

Material Safety Data Sheet

Silica Flour (RXSOL-81-8119-030)



1. Product and Company Identification

Product Name Silica Flour
Part Number RXSOL-81-8119-030

Company Details:
RX MARINE INTERNATIONAL
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2. Composition / information on ingredients

Name of Substance	Cas Number	Wight %
SiO ₂	14808-60-7	99.0 -99.5
Al ₂ O ₃	1344-28-1	0.8
Fe ₂ O ₃	1309-37-1	0.1
TiO ₂	13463-67-7	0.1

3. Hazards Identification

Principle routes of exposure	Inhalation.Eye contact
Main health hazards	Respirable dust CANCER HAZARD.This product May contain small amounts of respirable Crystalline silica .Crystalline silica dust is listed by IARC in Group 1 as known to cause lung cancer In humans,if inhaled.Risk of cancer depends on Duration and level of exposure.
Main environmental hazards	None
Other hazards	Dust. The adverse health effects:silicosis,cancer,Autoimmune,diseases,tuberculosis,and Nephrotoxicity; are chronic effects.Inhalation:Silicosis Respirable crystalline silica (quartz) can cause silicosis,a fibrosis(scarring) of the lungs. Silicosis may be Progressive; it may lead to disability and Death.
Chronic Effects	• Cancer Crystalline silica (quartz) inhaled From occupational sources is classified as Carcinogenic to humans. • Autoimmune Diseases There are some Studies that show excess numbers of Cases of scleroderma and other Connective tissue disorders in workers Exposed to respirable crystalline silica. • Tuberculosis Silicosis increases the risk Of tuberculosis. • Nephrotoxicity There are some studies That show an increased incidence of Chronic kidney disease and end-stage Renal disease in workers exposed to Respirable crystalline silica.

4. First Aid Measures

Eye Contact	Rinse with water.
Skin Contact	Rinse with water.
Inhalation:	No specific first –aid is necessary since the adverse health effects Associated with exposure to crystalline silica (quartz),Remove the person immediately to fresh air,give artificial respiration as Needed,seek medical attention as needed.
Ingestion:	Rinse mouth. Consult a physician if necessary.Never give anything by Mouth to an unconscious person.
Notes to Physicians	Good personal hygiene is essential. Always wash your hands after handling crystalline silica, prior to handling food and/or drinkable liquids.Inhalation of silica is known to cause silicosis of the lungs along with lung cancer with long term exposure.

5. Fire-fighting Measures

Flammability	Non Flammable.
Fire hazard	Does not flash
Flash Point	Not Applicable
Autoignition temperature	Not Applicable
Flammability limits in air	
Lower	Not Applicable
Upper	Not Applicable
Oxidizing properties	None
Suitable extinguishing media	None needed .The product itself does not burn. Use extinguishing Media suitable for surrounding.
Combustion products,or Released gases	None
Special protective Equipment for firefighters	Not applicable.

6. Accidental Release Measures

Main physical hazards	No classified physical hazards.
Other Hazard	Dust
Personal precautions	Do not breathe dust. Wear suitable protective equipment.
Methods for cleaning up	Shovel into suitable container for disposal. After cleaning,flush awayTraces with water.Use dustless methods(vacuum) iff possible and Place into closable container for disposal,or flush with water.Do not dry Sweep.Wear protective equipment specified below.
Environmental precautions	None

7. Handling and Storage

Personal Handling	Do not breath dust.Use adequate ventilation and dust collection.Keep airborne dust concentrations below PEL.Do not rely on your sight to Determine if dust is in the air. Silica may be in the air without a visible Dust cloud.If dust cannot be kept below permissible limits.wear a Respirator approved for silica dust when using handling.stroing or Equipment.Maintain, clean,and fit test respirators in accordance with OSHA regulations.Maintain and test ventilation and dust collection Equipement .Wash or vacuum clothing that has become dusty. See also Control measures in Section 8.
Safe handling advice	Provide appropriate exhaust ventilation at places where dust is formed.
Storage Condition	No special storage conditions required.
Packaging requirements	Paper bag (minimum 3ply) ,or other industrial container designed for Powders and granulated materials.

Incompatible products None known.

8. Exposure controls and personal protection

Hygiene measures	Keep airborne concentrations below exposure limits.Wear suitable Protective equipment .Avoid contact with eyes.
Respiratory protection	Use NIOSH approved respirator with dust mist protection (3M 8210).If dust concentration exceeds 5 times exposure limit.wear an
Eye protection	Safety glasses with side-shields.
Hand protection	Cotton gloves.



