

MSDS

Material Safety Data Sheet

Effective Date: May 1, 2009

From: **BIOLIFE, LLC**
1235 Tallevast Rd
Sarasota, FL 34243

Phone: 941-360-1300
or Local Poison Control

WoundSeal Powder (Packaged in individual packages)

1. Product Identification

Synonyms: QR (Quick Relief)[®] for Minor External Bleeding from Wounds and Procedures

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

Appearance: brown powder

Package Size: <1g

2. Identification of Components

Identification	Percent by Wt
Potassium Ferrate	10 to 15
Ion Exchange Resin	85 to 90

3. Hazard Information

Health Rating: 1

Flammability Rating: 0

Reactivity Rating: 2

Personal Equipment Needed: eye protection, dust mask, gowning

A reactivity rating of two is due to the powder's 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:

If inhaled, the powder may be a temporary respiratory irritant.

Ingestion:

The powder will pass thru the digestive track.

Skin Contact:

The dry powder is not a skin irritant.

Eye Contact:

The powder is an irritant to the eyes contact should be avoided.

Chronic Exposure:

N/D

Other:

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

Application of the powder to an exposed dry wound may result in a stinging sensation

4. First Aid Measures

Inhalation:

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

Ingestion:

Do not induce vomiting.
Seek medical attention as needed.

Eye Contact:

Flush the eye with running water for at least 5 minutes. The eye may be temporarily red.
Seek medical attention as needed.

Skin Contact:

Remove the dry powder from the skin with a brush.
Rinse the dry powder with a large volume of water.
Seek medical attention as needed.

5. Fire Fighting Information

Combustibility:

Flash Point: No Flash

Explosive Nature:

Explosive Limits: N/D

Fire Extinguishing Media:

Do not use foam or water.

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

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 dark brown to 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; slightly astringent

Solubility: Insoluble

Density (g/ml): 0.8

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 $>300^{\circ}\text{C}$

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 O_2 (g) as it decomposes.

Decomposition Products:

The byproducts of decomposition when wetted are polymer, iron oxide, and oxygen.

Hazardous Decomposition Products

None Known

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

N/D

13. Miscellaneous Additional Information

Storage and Labeling:

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

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 LLC's knowledge. There is no assertion to any claims if this product is combined with any other material.

Biolife LLC is providing the contained herein information in good faith, but is making no assertion or claim that it is accurate or is comprehensive. The aforementioned information in this document is solely meant as a guide to the precautionary handling of packaged product by a properly trained person using this product. The properly trained individual using this product must use their expertise and independent judgment to determine the appropriate use for this product. Biolife LLC makes no warranty or representation that this information is complete, and is applicable to any situation. Biolife L.L.C. will not be held accountable for any damage resulting from the use or reliance on the aforementioned information contained within this document.