

MATERIAL SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: **Electrode Filling Solution with Ag/AgCl**
Catalog Number: **RFOZAG**

Analytical Sensors & Instruments, Ltd.
12800 Park One Drive
Sugar Land, TX USA 77478
Telephone Numbers: (281) 565-8818 (8am - 5pm CST)

MSDS Number: RFOZAG
Chemical Name: Not applicable
CAS No.: Not applicable
Chemical Formula: Not applicable
Chemical Family: Not applicable
Hazard: May cause eye irritation.
Date of MSDS Preparation:
1/1/2008

2. COMPOSITION/INFORMATION ON INGREDIENTS

Demineralized Water

CAS No.: 7732-18-5
TSCA CAS Number: 7732-18-5
Percent Range:
65.0-75.0
Percent Range Units: volume/volume
LD50: None reported
LC50: None reported
TLV: Not established
PEL: Not established
Hazard: No effects anticipated.

Silver Chloride

CAS No.: 7783-90-6
TSCA CAS Number: 7783-90-6
Percent Range: <1.0
Percent Range Units: weight/volume
LD50: Oral mouse
LD50>10g/kg;
Oral guinea pig LD50>5g/kg
LC50: None reported
TLV: 0.01mg/m³ (as Ag soluble salts)
PEL: Not Established
Hazard: May cause irritation.

Potassium Chloride

CAS No.:7447-40-7
TSCA CAS Number: 7447-40-7
Percent Range: 25.0-35.0
Percent Range Units: weight/volume
LD50: Oral rat
LD50=2600mg/kg
LC50: None reported.
TLV: Not established.
PEL: Not established.
Hazard: May cause irritation.

3. HAZARDS IDENTIFICATION

Emergency Overview:
Appearance: Clear, colorless liquid
Odor: None
MAY CAUSE EYE IRRITATION

HMIS:
Health: 1
Flammability: 0
Reactivity: 0
Protective Equipment: X – see protective equipment, Section 8.

NFPA:
Health: 1
Flammability: 0
Reactivity: 0
Symbol: Not applicable

Potential Health Effects:
Eye Contact: May cause irritation
Skin Contact: None reported
Skin Absorption: None reported
Target Organs: None reported
Ingestion: Very large doses may cause: abdominal cramps weakness circulatory disturbances heart problems central nervous system effects
Target Organs: Central nervous system
Inhalation: No effects anticipated
Target Organs: Not applicable
Medical Conditions Aggravated: Pre-existing Kidney conditions
Chronic Effects: None reported

Cancer/Reproductive Toxicity Information:
This product does NOT contain any OSHA listed carcinogens.
This product does NOT contain any IARC listed chemicals.
This product does NOT contain any NTP listed chemicals.

Additional Cancer/Reproductive Toxicity Information: None reported
Toxicologically Synergistic Products: None reported

4. FIRST AID

Eye Contact:
Immediately flush eyes with water for 15 minutes. Call physician.
Skin Contact (First Aid): Wash skin with plenty of water.
Ingestion (First Aid): Give large quantities of water. Call physician immediately.
Inhalation: None required.

5. FIRE FIGHTING MEASURES

Flammable Properties: Material will not burn.
Flash Point: Not applicable
Method: Not applicable
Flammability Limits:
Lower Explosion Limits: Not applicable
Upper Explosion Limits: Not applicable
Auto ignition Temperature: Not applicable
Hazardous Combustion Products: Not applicable
Fire/Explosion Hazards: None reported
Static Discharge: Nonreported.
Mechanical Impact: None reported
Extinguishing Media: Use media appropriate to surrounding fire conditions
Fire Fighting Instruction: As in any fire, wear self-contained breathing apparatus pressure-demand and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Spill Response Notice: Only persons properly qualified to respond to an emergency involving hazardous substances may respond to a spill according to federal regulations (OSHA 29CFR1910.120(a)(v)) and per your company's emergency response plan and guidelines/procedures. See Section 13, Special Instructions for disposal assistance.

Containment Technique: Releases of this material may contaminate the environment. Absorb spilled liquid with non-reactive sorbent material. Stop spilled material from being released to the environment. Dike the spill to contain material for later disposal.

Clean-up Technique: Absorb spilled liquid with non-reactive sorbent material. Sweep up material. Dispose of material in an E.P.A. approved hazardous waste facility. Decontaminate the area of the spill with a soap solution.

Evacuation Procedure: Evacuate as needed to perform spill clean-up. If conditions warrant, increase the size of the evacuation.

