SAFETY DATA SHEET

Section 1. PRODUCT AND COMPANY IDENTIFICATION

Product Name:	K-Ace Liquid Charge 23351
Other Identifiers:	K-Ace, Amerex 16162
Product Code(s):	
Model Code(s) for Extinguishers:	VHL2.5, 267
Recommended Use:	Liquid fire suppression agent, not for human or animal drug use.
Manufacturer:	SAVA FIRE EQUIPMENT INC.
Internet Address:	www.amerex-fire.com
Address:	1085 Stacey Court Mississauga, ON L4W 2X7
Company Telephone:	(905) 238-6400
E-mail Address:	info@savafire.ca
Emergency Contacts:	Chemtrec 1(800) 424-9300 or (703) 527–3887
Revised:	April 25, 2014

Section 2. HAZARDS IDENTIFICATION

GHS – Classification

Health	Environmental	Physical
Acute Toxicity: Category 5	None	None
Skin Corrosion/Irritation: Category 2	None	None
Skin Sensitization: NO	None	None
Eye: Category 2B	None	Warning
Carcinogen: Category None	None	None

GHS – Label Symbol(s): None

GHS – Signal Word(s): **Warning**

Other Hazards Not Resulting in Classification: None

GHS – Hazard Phrases

GHS Hazard	GHS Codes(s)	Code Phrase(s)
Physical	None	
Health	H313 320	May cause skin irritation Causes eye irritation
Environmental	None	
Precautionary:		
General	P101 102	If medical advice is needed, have product container or label at hand Keep out of reach of children
Prevention	210 234 251 264 270 281 285	Keep away from heat Keep in original container Pressurized container; do not pierce or burn, even after use Wash hands and face thoroughly after handling Do not eat, drink, or smoke when using this product Use personal protective equipment as required In case of inadequate ventilation, wear respiratory protection
Response	P301+330+331 302+352 305++337+338+351 308+313	If swallowed, rinse mouth and do not induce vomiting If on skin, wash with soap and water If in eyes, flush with water for at least 15 minutes. Remove contact lenses if present and easy to do, continue rinsing. If irritation persists, seek medical attention If exposed or concerned, get medical advice/attention
Storage	P401+402+403	Store in original container or extinguisher in a dry, well ventilated place

Section 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	EC No.	REACH Reg. No.	CAS-No.	Weight %
Potassium Acetate	NA	NA	127-08-2	48-52
Water	204-822-2	NA	7732-18-5	47-51

Emergency overview: Clear to light straw liquid.

Adverse health effects and symptoms: Irritating to respiratory system, eyes and skin. Symptoms may include coughing, shortness of breath, stinging, tearing, and redness of eyes and burning of skin. Ingestion, although unlikely, may cause cramps, nausea, and diarrhea.

Cut-off Levels

Chemical Name	Reproductive Toxicity	Carcinogenicity	Mutagenicity	Other Hazard Classes
Potassium Acetate	NA	NA	NA	NA
Water	NA	NA	NA	NA

Section 4. FIRST AID MEASURES

Eye Exposure:	May cause eye irritation. Irrigate eyes with water and repeat until pain free. Remove contact lenses and continue to rinse. Seek medical attention if irritation continues.
Skin Exposure:	May cause skin irritation. In case of contact, wash with plenty of soap and water. Seek medical attention if irritation persists.
Inhalation:	May cause irritation, along with coughing. If respiratory irritation or distress occurs, remove victim to fresh air. Seek medical attention if irritation persists.
Ingestion:	Overdose symptoms may include nausea, diarrhea, and general ill feeling. If victim is conscious and alert, give 2-3 glasses of water to drink. If conscious, do not induce vomiting. Seek immediate medical attention. Do not leave victim unattended. To prevent aspiration of swallowed product, lay victim on side with head lower than waist.
Medical conditions possibly aggravated by exposure:	Inhalation of product may aggravate existing chronic respiratory problems such as asthma, emphysema, or bronchitis.

