

14K HY FLOW™

Version 1.1

12/19/2003

- burns.
- Eyes : Can cause severe irritation, redness, tearing and blurred vision. Prolonged or repeated contact can cause burns and possibly corneal injury.
- Ingestion : Irritating to mouth, throat and stomach.
- Chronic exposure : This product contains Crystalline (quartz) Silica which has been listed as a human carcinogen by NTP (Group 1) and IARC (Human Carcinogen) and a Suspected Human Carcinogen by ACGIH (category A2). Repeated or prolonged over exposure to free respirable Crystalline (quartz) silica can cause silicosis or other delayed and serious lung injury. Repeated or prolonged overexposure to free respirable silica can cause silicosis or other delayed and serious lung injury.

Carcinogenicity

	ACGIH	IARC	NTP	OSHA
SILICA, CRYSTALLINE QUARTZ	Suspected human carcinogen.	Human carcinogen.	Known carcinogen.	N.E.
PORTLAND CEMENT	N.E.	N.E.	N.E.	N.E.
LIMESTONE	N.E.	N.E.	N.E.	N.E.
CALCIUM OXIDE	N.E.	N.E.	N.E.	N.E.
GYPSUM	N.E.	N.E.	N.E.	N.E.
SILICA, AMORPHOUS	N.E.	Classification not possible from current data.	N.E.	N.E.
MAGNESIUM OXIDE	Not classifiable as a human carcinogen.	N.E.	N.E.	N.E.
ALUMINA CEMENT	N.E.	N.E.	N.E.	N.E.

4. FIRST AID MEASURES

- Eye contact : Flush eyes with water, lifting upper and lower lids occasionally for 15 minutes. Seek medical attention.
- Skin contact : Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Seek medical advice.
- Ingestion : Do not induce vomiting without medical advice. If conscious, drink plenty of water. Call a physician immediately. Never give anything by mouth to an unconscious person. If a person vomits, place him/her in the recovery position.
- Inhalation : Remove victim from exposure. If difficulty with breathing, administer oxygen. If breathing has stopped administer artificial respiration, preferably mouth-to-mouth. Seek immediate medical attention.

5. FIRE-FIGHTING MEASURES

- Flash point : Not combustible.
- Autoignition temperature : Not combustible.
- Lower explosion limit : not applicable
- Upper explosion limit : not applicable
- Suitable extinguishing media : water fog
carbon dioxide (CO2)

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dry chemical
alcohol-resistant foam

- Fire and Explosion Hazards : This product is alkaline and releases considerable heat on contact with small amounts of water. Avoid contact between resulting hot alkaline paste and metallic aluminum. Such contact could generate hydrogen gas.
- Special Fire-fighting Procedures : As in any fire, wear self-contained breathing apparatus pressure-demand (MSHA/NIOSH approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

- Methods for cleaning up : Clean up promptly by sweeping or vacuum. Clean thoroughly. After cleaning, flush away traces with water. Keep in suitable, closed containers for disposal. Wear personal protective equipment.

7. HANDLING AND STORAGE

- Handling : Use only in area provided with appropriate ventilation. Keep out of reach of children. Avoid exceeding of the given occupational exposure limits (see section 2). Avoid formation of respirable particles.
- Storage : Keep container tightly closed.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

- Eye protection : Wear as appropriate:
safety glasses with side-shields
face-shield
goggles
- Hand protection : Wear as appropriate:
impervious gloves
- Body Protection : Wear as appropriate:
preventive skin protection
impervious clothing
- Respiratory protection : In case of insufficient ventilation wear suitable respiratory equipment. When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.
- Hygienic Practices : Avoid contact with skin, eyes and clothing. Ensure adequate ventilation, especially in confined areas. Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday. When using, do not eat, drink or smoke.
- Engineering Controls : Local exhaust ventilation can be necessary to control any air contaminants to within their TLVs during the use of this product.

9. PHYSICAL AND CHEMICAL PROPERTIES

- Color : gray

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Physical State	:	powder
Odor	:	none
pH (at 100 %)	:	not applicable
Odor Threshold	:	no data available
Vapor Pressure	:	not applicable
Vapor Density	:	not applicable
Boiling point/range	:	no data available
Freeze Point	:	no data available
Water solubility	:	slightly soluble
Specific Gravity	:	2.8
Viscosity	:	not applicable
Evaporation rate	:	no data available
Partition coefficient (n-octanol/water)	:	no data available
VOC Concentration as applied (less water and exempt solvents)	:	0 g/l

10. STABILITY AND REACTIVITY

Stability	:	Stable under recommended storage conditions.
Conditions to avoid	:	no data available
Materials to avoid	:	strong acids and strong bases strong oxidizing agents
Hazardous decomposition products	:	no data available
Hazardous polymerization	:	Will not occur under normal conditions.

