

MSDS

Material Safety Data Sheet

Effective Date: March 15, 2005

From: **BIOLIFE, LLC**
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Phone: 941-360-1300
or Local Poison Control

QR Powder (Packaged in individual packages)

1. Product Identification

Synonyms: QR for cuts and lacerations, QR for nosebleeds, Sports QR, Nosebleed QR, Kids QR, Urgent QR, powder to stop bleeding by Biolife LLC

Molecular Weight: N/A – It is a mixture of 2 components.

Appearance: The powder is distributed in individual peel to open tear drop shaped blister packs. It may also be distributed packaged in or with an applicator.

2. Identification of Components

Identification	Percent by Wt
Potassium Salt	5 to 20
Ion Exchange Resin	80 to 95

3. Hazard Information

Health Rating: 1

Flammability Rating: 0

Reactivity Rating: 2

Personal Equipment Needed: N/A

A reactivity rating of 2 is due to the powder's friction based exothermic absorption of water. Thicker liquids, such as blood, absorb more slowly thus reducing the amount of heat generated. Large quantities of powder will generate considerable heat when mixed with water.

Potential Health Effects:

Inhalation:

The powder is a respiratory irritant.

Ingestion:

The major concern with ingestion is iron absorption by the person. The polymer will pass thru the digestive track.

Skin Contact:

The dry powder will dehydrate the skin and may react exothermically with any moisture on the skin. (e.g. perspiration)

Eye Contact:

Even minute quantities in the air are an irritant to the eyes and should be avoided. Accidental eye contact could result in severe burns to the eye, and even irreparable damage. The polymer portion of the powder is a solid material and may scratch or continue to irritate the surface of the eye.

Chronic Exposure:

N/D

Other:

QR Powder reacts exothermically when exposed to water. This could result in a physical burn.

Application of the powder to an exposed dry wound will result in a stinging sensation, because of the salt portion of the powder.

4. First Aid Measures

Inhalation:

Remove the person to fresh air.
Seek medical attention as needed.

Ingestion:

Do not induce vomiting.
For amounts of less than 600mg/kg body weight, give the person lots of water. The material should pass thru the digestive track. If complication occurs then seek medical attention. The major health concern with ingestion is the amount of iron that is ingested. See Toxicological Information below for calculations.
Seek medical attention as needed.

Eye Contact:

Move very quickly and flush the eye with running water for at least 15 minutes. Be sure to wash under the eyelids.

Seek medical attention as needed.

Skin Contact:

Remove the dry powder from the skin with a brush or vacuum. Then wash the area with running water, or a large volume of water. **Caution:** Using a small volume of water to try to remove a large quantity of powder could result in a burn, due to the powder's exothermic reaction with water.

Seek medical attention as needed.

Other:

5. Fire Fighting Information

Combustibility:

Flash Point: Method 1010, PEL Laboratories, Inc, No Flash

Explosive Nature:

Explosive Limits: N/D

Fire Extinguishing Media:

Do not use foam or water.

Extinguish fires with CO₂, dry chemicals, sand, soda ash, or evacuate the area and allow the fire to burn.

Other:

6. Accidental Release Measures

Wear appropriate personal protective equipment. Remove sources of ignition, and ventilate the area. Pick up material in a way to avoid creating dust and dispose in an appropriate container. Properly report any spills that may be an environmental concern.

Disposal of the material is to be conducted in compliance with all governmental regulations.

7. Handling and Storage

Keep the packages in a cool dry environment. If the powder is removed from its protective packaging dispose of it because it will inactivate itself by absorbing moisture

from the air. Once the powder goes from the dark brown to the light tan color it is no longer useful.

8. Exposure Controls and Personal Protection

Osha Permissible Exposure Limit (PEL): N/D

AGGIH Threshold Limit Value (TLV): N/D

Ventilation:

Work in a well ventilated facility. Avoid concentrating the dust in a confined work area.

Respiratory Protection: N/A

Other Personal Protection Equipment: N/A

9. Physical and Chemical Properties

Appearance: Brown powder

Odor: None

Solubility: Polymer portion is insoluble

Density (g/ml): Approximately 1

pH: N/A (solid powder)

Vapor Pressure (mmHg): N/A (solid powder)

% Volatile by Volume: N/A (solid powder)

Freezing Point: N/A (solid powder)

Melting Point: N/A (solid powder)

Sublimation Point: Polymer portion of the powder will sublime at >300°C

10. Stability and Reactivity

Stability:

If the material is kept dry and near 25°C it is very stable. It will exothermically react with water and other liquids, producing O₂ (g) as it decomposes.

Decomposition Products:

The Polymer under normal conditions will not decompose, but the salt decomposes when wetted. There is interaction between the two species in the mixture when wetted. The byproducts are polymer, iron oxide, and oxygen.

Incompatibilities:

N/A under designed usages

Conditions to Avoid:

N/A under designed usages

11. Disposal Measures

Disposal of the material is to be conducted in compliance with all governmental regulations.

12. Toxicological Information

Toxic levels of Iron = 30 mg/kg

Approximately 5% of the QR powder is Iron

Toxic levels of iron (30mg/kg) may be reached from QR ingestion at an ingestion rate = 600 mg/kg body weight (calculated)

A 10kg child would have to eat >14 QR individual packages for nosebleed or >20QR individual packages or QR for cuts and lacerations to ingest an amount of iron to be near the toxic levels. This is assuming that 100% of the iron is absorbed, which will not be the case. Some of the iron will be bound to the polymer thru a chemical reaction, and some of the iron will pass thru the body in a non absorbable form.

Information taken from the National CDC web site.

“Although a toxic dose of elemental iron is 30 mg/kg, and a fatal dose is typically more than 250 mg/kg, ingestion of doses as low as 60 mg/kg have resulted in death.”

Baker MD. Iron. In: Noji EK, Kelen GD, eds. Manual of toxicologic emergencies. Chicago: Year Book Medical Publishers, 1989:496-506

13. Miscellaneous Additional Information

Storage and Labeling:

Do not remove the powder from the package until it is to be used.

First Aid Label:

Disclaimer:

The submission of the MSDS is required by law and is not an assertion that the product is hazardous when used in the proper conditions, by trained individuals. The information herein is dependable and accurate to the best of Biolife L.L.C.'s knowledge. There is no assertion to any claims if this product is combined with any other material.

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