



Redi-Plug

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name Redi-Plug
Product Identifier Redi-Plug
MSDS No. 0027
Product Family Construction Products-Repair Mortar
Manufacturer / Supplier King Packaged Materials Company, 3385 Harvester Road, Burlington, Ontario, L7R 3Y5
Emergency Contact Information King Packaged Materials Company, (800) 461-0566, 8:30am-4:30pm
Use Repairs cracks in concrete sewer pipes, manholes, catch basins, tanks or any other concrete or masonry surfaces that are under hydrostatic water pressure.

2. HAZARDS IDENTIFICATION

Potential Health Effects

Route of Exposure Inhalation; ingestion; skin absorption; eye contact.
Inhalation Exposure to airborne concentrations above exposure limits may cause irritation of the nose, throat and lungs.
Skin Contact May cause dry skin, discomfort and irritation.
Eye Contact Airborne dust may cause immediate or delayed irritation or inflammation.
Effects of Long-Term (Chronic) Exposure Risk of injury depends on duration and level of exposure.
Carcinogenicity CARCINOGEN. Risk of cancer depends on duration and level of exposure.
Teratogenicity / Embryotoxicity No information was located.
Reproductive Toxicity No information was located.
Mutagenicity No information was located.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS Registry No.	Concentration %	Other Identifiers
Portland cement	65997-15-1	60-100%	
Silica, total quartz	14808-60-7	30-60%	
Fly Ash	68131-74-8	1-5%	
Sodium hydroxide	1310-73-2	1-5%	

Notes Other additives not controlled through WHMIS or other legislation.

4. FIRST AID MEASURES

First Aid Procedures

Inhalation Move victim to fresh air. Seek medical attention for discomfort or if coughing or other symptoms do not subside.
Skin Contact Seek medical attention for rash, burns, irritation, dermatitis and prolonged unprotected

MSDS Name: Redi-Plug - Ver. 1
MSDS No.: 0027
Date of Preparation: April 03, 2014

Eye Contact	exposures to wet cement, cement mixtures or liquids from wet cement. Immediately flush the contaminated eye(s) with lukewarm, gently flowing water for 15-20 minutes, while holding the eyelid(s) open. Seek medical attention for abrasions.
Ingestion	NEVER give anything by mouth if victim is rapidly losing consciousness, or is unconscious or convulsing. DO NOT INDUCE VOMITING. If conscious, give victim a glass of water or milk. Immediately call a Poison Centre or doctor.
Note to Physicians	Additional Notes - Silicosis - There are three (3) types of silicosis: <p>1) Simple chronic silicosis - which results from long-term exposure (more than 20 years) to low amounts of respirable crystalline silica. Nodules of chronic inflammation and scarring provoked by the respirable crystalline silica form in the lungs and chest lymph nodes. This disease may feature breathlessness and may resemble chronic obstructive pulmonary disease (COPD).</p> <p>2) Accelerated silicosis - occurs after exposure to larger amounts of respirable crystalline silica over a shorter period of time (5-15 years). Inflammation, scarring, and symptoms progress faster in accelerated silicosis than in simple silicosis.</p> <p>3) Acute silicosis - results from short-term exposure to very large amounts of respirable crystalline silica. The lungs become very inflamed and may fill with fluid, causing severe shortness of breath and low blood oxygen levels.</p> <p>Progressive massive fibrosis may occur in simple or accelerated silicosis, but is more common in the accelerated form. Progressive massive fibrosis results from severe scarring and leads to the destruction of normal lung structures.</p>

5. FIRE FIGHTING MEASURES

Flammable Properties	Does not burn.
Suitable Extinguishing Media	Not combustible. Use extinguishing agent suitable for surrounding fire.
Unsuitable Extinguishing Media	DO NOT use carbon dioxide, or other agents that smother the flames.
Specific Hazards Arising from the Chemical	None known.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions	Use the Personal Protective Equipment recommended in Section 8 of this MSDS.
Environmental Precautions	Do not allow into any sewer, on the ground or into any waterway.
Methods for Containment and Clean-up	Avoid generating dust. Allow material to dry or solidify before disposal.

7. HANDLING AND STORAGE

Handling	Stack bagged material in a secure manner to prevent falling. Only use where there is adequate ventilation. Avoid generating dusts. Bagged product is heavy and poses risks such as sprains and strains to the back, the arms, the shoulders and the legs during lifting and mixing.
Storage	Keep away from food and drinking water. Store in an area that is: dry. Store in the original, labelled, shipping container. Keep containers tightly closed when not in use.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines

Chemical Name	ACGIH TLV®		OSHA PEL		AIHA WEEL	
	TWA	STEL	TWA	Ceiling	8-hr TWA	TWA
Portland cement	1 mg/m ³ (R) A4		5 mg/m ³ (R)			
Silica, total quartz	0.05 mg/m ³ (R) A2		0.1 mg/m ³			
Sodium hydroxide	2 mg/m ³		2 mg/m ³			

Engineering Controls If user operations generate dust, fume, or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

Personal Protective Equipment (PPE)

Eye/Face Protection Approved safety eye wear should be worn, based on the risk assessments performed.

