

SAFETY DATA SHEETS

This SDS packet was issued with item:

078462746

The safety data sheets (SDS) in this packet apply to the individual products listed below. Please refer to invoice for specific item number(s).

078462753



Research Associates, Inc.

P.O. Box 996 • Bensenville, IL 60106

Toll Free: 888 • 330 • 8387 • Fax: 630 • 766 • 6000

MATERIAL SAFETY DATA SHEET (MSDS)

PRODUCT NAME: Apple-X

DATE UPDATED: 9/20/07

PREP'D BY: Nick Cinquino

SECTION 1: PRODUCT IDENTIFICATION

Product Name: Apple-X

Synonyms: Electrolytes

Research Associates Product #: 36

Product Type: Nutritional source of electrolytes and trace minerals for horses.

SECTION 2: INGREDIENTS

Salt, Potassium chloride, Sodium bicarbonate, Calcium carbonate, Magnesium sulfate, Calcium lactate, Zinc sulfate, Artificial apple flavor, Manganese sulfate, Copper sulfate, Cobalt sulfate.

NOTE: Ingredients are listed in order of decreasing concentration down to less than 1% w/w.

NOTE: Actual ingredient percentages are proprietary.

SECTION 3: PHYSICAL DATA

Appearance:	White granular powder
Solubility:	Soluble in water.
Odor:	Apple
Boiling Point/Melting Point:	Does not boil or melt below 400F

SECTION 4: FIRE AND EXPLOSION HAZARD DATA

Flash Point:	Does not flash below 212 F
Extinguishing Media:	Water.
Other required equipment:	Face mask.
Other Notes:	

SECTION 5: TECHNICAL ASSISTANCE AND EMERGENCY INFORMATION

Contact: Nick Cinquino	PHONE# 888-330-8387 8:00AM-4:30PM Central Time
------------------------	--

SECTION 6: HEALTH HAZARD DATA

EYES:	Dusts may be irritating to eyes. Use goggles if exposed to dust from this product.
SKIN:	May be irritating to skin. Use gloves and protective clothing if skin is exposed to Apple-X.
RESPIRATORY:	Avoid breathing dusts. Use a dust/vapor mask if exposed to dusts for long periods of time.

SECTION 7: CHEMICAL REACTIVITY DATA

STABILITY:	Stable. Store in a cool, dry place, out of direct sunlight.
CONDITIONS TO AVOID:	Open flame, heat, sparks or other sources of ignition.

INCOMPATIBLE CHEMICALS:
HAZARDOUS DECOMPOSITION PRODUCTS:
CORROSIVE TO METALS?

N/A
N/A
Slight

SECTION 8: SPECIAL PROTECTION INFORMATION

PREVENTION:
RESPIRATORY:
VENTILATION:
EYE:
CLOTHING:

Keep all containers sealed to prevent hazards
Use dust mask if needed.
Not required
Use goggles to protect from dust.
Use protective clothing if in contact with material for extended periods.

SECTION 9: ENVIRONMENTAL PROTECTION

ENVIRONMENTAL TOXICITY DATA
SPILL AND LEAK PROCEDURES
WASTE DISPOSAL

N/A
Contain spill, sweep up and dispose of properly.
Small quantities may be disposed down the drain with water.

SECTION 10: SHIPPING DATA

D.O.T. Shipping Name
Bill Of Lading Description
Special Labeling

Animal feed supplement NMFC
Animal Feed NMFC
N/A

SECTION 11: LABEL FACSIMILE

For a 1000 lb. horse, administer Research Associates' Electrolytes directly onto feed per the chart below; alternatively, administer into water. Fresh water and free choice salt should remain available.

WORKLOAD	CLIMATE	ADMINISTER
Rest	Hot, Humid	1/2 oz.
Light	Moderate	1/2 oz.
Moderate	Moderate	1 oz.
Light	Hot, Humid	1 oz.
Moderate	Hot, Humid	1 1/2 oz.
Heavy	Moderate	1 1/2 oz.
Intense	Hot, Humid	2 oz.

INGREDIENTS: Salt, potassium chloride, sodium bicarbonate, calcium carbonate, magnesium sulfate, calcium lactate, zinc sulfate, artificial apple flavor, manganese sulfate, ferrous sulfate, copper sulfate, cobalt sulfate.

- For use in horses only.
- Do not exceed recommended serving size.
- Store at room temperature.
- Keep container sealed when stored.
- Keep out of reach of children.