Gloves

9. Physical and chemical properties

Chemical characterization	Inert (Inorganic).
Fire hazard	Not Combustible
Form	Soild/Powder
Colour	White -Tone
Odour	None
Odor threshold	Not Applicable
pH	Not Applicable
Boiling Point / Range	Not Applicable
Flash Point	Does not flash
Flamability in Air	
Lower	Not Applicable
Upper	Not Applicable
Bulk density	1100-1600kg/m3
Melting point/range	>1700°C /3092 °F
Decomposition temperature	Not Applicable
Water solubility	Insoluble.
Fat solubility	Insoluble.
Relative density	No data available
Specific Gravity	2.65 (@20 °C)
Vapor Pressure	Not Applicable
Vapor Density	Not Applicable
Viscosity	Not Applicable
Evaporation Rate	Not Applicable
% Volatile	None

10. Stability and reactivity

Stability	Stable
Conditions to avoid	Not known
Incompatibility with other	Not known
Substances Hazardous Decomposition	None
Product Hazardous polymerization	None
Other hazards	Dust

11. Toxicological information

Eye contact	May cause mechanical irritation.
Skin contact	No effect expected
Ingestion	Accidental ingestion of small amounts is not expected to cause adverse Effects.
Inhalation	Inhalation of dust may cause shortness of breath,tightness of the chest, A sore throat and cough. This product may contain small amounts of Respirable crystalline silica. Repeated or prolonged inhalation of Crystalline silica dust can cause delayed lung injury,and other diseases, Including silicosis and lung cancer.
Sensitization	None
Toxicologically synergistic	Smoked tobacco

Crystalline silica dust is listed by IARC in Group 1 as known to cause Lung cancer in humans, if inhaled Risk of cancer depends on duration And level of exposure.

A.SILICOSIS The major concern is silicosis,caused by the inhalation And retention of respirable crystalline silica dust.Silicosis can exist in Several forms,chronic(or ordinary),accelerated,or acute.Chronic or Ordinary Silicosis (often referred to as Simple Silicosis) is the most Common form of silicosis ,and can occur after many years of exposure To relatively low levels of airborne respirable crystalline silica dust.It is Further defined as either simple or complicated silicosis.Simple silicosis Is characterized by lung lesions(shown as radiographic opacities) less

Than 1 centimeter in diameter,primarily in the upper lung zones.Often, Simple silicosis is not associated with symptoms,detectable changes in Lung function or disability.Simple silicosis may be progressive and may Develop into complicated silicosis or progressive massive fibrosis (PMF).Complicated silicosis or PMF is characterized by lung lesions (shown as radiographic opacities) grater than 1 centimeter in diameter Although there may be no symptoms associated with complicated

Silicosis or PMF , the symptoms, if present,are shortness of breath,

Wheezing,cough and sputum production Complicated silicosis or PMF may be associated with decreased lung Funcation and may be disabling.Advanced complicated silicosis or PMF May lead to death.Advanced complicated silicosis or PMF can result in Heart disease secondary to the lung disease(cor pumonale). Accelerated Silicosis can occur with exposure to high concentrations of Respirable crystalline silica over a relatively short period,the lung . Lesions can appear within five(5) years of the initial exposure.The Progression can be rapid .Accelerated silicosis is similar to chronic or Ordinary silicosis,except that the lung lesions appear earlier and theProgeession is more rapide Acute Silicosis can occur with exposures to very high concentrations of Respirable crystalline silica over a very short time period,sometimes as Short as a few months. The symptoms of acute silicosis includes Progressive shortness of breath,fever,cough and weight loss.Acute Silicosis is fatal.

B.CANCER IARC –The International Agency for Research on Cancer (“IARC”) concluded that there was “sufficient evidence in Humans for the carcinogenicity of crystalline silica in the forms of quartz Or cristobalite from occupational sources is Carcinogenic to human (Group1)”The IARC evaluation noted that “carcinogenicity was not dedcted in all industrial circumstances studies. Carcinogenicity may be dependent on inherent characteristics of the Crystalline silica or on external factors affecting its biological activity or Distribution of its polymorphs.” For further information on the IARC Evaluation,see IARC Monographs on the Evaluation of Carcinogenic

Araisks to Humans,Volume 68,”Silica,Some Silicates.....”(1997). NTP.The National Toxicology Program ,in its Ninth Annual Report on Carcinogens,classified” silica,crystalline (respirable)” as a known

Human carcinogen. OSHA-Crystalline silica (quartz) is not regulated by the U.S. Occupational Sfety and Health Administration as a carcinogen.There Have been many article published on the carcinogenicity of crystalline Silica,which the reader should consult for additional information,the Following are examples of recently published articles.