Skin Protection Personal protective equipment for the body should be selected based on the task being performed. This includes gloves, coveralls and footwear. Approved gloves should be worn based on risk assessments.

Respiratory Protection Use of an approved respirator, based on a risk assessment is necessary. Respiratory protection should be selected based on the known or anticipated levels of exposure, and the work being performed.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Solid
Appearance	Solid powder.
Odour	Odourless
Odour Threshold	Not available
Boiling Point	Not applicable
Freezing Point	Not applicable
Relative Density (water = 1)	2.5
pH	Not available
Partition Coefficient, n-Octanol/Water	Not applicable
Vapour Pressure	Not applicable
Vapour Density (air = 1)	Not applicable
Evaporation Rate	Not applicable
Flash Point	Not applicable
Lower Flammable/Explosive Limit	Not applicable
Upper Flammable/Explosive Limit	Not applicable
Auto-ignition Temperature	Not applicable

10. STABILITY AND REACTIVITY

Chemical Stability	Normally stable.
Conditions to Avoid	Water, moisture or humidity.
Incompatible Materials	None known.

MSDS Name: Redi-Plug - Ver. 1
MSDS No.: 0027
Date of Preparation: April 03, 2014

Hazardous Decomposition Products Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Possibility of Hazardous Reactions None known.

11. TOXICOLOGICAL INFORMATION

LC50/LD50 Values

Chemical Name	LC50	LD50 (oral)	LD50 (dermal)
Silica, total quartz		500 mg/kg (rat)	

LC50: No information was located.

LD50 (dermal): No information was located.

Skin Irritation / Corrosion

Animal tests show skin corrosion. (Sodium hydroxide)

Eye Irritation / Corrosion

Animal tests show corrosive eye damage. (Sodium hydroxide)

Effects of Short-Term (Acute) Exposure

Inhalation

At low concentrations: May cause lung inflammation At high concentrations: May cause lung injury. lung inflammation. (Silica, total quartz)

Effects of Long-Term (Chronic) Exposure

(Silica, total quartz) Lung damage, such as inflammation, silicosis (scarring of the lungs) and alveolar proteinosis (a condition where a type of protein builds up in the alveoli) have been observed in several different animal species following exposures to quartz ranging from one week to 27 months.

Respiratory and/or Skin Sensitization

Not a respiratory sensitizer. Not a skin sensitizer. Reactions have been observed after crystalline silica has accidentally gotten lodged under the skin, as the result of a physical injury. Often this effect is delayed for weeks to years.(1). (Silica, total quartz)

Carcinogenicity

Chemical Name	IARC	ACGIH®	NTP	OSHA
Silica, total quartz	Group 1	A1	Known carcinogen	

Key to Abbreviations

IARC = International Agency for Research on Cancer. Group 1 = Carcinogenic to humans. ACGIH® = American Conference of Governmental Industrial Hygienists. A1 = Confirmed human carcinogen.

Teratogenicity / Embryotoxicity

No information was located.

Reproductive Toxicity

No information was located.

Mutagenicity

Not mutagenic.

Toxicologically Synergistic Materials

No information was located.

12. ECOLOGICAL INFORMATION

General Comments There are no known significant effects or critical hazards.

MSDS Name: Redi-Plug - Ver. 1
MSDS No.: 0027
Date of Preparation: April 03, 2014

13. DISPOSAL CONSIDERATIONS

The generation of waste should be avoided or minimized wherever possible. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Store product for disposal as described under Storage in Section 7 of this MSDS.

14. TRANSPORT INFORMATION

Other Transport Information

Special Shipping Information Not applicable

15. REGULATORY INFORMATION

Canada

WHMIS Classification



Class D2A



Class E

D2A - Very Toxic (Chronic toxicity; Carcinogenicity); E - Corrosive

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by the Controlled Products Regulations.

16. OTHER INFORMATION

MSDS Prepared By King Packaged Materials

Phone No. 905-639-2993

Date of Preparation April 03, 2014

Disclaimer To the best of our knowledge, the information contained herein is accurate. However, neither KPM Industries Ltd., nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

MSDS Name: Redi-Plug - Ver. 1

MSDS No.: 0027

Date of Preparation: April 03, 2014

Page 05 of 05