Guaranteed Analysis:

Salt, Min.	35%	Phosphorus, Min.	.001%
Salt, Max.	45%	Zinc, Min.	40 ppm
Sodium, Min.	15%	Manganese, Min.	300 ppm
Potassium, Min.	12%	Ferrous, Min.	2.8 ppm
Calcium, Min.	5.9%	Copper, Min.	10 ppm
Calcium, Max.	6.9%	Cobalt, Min.	0.3 ppm
Magnesium, Min.	0.5%		

Research Associates, Inc.

APPLE-X™

ELECTROLYTES

APPLE FLAVORED

A Complete Source of Electrolytes and Trace Minerals

Net Wt. 5 lbs. (2.27 kg)

Available through Veterinarians only.

Manufactured in the USA for:
Research Associates, Inc.
P.O. Box 996
Bensenville, IL 60106

100% Satisfaction Guaranteed
Questions? Comments?
Call 888/230-VETS Mon.-Fri.
8 a.m. to 4:30 p.m. Central Time

7 15401 36005 8



Research Associates, Inc.

P.O. Box 996 • Bensenville, IL 60106

Toll Free: 888 • 330 • 8387 • Fax: 630 • 766 • 6000

SAFETY DATA SHEET (SDS)

SECTION 1: IDENTIFICATION

Product Name: **Apple-X Electrolytes**

Synonyms: None

Research Associates Product #: 36

Product Type: Nutritional source of electrolytes and trace minerals for horses.

Manufacturer: Research Associates, Inc.

Address: PO Box 1000, Bensenville IL 60106

Telephone: 888-330-8387 Fax: 630-766-6000

Website: www.researchassoc.net

Recommended use: For use in horses. Promotes healthy hydration.

SECTION 2: HAZARD IDENTIFICATION

Warning: May be irritating to eyes and mucous membranes. Keep out of reach of children.



SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

INGREDIENT LIST: Salt, Potassium chloride, Sodium bicarbonate, Calcium carbonate, Magnesium sulfate, Calcium lactate, Zinc sulfate, Artificial apple flavor, Manganese sulfate, Copper sulfate, Cobalt sulfate.

<u>GUARANTEED ANALYSIS</u>	<u>CAS#</u>
Calcium, Min. 5.9%	471-34-1
Calcium, Max. 6.9%	
Salt, Min. 35%	7647-14-5
Salt, Max. 36.5%	
Sodium, Min. 19%	
Sodium, Max. 21%	
Potassium, Min. 12%	7447-40-7
Magnesium, Min. 0.5%	7487-88-9
Manganese, Min. 300 ppm	10034-96-5
Zinc, Min. 40 ppm	7446-19-7
Iron, Min. 100 ppm	13463-43
Copper, Min. 10 ppm	7758-98-7
Cobalt, Min. 0.3 ppm	10026-24-1

SECTION 4: FIRST AID MEASURES

EXPOSURE ROUTE	SYMPTOM	TREATMENT
Inhalation	Minimal respiratory impact	Bring to well ventilated area
Skin contact	Minimal skin irritation	Wash with warm water for 15 minutes. Seek medical attention if irritation persists.
Eye contact	Irritating to eyes	Rinse eyes with cool water for 15 minutes. Seek medical attention if irritation persists.
Ingestion	Small quantity not harmful.	Rinse mouth if minimal. Seek medical attention if any symptoms develop from significant ingestion.

SECTION 5: FIRE-FIGHTING MEASURES

Flash Point:	Does not flash below 212 F.
Extinguishing Media:	Water.
Other required equipment:	Face mask, gloves, suitable protective clothing.
Special precautions:	None

SECTION 6: ACCIDENTAL RELEASE PROCEDURES

PERSONAL PRECAUTIONS: Keep unnecessary personnel away. Wear appropriate protective equipment (gloves, safety glasses) if in contact with spilled product. Avoid breathing dust – use dust mask.

CLEANUP PROCEDURES: Sweep or vacuum spillage and collect in plastic container for disposal. Clean surface thoroughly to remove residual contamination. Dispose of in accordance with local regulations.

ENVIRONMENTAL PRECAUTIONS: Contains trace amounts of copper, may be toxic to aquatic life.



SECTION 7: HANDLING AND STORAGE

Store in a cool, dry place, optimum 60-80 degrees F.

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE LIMITS / THRESHOLDS: None.

ENGINEERING CONTROLS: None.