(1)”Crystalline Silica and Lung Cancer The Problem of Conflicting Evidence,” Indoor Built Environ,Volume 8,pp.121-126(1998);(2) Crystalline Silica and the risk of lung cancer on the potteries,” Occup Environ.Med,Volume 55,pp.779-785(1998); (3) “ Is Silicosis Required for Silica –Associated Lung Cancer?”, American Journal of Industrial Medicine,Volume 37, pp. 252-259(2000);(4)” Silica Silicosis ,and Lung Cancer: A Risk Assessment,”American Journal of Industrial Medicine,Volume 38 pp. 8-18(2000); (5)”Silica ,Silicosis, And Lung Cancer: A Response to a Recent Working Group Report,” Journal of Occupational and Environmmmental Medicine,Volume 42,pp. 704-702(2000).

C.AUTOIMMUNE DISEASES There is evidence that Exposure to respirable crystalline silica (Without silicosis) or that the Disease silicosis is associated with the increased incidence of several Autoimmune disorders,---scleroderma, systemic lupus erythematosus, Rheumatoid arthritis and diseases affecting the kidneys.For a review of The subject the following may be consulted; “Occupational Exposure Crystalline Silica And Autoimmune Disease,” Environmental Health Perspectives,Volume 107, Supplement 5, pp.793-802 (1999): “Occupational Scleroderma,” Current Opinion In Rheumatology,Volum 11.pp.490-494 (1999),

D.TUBERCULOSIS Individuals with silicosis are at increased risk to Develop pulmonary tuberculosis,if exposed to persons with Tuberculosis.The following may be consulted for further information; Occupational Lung Disorders,Third Edition,Chapter 12, entitled “Silicosis and Related Diseases,” Parkes,W.Raymond (1994);”Risk of Pulmonary tuberculosis relative to silicosis and exposure to silica dust In South African gold miners,”Occup Environ Med,Volume 55,pp.496-502(1998)

E. KIDNEY DISEASE There is evidence that exposure to respirable

Crystalline silica (withoutsilicosis)or that the disease silicosis is End stage renal disease.For additional information on the subject,the Following may be consulted;”Kideny Disease and Silicosis” Nephron Volume 85,pp.14-19(2000).

Products Carcinogenic effects

Mutagenic effects

None

Teratogenic effects

None

Target organ effects

Silicosis,Lung cancer.

12. Ecological information

Persistence/Degradability	Not Applicable
Main environmental hazards	None Crystalline silica(quartz) is not known to be ecotoxic;i.e. there is No data which suggests that crystalline silica (quartz)is toxic to birds,Fish,invertebrates,microorganisms or plants. For additional information.On crystalline silica (quartz),see Sections 9(physical and chemical Properties) and 10 (stability and reactivity)of this MSDS.
Aquatic toxicity	This product has no known eco-toxicological effects.
Bioaccumulation potential	None

13. Disposal considerations

Waste from residues/ Unused products	Dispose of by injection or other acceptable method in accordance with local regulations,however,material should be covered to Minimize generation of airborne dust
Contaminated packaging	Dispose of in accordance with local regulations.

14. Transport information

DOT, ADN, IMDG, IATA	Crystallina silica (quartz/Flour) is not a hazardous material for purposes of transportation under the U.S. Department of Transportation Table of Hazardous Materials,49 CFR -172 101.
ADR	N/A
ADNR	N/A
RID	N/A
IATA	Not Regulated
IMO	Not Regulated
Transport in Bulk	Not Available

15. Regulatory information

OSHA	Not available
HMIS(U.S.A)	Health Hazard:1 Fire Hazard:0 Reactivity :0
National Fire Protection Association (U.S.A)	Health :1 Flammability:0 Reactivity :0 Specific hazard

16. Other information

Other
Information

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall we be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if **Rx Marine International** has been advised of the possibility of such damages.

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