

MATERIAL SAFETY DATA SHEET — 16 Sections

SECTION 1 — PRODUCT AND COMPANY IDENTIFICATION

Product Name and Codes Z4 Universal Investment & MG-Vest Partial Investment Item No. Various		Product Synonyms Phosphate Casting Investment	
Product Use Used by dental technicians, dental offices and jewelry makers		Product Packages Foil Envelopes	
Manufacturer's Name Vacalon Company Inc			
Street Address 12960 Stonecreek Dr, Ste C			
City Pickerington		State OH	Country USA
Contact Information For General Product Details (Mon - Fri, 9:00 am - 3:00 pm EDT)			
Zip Code 43147	Telephone Number 614-577-1945	Fax Number 614-759-4999	
Date MSDS Prepared May 1, 2008			

SECTION 2 — COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous Ingredients	%	CAS Number	OSHA PEL	ACGIH TLV
Silica, Crystalline, Quartz		14808-60-7	0.1 mg/m ³	0.1 mg/m ³
Silica, Crystalline, Cristobalite		14464-46-1	0.05 mg/m ³	0.05 mg/m ³

SECTION 3 — HAZARDS IDENTIFICATION

Route of Entry <input checked="" type="checkbox"/> Skin Contact <input checked="" type="checkbox"/> Ingestion <input checked="" type="checkbox"/> Eye Contact <input checked="" type="checkbox"/> Inhalation
(Emergency Overview) Appearance: Solid powder, slightly grey in color (Can exhibit various colors) Odor: None - WARNING: Excessive inhalation of dust over a prolonged period can result in lung damage. (Silicosis) Prevent overexposure to dust. (Potential Health Effects) - Inhalation: Excessive inhalation of dust over a prolonged period can result in lung damage. (Silicosis) - Eyes: May cause irritation. Direct contact can cause damage. - Ingestion: This material is not toxic. May do damage to lungs if breathing during accidentally swallowing. - Skin: Rubbing may cause irritation similar to sand or dirt

SECTION 4 — FIRST AID MEASURES

Skin Contact	Remove any contaminated clothes. Then wash with plenty of water for 15 - 20 minutes.
Eye Contact	Flush eyes with large amount of water for at least 15 minutes. Seek attention if irritation persists.
Inhalation	Move subject to fresh air. Give artificial respiration if breathing has stopped. See a physician.
Ingestion	Accidental ingestion of a small amount is not expected to cause significant harm.

Note: In severe cases contact physician and/or poison control center immediately. Have product or label available and follow advice given.

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SECTION 5 — FIRE FIGHTING MEASURES

Flammable Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	General Hazards Material is not considered flammable or combustible. Water will cause to solidify.	
Means of Extinction N/A		
Flashpoint (°C) and Method N/A	Upper Flammable Limit (% by volume) N/A	Lower Flammable Limit (% by volume) N/A
Autoignition Temperature N/A	Explosion Data - Sensitivity to Impact None	Explosion Data - Sensitivity to Static Discharge
Special Fire Fighting Procedures Use of respirators is recommended as dust can be harmful.		

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Leak and Spill Procedures Personal Precautions: Provide adequate ventilation. Avoid breathing dust that is created while handling. Vacuum spilled material and try to avoid creating dust. Wipe down surfaces with wet cloth. Water will cause material to harden.
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SECTION 7 — HANDLING AND STORAGE

Handling Procedures and Equipment No special protection is needed during normal laboratory use.
Storage Requirements No special requirements exist for storage but it is recommended to store in a dry location.
Other Precautions Avoid breathing dust that is created while handling. Wear respirator if necessary.

SECTION 8 — EXPOSURE CONTROL / PERSONAL PROTECTION

Specific Engineering Controls (such as ventilation, enclosed process) If necessary local ventilation should be designed and installed to prevent exposure to dust from exceeding the recommended exposure guideline for this material.
Personal Protective Equipment <input checked="" type="checkbox"/> Gloves <input checked="" type="checkbox"/> Respirator <input checked="" type="checkbox"/> Eye <input type="checkbox"/> Footwear <input checked="" type="checkbox"/> Clothing <input type="checkbox"/> Other
If checked, please specify type Gloves: Chemical resistant gloves are recommended if prolonged or repeated skin contact is likely Respirator: None required if good ventilation is maintained. Otherwise self contained breathing apparatus (pressure-demand, MSHA/NIOSH - approved or equivalent) that is suitable for up to 10 times that of exposure limit. Eye: Safety glasses should be worn. Clothing: Apron or other impervious cloth

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SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

Physical State Solid Powder	Odor and Appearance Odorless, grey in color	Vapour Pressure N/A
Specific Gravity (H ₂ O = 1) N/E	Vapor Density (Air = 1) N/A	
Evaporation Rate (Butyl Acetate = 1) N/E	Boiling Point (°C) N/E	
pH N/E	Solubility in water Insoluble in water	Other

SECTION 10 — STABILITY AND REACTIVITY

Chemical Stability <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If no, under which conditions?
Incompatibility with Other Substances <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes, which ones? Hydrofluoric acid
Material is basically stable but may solidify if contacted by water	
Reactivity, and under what conditions?	
Hazardous Decomposition or By-Products None known	
Hazardous Polymerization Will not occur	

SECTION 11 — TOXICOLOGICAL INFORMATION

LD50 Information N/A
Chronic/Carcinogenicity The International Agency for Research on Cancer (IARC) reports inhaled crystalline silica is a Group 1 carcinogen to humans. NTP has listed crystalline silica as a carcinogen.

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SECTION 12 — ECOLOGICAL INFORMATION

Ecological Information No specific studies are available but the material is generally considered chemically inert in the environment.
There are no known adverse effects to water.

SECTION 13 — DISPOSAL CONSIDERATIONS

Waste Disposal Material is not considered a hazardous waste as defined by RCRA. Avoid washing down drains as material can plug drains.
SECTION 14 — TRANSPORT INFORMATION Special Shipping Information

DOT Not regulated	MDG
ATA	Other

SECTION 15 — REGULATORY INFORMATION

OSHA Considered hazardous under OSHA Hazard Communication	WHMIS "Controlled Product"
SABA 313 Immediate and delayed health.	California Prop 65 This material contains a chemical known to the State of California to cause cancer.
SABA 311/312 Reportable Ingredients: None	TSCA All ingredients are listed in the TSCA inventory

SECTION 16 — OTHER INFORMATION

HMSD Hazard Rating 3 Health 0 Fire 0 Reactivity	Hazard: 4-Severe; 3-Serious; 2-Moderate; 1-Minimum
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