PERSONAL PROTECTIVE EQUIPMENT: Not needed for normal container handling. Keep containers closed. If spilled, use gloves, dust mask and safety glasses.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance/Odor: White fine granular powder. Apple aroma.

pH: N/A

Boiling point/range: Does not boil below 212 Degrees F

Flash Point: Does not flash below 212 Deg.F

Explosive properties: Not applicable.

Oxidizing properties: Not oxidizing.

Specific gravity: 38grams/volume ounce.

Solubility (water, 20 Deg.C): Soluble in water.

SECTION 10: STABILITY AND REACTIVITY

Stability:

Stable. Store in a cool, dry place, out of direct sunlight.

Conditions to avoid:

Avoid temperature extremes.

Materials to avoid:

None

Hazardous decomposition products:

None

SECTION 11: TOXICOLOGICAL INFORMATION

Numerical Measures of toxicity, individual components:

Sodium chloride ORAL (LD50): Acute: 3000 mg/kg [Rat.].

Potassium chloride Oral, mouse: LD50 = 1500 mg/kg

Magnesium sulfate LD50. Oral. Rat. 5000 mg/kg.

Calcium carbonate Oral, rat: LD50 = 6450 mg/kg

Acute and chronic effect: Eye, respiratory and skin irritation, allergic response.

Related symptoms: None.

Routes of exposure: Oral, inhalation, skin exposure.

SECTION 12: ECOLOGICAL INFORMATION

Aquatic or terrestrial toxicity tests: N/A

Potential for environmental persistence: N/A

Bioaccumulation potential: N/A

Adsorption or leaching studies: N/A

SECTION 13: DISPOSAL CONSIDERATIONS

Appropriate disposal container: Plastic containers/buckets, closed

Recommendation of appropriate disposal method: Sweep/vacuum into plastic container.

Physical and chemical properties that may affect disposal method: Dry powder.

Sewage disposal: Per local guideline/regulation.

Precautions for landfill or incineration: N/A

SECTION 14: TRANSPORT INFORMATION

UN number (4-digit ID): N/A

UN proper shipping name: N/A

Transport hazard class: N/A

Packing group no (based on degree of hazard): N/A

Environmental hazard (IMDG code): N/A

Bulk transport guidance (MARPOL): N/A

NMFC shipping: animal feed, 0607070-00

Additional special precautions: N/A

SECTION 15: REGULATORY INFORMATION

Any additional regional or national regulations specific to this product, not mentioned previously: N/A

SECTION 16: OTHER INFORMATION

Revision number: V1.0, prepared on 2/29/2016 FLHP

Label facsimile:

For a 1000 lb. horse, administer **Research Associates' Electrolytes** directly onto feed per the chart below; alternatively, administer into water. Fresh water and free choice salt should remain available.

WORKLOAD	CLIMATE	ADMINISTER
Rest	Hot, Humid	1/2 oz.
Light	Moderate	1/2 oz.
Moderate	Moderate	1 oz.
Light	Hot, Humid	1 oz.
Moderate	Hot, Humid	1 1/2 oz.
Heavy	Moderate	1 1/2 oz.
Intense	Hot, Humid	2 oz.

INGREDIENTS: Salt, potassium chloride, sodium bicarbonate, calcium carbonate, magnesium sulfate, calcium lactate, zinc sulfate, artificial apple flavor, manganese sulfate, ferrous sulfate, copper sulfate, cobalt sulfate.

- For use in horses only.
- Do not exceed recommended serving size.
- Store at room temperature.
- Keep container sealed when stored.
- Keep out of reach of children.

Guaranteed Analysis:

Salt, Min.	35%	Phosphorus, Min.	.001%
Salt, Max.	45%	Zinc, Min.	40 ppm
Sodium, Min.	15%	Manganese, Min.	300 ppm
Potassium, Min.	12%	Ferrous, Min.	2.8 ppm
Calcium, Min.	5.9%	Copper, Min.	10 ppm
Calcium, Max.	6.9%	Cobalt, Min.	0.3 ppm
Magnesium, Min.	0.5%		

Research Associates, Inc.

APPLE-X™

ELECTROLYTES

APPLE FLAVORED


A Complete Source of Electrolytes and Trace Minerals

Net Wt. 5 lbs. (2.27 kg)

Available through Veterinarians only.

Manufactured in the USA for:
Research Associates, Inc.
P.O. Box 996
Bensenville, IL 60106

100% Satisfaction Guaranteed
Questions? Comments?
Call 888/330-VETS Mon.-Fri.
8 a.m. to 4:30 p.m. Central Time



7 15401 36005 8