Section 5. FIRE-FIGHTING MEASURES

Flammable Properties:	Not flammable
Flash Point:	Not determined
Suitable Extinguishing Media:	Non-combustible. Use extinguishing media suitable for surrounding conditions.
Hazardous Combustion Products:	Carbon dioxide and water.
Explosion Data:	
Sensitivity to Mechanical Impact:	Not sensitive
Sensitivity to Static Discharge:	Not sensitive
Unusual fire/explosion hazards:	None
Protective Equipment and Precautions for Firefighters:	As in any fire, wear self-contained breathing apparatus in pressure-demand, NIOSH approved or equivalent and full protective gear.

Section 6. ACCIDENTAL RELEASE MEASURES

Personal Precautions:	Avoid contact with skin, eyes, and clothing.
Personal Protective Equipment:	Minimum - safety glasses, gloves, and a dust respirator.
Emergency Procedures:	NA
Methods for Containment:	Prevent further leakage or spillage if safe to do so.
Methods for Clean Up:	**Small spill** - Absorb liquid on vermiculite, floor absorbent, or other absorbent material and transfer to a fume hood. **Large spill** – Prevent runoff to sewers, streams or other bodies of water. If runoff occurs, notify proper authorities as required, that spill has occurred. Use protective clothing and devices as required. Stop spill at source
Environmental Precautions:	Prevent material from entering waterways.
Other:	If product is contaminated, use PPE and containment appropriate to the nature of the most toxic chemical/material in the mixture.

Section 7. HANDLING AND STORAGE

Personal Precautions:	Use appropriate PPE when handling or maintaining equipment, and wash thoroughly after handling (see Section 8).
Conditions for Safe Storage/Handling:	Containers of this material may be hazardous when emptied. Since empties containers retain product residues (vapor, liquid, and/or solid), all hazard precautions given in the data seet must be observed
Incompatible Products:	Not available.

Section 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Chemical Name	OSHA PEL	ACGIH TLV	DFG MAK *	EU BLV
Potassium Acetate	NR	NR	NR	NR
Water	NR	NR	NR	NA

NR = Not Regulated. All values are 8 hour time weighted average concentrations.

Engineering Controls: Showers
Eyewash stations
Ventilation systems

Personal Protective Equipment – PPE Code E:




Eye/Face Protection:	Tightly fitting safety/splash goggles
Skin and Body Protection:	Wear protective gloves and normal work clothing.
Respiratory Protection:	Use N95 dust mask for limited exposure; use air-purifying respirator (APR) with high efficiency particulate air (HEPA) filters for prolonged exposure. Positive-pressure-demand supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations. The need for respiratory protection is not likely for short-term use in well ventilated areas.
Hygiene Measures:	Good personal hygiene practices essential, such as avoiding food, tobacco products, or other hand-to-mouth contact when handling. Wash thoroughly after handling.

Section 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Straw-colored liquid
Molecular Weight:	98.15
Odor:	Slightly acidic
Odor Threshold:	No information available
Decomposition Temperature ^{o}C:	No information available
Freezing Point ^{o}C:	-60
Initial Boiling Point ^{o}C:	No information available
Physical State:	Liquid
pH:	9.5-10.5
Flash Point ^{o}C:	None
Auto-ignition Temperature ^{o}C:	None

Boiling Point/Range ^{o}C:	Not Applicable
Melting Point/Range ^{o}C:	292
Flammability:	Not Flammable
Flammability Limits in Air ^{o}C:	Upper – Not Flammable; Lower-Not Flammable
Explosive Properties:	None
Oxidizing Properties:	None
Volatile Component (%vol)	Not Applicable
Evaporation Rate:	Not Applicable
Vapor Density:	Not Applicable
Vapor Pressure:	1.37e-008 mm Hg
Specific gravity at 25 C:	1.1 to 1.3
Solubility:	Soluble in Water
Partition Coefficient:	Not Applicable
Viscosity:	6.5 cP