Special Instructions (for accidental release):
Product is regulated as RCRA hazardous waste.
304 EHS RQ (40CFR355): Not applicable
D.O.T. Emergency Response Guide Number: None

7. HANDLING/STORAGE

Handling: Avoid contact with eyes Wash thoroughly after handling.
Maintain general industrial hygiene practices when using this product.
Storage: Keep container tightly closed when not in use.
Flammability Class: Not applicable

8. EXPOSURE CONTROLS/PROTECTIVE EQUIPMENT

Engineering Controls: Have an eye wash station nearby. Maintain general industrial hygiene practices when using this product.
Personal Protective Equipment:
Eye Protection: safety glasses with top and side shields
Skin Protection: lab coat disposable latex gloves
Inhalation Protection: adequate ventilation
Precautionary Measures: Avoid contact with: eyes Wash thoroughly after handling.
TLV: Not established
PEL: Not established

9. PHYSICAL/CHEMICAL PROPERTIES

Appearance: Clear, colorless liquid
Physical State: Liquid
Molecular Weight: Not applicable
Odor: None
pH: 5.5-8.0
Vapor Pressure: Not determined
Vapor Density (air=1): Not determined
Boiling Point: 106°C
Melting Point: -6°C
Specific Gravity (water=1): 1.12
Evaporation Rate (water=1): Not determined
Volatile Organic Compounds Content: Not applicable
Partition Coefficient (n-octanol/water): Not applicable
Solubility:
 Water: Miscible
 Acid: Miscible
Metal Corrosivity:
 Steel: Not determined
 Aluminum: Not determined

10. STABILITY/REACTIVITY

Chemical Stability: Stable when stored under proper conditions.
Conditions to Avoid: Extreme temperatures
Evaporation Reactivity/Incompatibility: May react violently in contact with: brominotrifluoride sulfuric acid
Hazardous Decomposition: None reported
Hazardous Polymerization: Will not occur.

11. TOXICOLOGICAL INFORMATION

Product Toxicological Data

LD50: None reported
LC50: None reported
Dermal Toxicity Data: None reported
Skin and Eye Irritation Data: None reported
Mutation Data: None reported
Reproductive Effects Data: None reported

Ingredient Toxicological Data:
Potassium Chloride:
Oral rat LD50=2600mg/kg,
Oral human LDLo =20mg/kg

Silver Chloride:
Oral mouse LD50 > 10g/kg

12. ECOLOGICAL INFORMATION

Product Ecological Information: No ecological data available for this product.
Ingredient Ecological Information:--No ecological data available for the ingredients of this product.

13. DISPOSAL CONSIDERATIONS

EPA Waste ID Number: D011
Special Instructions (Disposal): Dispose of material in an E.P.A. approved hazardous waste facility.
Empty Containers: Rinse three times with an appropriate solvent. Dispose of empty container as normal trash.
NOTICE (Disposal): These disposal guidelines are based on federal regulations and may be superseded by more stringent state or local requirements. Please consult your local environmental regulators for more information.

14. TRANSPORT INFORMATION

D.O.T.:
D.O.T. Proper Shipping Name: Not Currently Regulated
DOT Hazard Class: NA
DOT Subsidiary Risk: NA
DOT ID Number:NA
DOT Packing Group: NA

I.C.A.O.:
I.C.A.O. Proper Shipping Name: Not Currently Regulated
ICAO Hazard Class: NA
ICAO Subsidiary Risk: NA
ICAO ID Number: NA
ICAO Packing Group: NA

I.M.O.:
I.M.O. Proper Shipping Name: Not Currently Regulated
I.M.O. Hazard Class: NA
I.M.O. Subsidiary Risk: NA
I.M.O. ID Number: NA
I.M.O. Packing Group: NA

15. REGULATORY INFORMATION

U.S. Federal Regulations:
O.S.H.A.: This product meets the criteria for a hazardous substance as defined in the Hazard Communication Standard. (29CFR1910.1200)
E.P.A.:
S.A.R.A. Title III Section311/312 Categorization (40CFR370): Immediate (Acute) Health Hazard
S.A.R.A. Title III Section313 (40CFR372): This product does NOT contain any chemical subject to the reporting requirements of Section313 of Title III of SARA.

302(EHS) TPQ (40CFR355): Not applicable
304 CERCLA RQ (40CFR302.4): Not applicable
304 EHSRQ (40CFR355): Not applicable
Clean Water Act (40CFR116.4): Not applicable
RCRA: Contains RCRA regulated substances. See Section13,
EPA Waste ID Number .C.P.S.C.: Not applicable

State Regulations: California Prop. 65: No Prop. 65 listed chemicals are present in this product.

Identification of Prop. 65 Ingredient(s): Not applicable

Trade Secret Registry: Not applicable

National Inventories: U.S. Inventory

Status: All ingredients in this product are listed on the TSCA 8(b) Inventory (40CFR710).

TSCA CAS Number: Not applicable

Intended Use: Electrode filling solution

References: 29 CFR 1900-1910 (Code of Federal Regulations - Labor). The Merck Index, 11th Ed. Rahway, New Jersey: Merck and Co., Inc. Fire Protection Guide on Hazardous Materials, 10th Ed. Quincy, MA: National Fire Protection Association, 1991.

Revision Summary: NA

Legend:

NA - Not Applicable

w/w - weight/weight

ND - Not Determined

w/v - weight/volume

NV - Not Available

v/v - volume/volume

USER RESPONSIBILITY: Each user should read and understand this information and incorporate it in individual site safety programs in accordance with applicable hazard communication standards and regulations.

THE INFORMATION CONTAINED HEREIN IS BASED ON DATA CONSIDERED TO BE ACCURATE. HOWEVER, NO WARRANTY IS EXPRESSED OR IMPLIED REGARDING THE ACCURACY OF THESE DATA OR THE RESULTS TO BE OBTAINED FROM THE USE THEREOF.

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