

SONOFLOW®

Version 1.6

12/17/2003

- 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.
LIMESTONE	N.E.	N.E.	N.E.	N.E.
ALUMINA CEMENT	N.E.	N.E.	N.E.	N.E.
PORTLAND CEMENT	N.E.	N.E.	N.E.	N.E.
ANHYDRITE	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)
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.

SONOFLOW®

Version 1.6

12/17/2003

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

Physical State : powder

Odor : none

pH (at 100 %) : not applicable

Odor Threshold : no data available

Vapor Pressure : not applicable

Vapor Density : not applicable

SONOFLOW®

Version 1.6

12/17/2003

Boiling point/range	:	no data available
Freeze Point	:	no data available
Water solubility	:	slightly soluble
Specific Gravity	:	2.6
Viscosity	:	no data available
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		
LIMESTONE	LC50	no data available		
ALUMINA CEMENT	LC50	no data available		
PORTLAND CEMENT	LC50	no data available		
ANHYDRITE	LC50	no data available		

Acute oral toxicity

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

SONOFLOW®

Version 1.6

12/17/2003

SILICA, CRYSTALLINE QUARTZ	LD50 (Oral)	1,300 mg/kg	
LIMESTONE	LD50 (Oral)	6,450 mg/kg	rat
ALUMINA CEMENT	LD50 (Oral)	2,255 mg/kg	
PORTLAND CEMENT	LD50 (Oral)	2,000 mg/kg	
ANHYDRITE	LD50 (Oral)	no data available	

Acute dermal toxicity

	<u>Type</u>	<u>Value</u>	<u>Species</u>
<u>Product</u>	LD50 (Dermal)	no data available	
<u>Component</u>			
SILICA, CRYSTALLINE QUARTZ	LD50 (Dermal)	no data available	
LIMESTONE	LD50 (Dermal)	no data available	
ALUMINA CEMENT	LD50 (Dermal)	no data available	
PORTLAND CEMENT	LD50 (Dermal)	no data available	
ANHYDRITE	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.

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:

SONOFLOW®

Version 1.6

12/17/2003

Weight % CAS No. Chemical Name

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.

RQ CAS No. Chemical Name

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:

CAS No. Chemical Name

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
554-13-2	LITHIUM CARBONATE
75-07-0	ACETALDEHYDE
1308-38-9	CHROMIUM OXIDE

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

This information is furnished without warranty, representation, or license of any kind, except that this information is accurate to the best of the manufacturer's knowledge, or is obtained from sources believed by the manufacturer to be accurate and is not intended to be all inclusive. No warranty is expressed or implied regarding the accuracy of this information or the results to be obtained from its use thereof. The manufacturer assumes no responsibility for injuries proximately caused by use of the Material if reasonable safety procedures are not followed as stipulated in this Data Sheet. Additionally, the manufacturer assumes no responsibility for injuries proximately caused by abnormal use of the Material even if reasonable safety procedures are followed. Buyer assumes the risk in its use of the Material.

End of MSDS.