

SAFETY DATA SHEET

Section 1 IDENTIFICATION

Product Name: WoundSeal

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

Recommended uses: First aid for Bleeding Wounds

Recommended Restriction: Use only as directed

Manufacturer: Biolife LLC
8163 25th Court
Sarasota, FL, 34243 USA

Telephone number: 941-360-1300
www.biolife.com

2. HAZARD(S) IDENTIFICATION

Classification:

Physical	Health
Not Hazardous	Not Hazardous

Label Elements: None Required

3. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical name	CAS No.	Concentration
Ion Exchange Resin	Proprietary	85-90%
Potassium Ferrate	Proprietary	10-15%

The specific identity and/or exact percentage of composition has been withheld as a trade secret.

4. FIRST-AID MEASURES

Inhalation: Remove victim to fresh air. If irritation occurs, get medical attention.

Skin contact: This product is intended for use on the skin. No adverse effects are expected.

Eye contact: Flush eyes thoroughly with water for several minutes while lifting the upper and lower lids. Get medical attention if irritation persists.

Ingestion: Rinse mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if any adverse effects occur.

Most important symptoms/effects, acute and delayed: May cause mild eye and skin irritation. Inhalation of dust may cause upper respiratory tract irritation with coughing and sneezing. Ingestion may cause gastrointestinal irritation, nausea and vomiting.

Indication of immediate medical attention and special treatment, if necessary: Immediate medical attention is not required under normal use conditions.

5. FIRE-FIGHTING MEASURES

Suitable (and unsuitable) extinguishing media: Use dry chemical, sand or soda ash. Do not use water or foam.

Specific hazards arising from the chemical: This product is not flammable or combustible. Polymer portion of the powder will sublime at $>300^{\circ}\text{C}$.

Special protective equipment and precautions for fire-fighters: Firefighters should wear positive pressure self-contained breathing apparatus and full protective clothing for all fires involving chemicals.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment, and emergency procedures: Wear appropriate protective clothing and equipment as described in Section 8. Wash thoroughly after handling.

Environmental hazards: Prevent spill from entering sewers and water courses. Report releases as required by local and national authorities.

Methods and materials for containment and cleaning up: Pick up material in a way to avoid creating dust and dispose in an appropriate container.

7. HANDLING AND STORAGE

Precautions for safe handling: Keep the package closed until ready to use. Wash hands thoroughly after handling.

Conditions for safe storage, including any incompatibilities: Store in a cool, dry location.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure guidelines:

Ion Exchange Resin	None Established
Potassium Ferrate	None Established

Appropriate engineering controls: Good general room ventilation (equivalent to outdoors) should be adequate under normal conditions. If exposures are excessive increased mechanical ventilation such as local exhaust may be required.

Individual protection measures, such as personal protective equipment:

Respiratory protection: None needed under normal use conditions. If exposures are excessive, use a NIOSH approved dust/mist respirator. Selection of respiratory protection depends on the contaminant type, form and concentration. Select in accordance with OSHA 1910.134 and good Industrial Hygiene practice.

Skin protection: None required. Wash hands thoroughly after handling.

Eye protection: Follow facility requirements.

Other: None required.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Brown powder

Odor: None to slightly astringent

Odor threshold: Not available	pH: Not applicable
Melting point/freezing point: Polymer portion of the powder will sublime at >300°C	Initial boiling point and boiling range:
Flash point: Not applicable	Evaporation rate: Not applicable
Flammability (solid, gas): Not flammable	
Flammable limits: LEL: Not applicable	UEL: Not applicable
Vapor pressure: Not applicable	Vapor density: Not applicable
Relative density: 0.8	Solubility in Water: Insoluble
Partition coefficient: n-octanol/water: Not applicable	Auto-ignition temperature: Not applicable
Decomposition temperature: Not available	Viscosity: Not applicable

10. STABILITY AND REACTIVITY

Reactivity: May react with water and moisture.

Chemical 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 oxygen as it decomposes.

Possibility of hazardous reactions: Reacts with water and moisture.

Conditions to avoid: Avoid unintentional moisture and contact the air.

Incompatible materials: Avoid oxidizing agents.

Hazardous decomposition products: Thermal decomposition may produce oxygen and iron oxide.

11. TOXICOLOGICAL INFORMATION

Acute effects of exposure:

Inhalation: Inhalation of dust may cause mild upper respiratory irritation with coughing and sneezing.

Ingestion: Swallowing large amounts may cause gastrointestinal irritation, nausea and vomiting.

Skin contact: May cause mild skin irritation. This product reacts exothermically when exposed to water. This may result in a physical burn.

Eye contact: May cause mild irritation with redness and tearing.

Chronic Effects: None known.

Germ Cell Mutagenicity: None of the components have been shown to cause germ cell mutagenicity.

Reproductive Toxicity: None of the components have been shown to cause reproductive or developmental effects.

Carcinogenicity: None of the components of this product are listed as carcinogens or suspected carcinogens by IARC, NTP, ACGIH or OSHA.

Acute toxicity values:

Product: Oral rat LD50 >5000 mg/kg; Dermal rabbit LD50>2000 mg/kg

12. ECOLOGICAL INFORMATION

Ecotoxicity:

Ion Exchange Resin: No data available.

Potassium Ferrate; No data available

Persistence and degradability: Biodegradation is not applicable to inorganic substances.

Bioaccumulative potential: This product is not expected to bioaccumulate.

Mobility in soil: No data available

Other adverse effects: None known

13. DISPOSAL CONSIDERATIONS

Dispose in accordance with all local, state and federal regulations.

14. TRANSPORT INFORMATION

	UN Number	Proper shipping name	Hazard Class	Packing Group	Environmental Hazard
DOT		Not Regulated			
TDG		Not Regulated			
IMDG		Not Regulated			
IATA		Not Regulated			

Transport in bulk (according to Annex II of MARPOL 73/78 and the IBC Code): Not applicable – product is transported only in packaged form.

Special precautions: None known

15. REGULATORY INFORMATION

Safety, health, and environmental regulations specific for the product in question.

CERCLA Hazardous Substances (Section 103)/RQ: This product is not subject to CERCLA reporting requirements as it is sold. Many states have more stringent release reporting requirements. Report spills required under federal, state and local regulations.

SARA Hazard Category (311/312): Not hazardous

EPA SARA 313: This product contains the following chemicals regulated under SARA Title III, section 313:
None

EPA TSCA Inventory: All of the components of this product are listed on the TSCA inventory.

16. OTHER INFORMATION

NFPA Rating: Health = 1 Flammability = 0 Instability = 2
HMIS Rating: Health = 1 Flammability = 0 Physical Hazard = 2

SDS Revision History: New SDS

Date of preparation: November 4, 2016

Date of last revision: New SDS