11. TOXICOLOGICAL INFORMATION

Acute inhalation toxicity

<u>Product</u>	<u>Type</u>	<u>Value</u>	<u>Species</u>	<u>Exposure time</u>
	LC50	no data available		
<u>Component</u>				
SILICA, CRYSTALLINE QUARTZ	LC50	no data available		
PORTLAND CEMENT	LC50	no data available		

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LIMESTONE	LC50	no data available	
CALCIUM OXIDE	LC50	no data available	
GYPSUM	LC50	no data available	
SILICA, AMORPHOUS	LC50	no data available	
MAGNESIUM OXIDE	LC50	46 mg/l	1 h
ALUMINA CEMENT	LC50	no data available	

Acute oral toxicity

<u>Product</u>	<u>Type</u>	<u>Value</u>	<u>Species</u>
	LD50 (Oral)	no data available	

Component

SILICA, CRYSTALLINE QUARTZ	LD50 (Oral)	1,300 mg/kg	
PORTLAND CEMENT	LD50 (Oral)	2,000 mg/kg	
LIMESTONE	LD50 (Oral)	6,450 mg/kg	rat
CALCIUM OXIDE	LD50 (Oral)	no data available	
GYPSUM	LD50 (Oral)	no data available	
SILICA, AMORPHOUS	LD50 (Oral)	no data available	
MAGNESIUM OXIDE	LD50 (Oral)	5,000 mg/kg	
ALUMINA CEMENT	LD50 (Oral)	2,255 mg/kg	

Acute dermal toxicity

<u>Product</u>	<u>Type</u>	<u>Value</u>	<u>Species</u>
	LD50 (Dermal)	no data available	

Component

SILICA, CRYSTALLINE QUARTZ	LD50 (Dermal)	no data available	
PORTLAND CEMENT	LD50 (Dermal)	no data available	
LIMESTONE	LD50 (Dermal)	no data available	
CALCIUM OXIDE	LD50 (Dermal)	no data available	
GYPSUM	LD50 (Dermal)	8,480 mg/kg	
SILICA, AMORPHOUS	LD50 (Dermal)	no data available	
MAGNESIUM OXIDE	LD50 (Dermal)	3,160 mg/kg	
ALUMINA CEMENT	LD50 (Dermal)	no data available	

12. ECOLOGICAL INFORMATION

Ecotoxicological Information : There is no data available for this product.

13. DISPOSAL CONSIDERATIONS

Recommendations: Use excess product in an alternate beneficial application. Handle disposal of waste material in manner which complies with local, state, province and federal regulation.

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14. TRANSPORT INFORMATION

DOT	: Proper shipping name	Not regulated
IATA	: Proper shipping name	Not regulated

15. REGULATORY INFORMATION

SARA 311/312 (RTK)

This product has been reviewed according to the EPA 'Hazard Categories' promulgated under Sections 311 and 312 of the Superfund Amendments and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

IMMEDIATE (ACUTE) HEALTH HAZARD DELAYED (CHRONIC) HEALTH HAZARD

SARA 313

This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372:

<u>Weight %</u>	<u>CAS No.</u>	<u>Chemical Name</u>
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This product contains no chemicals subject to the SARA 313 supplier notification requirements.

CERCLA

CERCLA section 103(a) specifically requires the person in charge of a vessel or facility to report immediately to the National Response Center (NRC) a release of a hazardous substance whose amount equals or exceeds the assigned RQ. The following hazardous substances are contained in this product.

<u>RQ</u>	<u>CAS No.</u>	<u>Chemical Name</u>
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No CERCLA chemicals exist in this product above reportable concentrations.

TSCA Section 12(b) Export Notification

This product contains the following chemical substances subject to the reporting requirements of TSCA 12(b) if exported from the United States:

<u>CAS No.</u>	<u>Chemical Name</u>
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There are no TSCA 12(b) Chemicals in this product.

California Proposition 65

The chemical(s) noted below and contained in this product, are known to the state of California to cause cancer, birth defects or other reproductive harm. Unless otherwise specified in Section 2 of this MSDS, these chemicals are present at < 0.1%:

<u>CAS No.</u>	<u>Chemical Name</u>
14808-60-7	SILICA, CRYSTALLINE QUARTZ
1333-86-4	CARBON BLACK
50-00-0	FORMALDEHYDE
1308-38-9	CHROMIUM OXIDE
554-13-2	LITHIUM CARBONATE
18540-29-9	CHROMIUM(VI)

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16. OTHER INFORMATION

Legend : N.E. - Not Established
TLV - Threshold Limit Value
STEL - Short Term Exposure Limit
PEL - Permissible Exposure Limit
CEIL - Ceiling

Prepared By : Environment, Health and Safety Department

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End of MSDS.