MATERIAL SAFETY DATA SHEET

McKeown International,Inc. Suite 240 1106 South Mays Street Round Rock, TX USA 78664	**Emergency Telephone #: (512) 828-3138**
Product Name: **Ultradol 75**	Product Name:

Section 2 - Material Description And Use

Chemical Name: **Calcium Oxide and Magnesium Oxide**
Chemical Formula: **CaO + MgO**
Chemical Additives: **MgO enriched**

Product Use: **Refractory Brick**:

Section 3 - Hazardous Ingredients

Paints, Preservatives, & Solvents	*%*	*TLV*	*Alloys And Metallic*	*%*	*TLV*
Pigments			Base metal		
Catalyst			Alloys		
Vehicle			Metallic coatings		
Solvents			Filler metal or core flux		
Additives			Others		
Others					

Hazardous Mixtures of Other Solvents	*%*	*CAS#*
Calcium Oxide (CaO)	18 ~ 22	1305-78-8
Magensia Oxide (MgO)	72 ~ 80	1309-48-4
Alumininum Oxide (Al2O3)	~0.6	1344-28-1
Iron Oxide(Fe2O3)	~1.12	1332-37-2
Quartz (SiO2)	~0.8	14808-60-7
Ignition Loss	~2.35	

Section 4 - First Aid Measures

Emergency and First Aid Procedures:	skin contact:	**Wash with water. Consult physician if persists**
	eye contact:	**Immediately flush w/ water. Consult physician if persists**
	Inhalation:	**Avoid prolonged inhalation of dust from cutting, grinding. Overexposure to dust may lead to permanent lung inquiry (silicosis)**
	Ingestion:	**Don't ingest may cause irritation**
	Chronic effects:	**This product has the potential for generation of respirable dust during handling and use. Dust may contain respirable crystalline silica. Overexposure to dust may result in pneumocononiosis, a respiratory disease caused by inhalation of mineral dust, which can lead to fibrotic changes to the lung tissue, or silicosis, a respiratory disease caused by inhalation of silica dust, which can lead to inflammation and fibrosis of the lung tissue. Occupational exposure to respirable dust and respirable crystalline silica should be monitored and controlled**

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Section 5 - Fire and Explosion Hazard Data

Flash Point:	of resin:	**N/A**
Ignition Temperature:	of resin:	**N/A**
Hazardous Decompostion:		**None**
Thermal Decomposition:	of resin	**N/A**
Flammable Explosion Limits:	upper:	**None**
	lower:	**None**
Hazardous Reactions:		**None**
Extinguishing Media:	suitable:	**Dry, non-acidic chemical, carbon dioxide**
	not to be used:	**Water**
Special Fire Fighting Procedures:		**None**
Unusual Fire and Explosion Hazards:		**None**

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Section 6 - Accidental Release Measures

Steps To Be Taken In Case Material is Released or Spilled:
Use any convenient dry clean-up method -- scoop, shovel, etc. Avoid contact with skin. Avoid generating dust

Section 7 - Handling and Storage

Technical Protective Measures: **Protect material from humidity and exposure to water**
Provide local exhaust at brick saw

Industrial Hygiene: **Remove contaminated clothing**

Protection against Fire and Explosion: **None**
(Handling & Storing)

Section 8 - Health Hazard Data and Protective Measures

Threshold Limit Value: **5 mg/m^3 for dust generated by cutting**

Effects of Overexposure: **Dust can irritate eyes, skin, and mucuous membrane**

Personal Protective Equipment:		
	respiratory:	**dust mask, if condition warrants**
	eye:	**safety glasses with sideshields**
	hand:	**abrasive resistant gloves**
	other:	**steel toe boots**

US. ACGIH Threshold Limits Values

Components	Type	Value	Form
Aluminium Oxide (1344-28-1)	TWA	1 mg/m³	Respirable Fraction
Glass, Oxide, Chemicals	TWA	1 fibers/cm³	Fiber
Quartz (SiO2) (14808-60-7)	TWA	0.025 mg/m³	Respirable fraction

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value	Form
Aluminium Oxide	PEL	5 mg/m3	Respirable fraction

US. OSHA Table Z-3 (29 CFR 1910.1000)

Components	Type	Value	Form
Quartz (SiO2) (14808-60-7)	TWA	0.3 mg/m3	Total dust
		0.1 mg/m3	Respirable
		2.4 mppcf	Respirable

Exposure guidelines: Occupational exposure to nuisance dust (total and respirable) and respirable crystalline silica should be monitored and controlled.