Section 10. STABILITY AND REACTIVITY

Stability:	Stable under recommended storage and handling conditions.
Incompatibles:	Strong acids, bases, and oxidizers. Avoid prolonged contact with reactive metals such as magnesium and zinc, especially in closed systems where hydrogen gas may accumulate over time.
Conditions to Avoid:	Storage or handling near incompatibles.
Hazardous Decomposition Products:	Heat of fire may release carbon monoxide, carbon dioxide.
Possibility of Hazardous Reactions:	Slight
Hazardous Polymerization	Does not occur

Section 11. TOXICOLOGICAL INFORMATION

Likely Routes of Exposure:	Inhalation, skin, and eye contact.
Symptoms:	
Immediate:	
Inhalation:	Irritation, coughing.
Eyes:	Irritation.
Skin:	Irritation.
Delayed:	Symptoms appear to be relatively immediate
Acute Toxicity:	Relatively non-toxic.
Chronic Toxicity:	
Short-term Exposure:	None known.
Long-term Exposure:	None known.

Acute Toxicity Values - Health

Chemical Name	LD50		LC50 (Inhalation)
	Oral	Dermal	
Potassium Acetate	3250 mg/kg (rat)	Not available	Not available
Water	Not available	Not available	Not available

Reproductive Toxicity: This product's ingredients are not known to have reproductive or teratogenic effects.

Target Organs and Effects (TOST): Respiratory system - slight irritant).
This product is a mild irritant to epithelial tissue, (eyes, mucous membranes, skin) and may aggravate dermatitis. No information was found indicating the product causes sensitization.

Other Toxicity Categories

Chemical Name	Germ Cell Mutagenicity	Carcino-genicity	Repro-ductive	TOST Single Exp	TOST Repeated Exp	Aspiration
Potassium Acetate	None	None	None	None	None	None
Water	None	None	None	None	None	None

Section 12. ECOLOGICAL INFORMATION

Ecotoxicity: Negative effects unknown. Weak toxin
Persistence/Degradability: Moderate biodegradation in soil. Rapid photolytic degradation in air.
Probability of rapid biodegradation: 0.792 (Rapid);
Anaerobic biodegradation probability: 0.943 (Rapid)
Bioaccummulation potential: Low
Bioconcentration factor: 3.16 L/kg (wet weight)
Bioaccummulation: Extent unknown.
Mobility in soil: Slow evaporation rate; water soluble, may leach to groundwater
Log Koc: Est: 0.013
Log Koa: NA
Log Kaw: Est: -3.72

Other Adverse Ecological Effects: No other known effects at this time

Aquatic Toxicity Values – Environment – Research

Chemical Name	Acute (LC50)	Chronic (LC50)
Potassium Acetate	N/A	N/A
Water	N/A	N/A

Aquatic Toxicity Values – Environment – Estimates

Chemical Name	Acute (LC50)	EC50
Potassium Acetate	2.58e+04 mg/L Fish 96 hr; 1.22e+04 mg/l Daphnid 48 hr;	4.40e+03 mg/L Gr. Algae 96 hr
Water	N/A	N/A

Section 13. DISPOSAL CONSIDERATIONS

Safe Handling	Use appropriate PPE when handling, and wash thoroughly after handling (see Section 8).
Waste Disposal Considerations	Dispose in accordance with federal, state, and local regulations.
Contaminated Packaging	Dispose in accordance with federal, state, and local regulations.

NOTES:
This product is not a RCRA characteristically hazardous or listed hazardous waste. Dispose of according to state or local laws, which may be more restrictive than federal laws or regulations. Used product may be altered or contaminated, creating different disposal considerations.

Section 14. TRANSPORT INFORMATION

UN Number:	NA
UN Proper Shipping Name:	NA
Transport Hazard Class:	NA
Packing Group:	NA
Marine Pollutant?:	NO
IATA	Not regulated
DOT	Not regulated

NOTES:
This product is not defined as a hazardous material under U.S. Department of Transportation (DOT) 49 CFR 172, or by Transport Canada “Transportation of Dangerous Goods” regulations.

