIH, Michigan 0.1 mg/m³, Minnesota 0.1 mg/m³, New Hampshire 0.089 µg/m³ AAL, New Jersey, North Carolina, Oregon, Pennsylvania, Rhode Island- see ACGIH, Tennessee 0.1 mg/m³, Texas 0.1 µg/m³ ESL, Vermont 0.1 mg/m³, Washington 0.1 mg/m³

California - Prop 65 THIS PRODUCT CONTAINS A CHEMICAL(S) KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER

Title 8 CCR, Title 22 CCR, ATHS, Ozone Depleting Compounds, Precursor Chemicals, SCAQMD, California - No Significant Risk Level - *No information found.*

Advisory Agencies/Africa/ Asia-Pacific/Europe Non-EU /EU Member Countries/Latin America and Caribbean/ Middle East/Government Inventory Lists

CAS#14808-60-7

IARC	IPCS	NTP	OECD	AICS	CHINA	PICC	New Zealand	Korea	ENCS	Germany VwVws	EC	EINECS
yes	yes	yes	yes	yes	yes	yes	yes	KE-29983	yes	no	no	238-878-4

OEL-TWA: Egypt 10 mg/m³, South Africa 0.1 mg/m³, Australia 0.1 mg/m³, China 0.2 mg/m³, Hong Kong 0.1 mg/m³, India 10 mg/m³, Indonesia 0.1 mg/m³, Malaysia 0.1 mg/m³, Singapore 0.1 mg/m³ PEL, Taiwan 1 mg/m³ TWA, Croatia 0.1 mg/m³ MAC, Iceland 0.3 mg/m³, Norway 0.3 mg/m³, Austria 0.15 mg/m³ MAK, Estonia 0.1 mg/m³, BELGIUM 0.1 mg/m³, DENMARK 0.1 mg/m³, FINLAND 0.2 mg/m³, GERMANY 0.15 mg/m³, RUSSIA:STEL 14 mg/m³, Finland 0.2 mg/m³, France 0.1 mg/m³, Hungary 0.15 mg/m³, Ireland 0.1 mg/m³, Lithuania 0.1 mg/m³, Netherlands 0.075 mg/m³, Poland 1.0 mg/m³, Portugal 0.025 mg/m³, Romania 0.1 mg/m³, Slovak Republic 0.1 mg/m³, Slovenia 0.15 mg/m³, Spain 0.1 mg/m³, Argentina 0.05 mg/m³, Chile 0.08 mg/m³, Peru 0.05 mg/m³, Venezuela 0.05 mg/m³, Mexico 0.1 mg/m³, GCC 0.1 mg/m³, Israel 0.025 mg/m³, SWEDEN 0.1 mg/m³, SWITZERLAND 0.15 mg/m³, THAILAND 30 mg/m³, UNITED KINGDOM 0.1 mg/m³, BULGARIA 0.07 mg/m³, COLOMBIA 0.025 mg/m³, KOREA 0.05 mg/m³, NEW ZEALAND 0.2 mg/m³, SINGAPORE 0.1 mg/m³ PEL

MATERIAL SAFETY DATA SHEET

Quartz Particles

Canada Federal/Provincial Government - CAS#14808-60-7

OEL-TWA: ALBERTA 0.1 mg/m³, BRITISH COLUMBIA 0.025 mg/m³, Manitoba 0.025 mg/m³, NEW BRUNSWICK 0.1 mg/m³ TWA, New Foundland 0.025 mg/m³, NORTHWEST TERRITORIES 0.1 mg/m³, Nova Scotia 0.025 mg/m³, NUNAVUT 0.1 mg/m³, ONTARIO 0.10 mg/m³, QUEBEC 0.1 mg/m³, SASKATCHEWAN 0.05 mg/m³, YUKON 300 particles/mL

SECTION 15 - REGULATORY INFORMATION - continued

European Union Directives CAS#14808-60-7

Canada Federal/Provincial Government CAS#14808-60-7

793/93/EEC	1907/2006 – REACH
no	no

CEPA	NPRI	Health Canada	DSL	NDSL	DWQ	WHMIS
yes	no	yes	yes	yes	no	<1% D2A

WHMIS:

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR

SECTION 16 - OTHER INFORMATION

Revision: 06

Date prepared: October 1, 2008

ABBREVIATIONS

- | | |
|--|---|
| EU: European Union | IATA: International Air Transport Association |
| DOT: Department of Transportation | NTP: National Toxicology Program |
| NIOSH: National Institute for Occupational Safety and Health | OSHA: Occupational Safety and Health Administration |
| ACGIH: American Conference of Governmental Industrial Hygienists | IARC: International Agency for Research on Cancer |

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