Section 9 - Physical Data

Physical Form:	**shaped brick**	Density:	**3.40 g/cm^3**
Boiling Temp:	**N/A**	Bulk Density:	**2.98~3.02 g/cm^3**
Freeze-Melt Temp:	**>2000℃**	Water Solubility:	**1.18 g/l (CaO), 0℃**
Vapor Pressure:	**N/A**	pH:	**12,4 at 20℃, 1.18 g/l (CaO)**
Viscosity:	**N/A**	Color:	**Brown**
Evaporation Rate:	**N/A**	Odor/Threshold:	**None/ N/A**
Specific Gravity:	**3.40 g/cm^3**	Coeff. Water/Oil Distrib.:	**N/A**

Section 10 - Reactivity Data

Stability	stable: **X** unstable:		Conditions to avoid:
Hazardous Polymerization	may occur: will not: **X**		Conditions to avoid:

Section 11 - Information on Toxicity

Hazardous by OSHA criteria. In 1997, IARC (the International Agency for Research on Cancer) concluded that crystalline silica inhaled from occupational sources can cause lung cancer in humans. However in making the overall evaluation, IARC noted that "carcinogenicity was not detected in all industrial circumstances studied. Carcinogenicity may be dependent on inherent characteristics of the crystalline silica or on external factors affecting its biological activity or distribution of its polymorphs." (IARC Monographs on the evaluation of the carcinogenic risks of chemicals to humans, Silica, silicates dust and organic fibres, 1997, Vol. 68, IARC, Lyon, France.) Cancer hazard. In June 2003, SCOEL (the EU Scientific Committee on Occupational Exposure Limits) concluded that the main effect in humans of the inhalation of respirable crystalline silica dust is silicosis. "There is sufficient information to conclude that the relative risk of lung cancer is increased in persons with silicosis (and, apparently, not in employees without silicosis exposed to silica dust in quarries and in the ceramic industry). Therefore, preventing the onset of silicosis will also reduce the cancer risk..." (SCOEL SUM Doc 94-final, June 2003) According to the current state of the art, worker protection against silicosis can be consistently assured by respecting the existing regulatory occupational exposure limits. Occupational exposure to respirable dust and respirable crystalline silica should be monitored and controlled.

ACGIH Carcinogens

Aluminium Oxide (CAS 1344-28-1)	A4 Not classifiable as a human carcinogen
Diiron Trioxide (CAS 1309-37-1)	A4 Not classifiable as a human carcinogen.
Glass, Oxide, Chemicals (CAS 65997-17-3)	A3 Confirmed animal carcinogen with unknown relevance to humans. A4 Not classifiable as a human carcinogen
Magnesium Oxide (CAS 1309-48-4)	A4 Not classifiable as a human carcinogen.
Quartz (SiO2) (CAS 14808-60-7)	A2 Suspected human carcinogen.

IARC Monographs. Overall Evaluation of Carcinogenicity

Diiron Trioxide (CAS 1309-37-1)	3 Not classifiable as to carcinogenicity to humans.
Glass, Oxide, Chemicals (CAS 65997-17-3)	3 Not classifiable as to carcinogenicity to humans.

US NTP Report on Carcinogens: Anticipated carcinogen

GLASS WOOL FIBERS (INHALABLE), CERTAIN (CAS 65997-17-3)	Reasonably Anticipated to be a Human Carcinogen

US NTP Report on Carcinogens: Known carcinogen

SILICA, CRYSTALLINE (RESPIRABLE SIZE) (CAS 14808-60-7)	Known To Be Human Carcinogen

Section 12 - Information on Ecological Effects

Calcium Oxide (CaO) endangers fishlife

Section 13 - Disposal Considerations

Waste Disposal Method:

If reuse and recycling is not possible or practiced, material may be disposed of at a sanitary landfill

Not Federally Regulated as a hazardous waste

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Section 14 - Transport Information

DOT. Not regulated as dangerous goods.

Section 15 - Regulatory Information

Chemical components have been reported to the EPA Office of Toxic Substances in accordance with the requirements of the Toxic Substance Control Act. This material contains no ingrediets listed on the Extremely Hazardous or CERCLA Lists

State regulations WARNING: This product contains a chemical known to the State of California to cause cancer.

US - California Proposition 65 - CRT: Listed date/Carcinogenic substance

Quartz (SiO2) (CAS 14808-60-7) Listed: October 1, 1988 Carcinogenic

Section 16 - Special Precautions and Other Information

Re-seal remaining material with packaging provided

Health: 3*

Flammability: 0

Physical hazard: 1

NFPA rating

Health: 3

Flammability: 0

Instability: 1