Special Precautions for Shipping:
If shipped in a stored pressure-type fire extinguisher, and pressurized with a non-flammable, non-toxic inert expellant gas, the fire extinguisher is considered a hazardous material by the US Department of Transportation and Transport Canada. The proper shipping name shall be FIRE EXTINGUISHER and the UN designation is UN 1044. The DOT hazard class is 2.2, non-flammable gas, when shipped via air and when operating pressure is over 240 psig. The hazard class is Limited Quantity when shipped via highway or rail and the pressure is less than 241 psig.

Section 15. REGULATORY INFORMATION

International Inventory Status: All ingredients are on the following inventories

Country(ies)	Agency	Status
United States of America	TSCA	Yes
Canada	DSL	Yes
Europe	EINECS/ELINCS	Yes
Australia	AICS	Yes
Japan	MITI	Yes
South Korea	KECL	Yes

REACH Title VII Restrictions: No information available

Chemical Name	Dangerous Substances	Organic Solvents	Harmful Substances Whose Names Are to be Indicated on Label	Pollution Release and Transfer Registry (Class II)	Pollution Release and Transfer Registry (Class I)	Poison and Deleterious Substances Control Law
Potassium Acetate	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable
Water	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable

Component	ISHA – Harmful Substances Prohibited for Manufacturing, Importing, Transferring, or Supplying	ISHA – Harmful Substances Requiring Permission	Toxic Chemical Classification Listing (TCCL) – Toxic Chemicals	Toxic Release Inventory (TRI) – Group I	Toxic Release Inventory (TRI) – Group II
Potassium Acetate	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable
Water	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable

European Risk and Safety phrases:

EU Classification: Irritant
R Phrases: 36 Irritating to eyes, respiratory system, and skin
S Phrases: 24/25 Avoid contact with skin and eyes

26	In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
36	Wear suitable protective clothing.

U.S. Federal Regulatory Information:

SARA 313:
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA) - This product does not contain and chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372. None of the chemicals in this product are under SARA reporting requirements or have SARA threshold planning quantities (TPQs) or CERCLA reportable quantities (RQs), or are regulated under TSCA 8(d).

SARA 311/312 Hazard Categories:

Acute Health Hazard	Yes
Chronic Health Hazard	No
Fire Hazard	No
Sudden Release of Pressure Hazard-*	Yes
Reactive Hazard	No

* - Only applicable if material is in a pressurized extinguisher.

Clean Water Act:
This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)
Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)
This product does not contain any substances regulated as hazardous air pollutants (HAPs) under Section 112 of the Clean Air Act Amendments of 1990.

U.S. State Regulatory Information:

Chemicals in this product are covered under specific State regulations, as denoted below:

Alaska - Designated Toxic and Hazardous Substances: None
California – Permissible Exposure Limits for Chemical Contaminants: None
Florida – Substance List: None
Illinois – Toxic Substance List: None
Kansas – Section 302/303 List: None
Massachusetts – Substance List: None
Minnesota – List of Hazardous Substances: None
Missouri – Employer Information/Toxic Substance List: None
New Jersey – Right to Know Hazardous Substance List: None
North Dakota – List of Hazardous Chemicals, Reportable Quantities: None

Pennsylvania – Hazardous Substance List: None
Rhode Island – Hazardous Substance List: None
Texas – Hazardous Substance List: No
West Virginia – Hazardous Substance List: None
Wisconsin – Toxic and Hazardous Substances: None

California Proposition 65: No component is listed on the California Proposition 65 list.

Section 16. OTHER INFORMATION

This SDS conforms to requirements under U.S., U.K., Canadian, Australian, and EU regulations or standards, and conforms to the proposed 2003 ANSI Z400.1 format.

Issuing Date	17-June-2012
Revision Date	25-April-2014
Revision Notes	None

The information herein is given in good faith but no warranty, expressed or implied, is made.
Updated by William F. Garvin, CIH.