SAFETY DATA SHEET

Section 1. PRODUCT AND COMPANY IDENTIFICATION

Product Name:	CH 506 Anti-Freeze Charge
Other Identifiers:	Loaded stream charge
Product Code(s):	CH 506, 19239
Model Code(s) for Extinguishers:	
Recommended Use:	Anti-freeze charge for water fire extinguisher, not for human or animal drug use.
Manufacturer:	AMEREX CORPORATION
Internet Address:	www.amerex-fire.com
Address:	7595 Gadsden Highway, P.O. Box 81 Trussville, AL 35173-0081
Company Telephone:	(205) 655-3271
E-mail Address:	info@amerex-fire.com
Emergency Contacts:	Chemtrec 1(800) 424-9300 or (703) 527–3887
Revised:	October, 2013

Section 2. HAZARDS IDENTIFICATION

GHS – Classification

Health	Environmental	Physical
Acute Toxicity: Oral, Category 4	None	None
Skin Corrosion/Irritation: Category 1	None	Danger
Skin Sensitization: NO	None	None
Eye: Category 1	None	Danger
Carcinogen: Category None	None	None

GHS – Label Symbol(s):

GHS – Signal Word(s): **Danger**

Other Hazards Not Resulting in Classification: None

GHS – Hazard Phrases

GHS Hazard	GHS Codes(s)	Code Phrase(s)
Physical	None	
Health	H302	Harmful if swallowed
	315	Causes skin irritation
	319	Causes serious eye irritation
	335	May cause respiratory irritation
Environmental	None	
Precautionary:		
General	P101	If medical advice is needed, have product container or label at hand
	102	Keep out of reach of children
Prevention	261	Avoid breathing (dust/fume/gas/mist/vapors/spray)
	264	Wash hands and face thoroughly after handling
	280	Wear protective gloves/clothing; eye and face protection
	281	Use personal protective equipment as required
	285	In case of inadequate ventilation, wear respiratory protection
	362+364	Take of contaminated clothing and wash it before reuse.
Response	P301+312	If swallowed, call doctor/Poison Control Center if victim feels unwell
	302+352	If on skin, wash with soap and water
	332+352	If skin irritation occurs, seek medical advice
	304+313+341	If inhaled, and if distress occurs, remove victim to fresh air and keep at rest in a position comfortable for breathing. Seek medical advice/attention
	305+351+338	If in eyes, rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do, and continue to rinse
	308+313	If exposed or concerned, get medical advice/attention
	337+313	If eye irritation persists; get medical advice/attention
Storage	P233+411	Store in tightly closed container at temperatures less than 27^0 C (80^0 F)

Section 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	EC No.	REACH Reg. No.	CAS-No.	Weight %
Water	NA	NA	7732-18-5	60-61
Potassium Carbonate	209-529-3	NA	584-08-7	24-25
Potassium Acetate	204-822-2	NA	127-08-2	14-15
Monoazo Yellow Dye S-319	NA	NA	6359-82-9, 1934-21-0	<0.1

Emergency overview: CH 506-Yellow to white dry powder, odorless.
19329-Yellow liquid, water based, odorless.

Adverse health effects and symptoms: As a dust, bulk liquid, or spray, this product is an irritant to the respiratory system, eyes, and skin. Symptoms may include coughing, sore throat, difficulty breathing, eye pain, and skin redness and irritation. Ingestion, although unlikely, may cause cramps, nausea and diarrhea.

Cut-off Levels

Chemical Name	Reproductive Toxicity	Carcinogenicity	Mutagenicity	Other Hazard Classes
Water	NA	NA	NA	NA
Potassium Carbonate	NA	NA	NA	NA
Potassium Acetate	NA	NA	NA	NA
Monoazo Yellow Dye S-319	NA	NA	NA	NA

Section 4. FIRST AID MEASURES

Eye Exposure:	Causes irritation. Irrigate eyes with water and repeat until pain free. Seek medical attention immediately.
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. May cause dizziness or drowsiness. If respiratory irritation or distress occurs, remove victim to fresh air. Seek medical attention if irritation persists.
Ingestion:	Overdose symptoms may include severe pain in the mouth and throat, collapse, breathing difficulty due to swollen throat, severe abdominal pain, diarrhea, and a rapid drop in blood pressure. If victim is conscious and alert, give 2-3 glasses of water or milk to drink. 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. Skin contact may aggravate existing skin disease. Chronic overexposure of powder may cause pneumoconiosis (“dusty lung” disease).

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 and sulfur oxides
Explosion Data:	
Sensitivity to Mechanical Impact:	Not sensitive
Sensitivity to Static Discharge:	Not sensitive
Unusual fire/explosion hazards:	In a fire this material may decompose, releasing oxides of carbon and potassium. (see Section 10).
Protective Equipment and Precautions for Firefighters:	As in any fire, wear self-contained breathing apparatus 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:	During minor spill clean-up: Minimum – chemical goggles, nitrile gloves, and an air purifying respirator.
Emergency Procedures:	Large spills (one container or more) should be addressed by hazardous materials technicians who follow a specific emergency response plan and who are trained in the appropriate use of PPE.
Methods for Containment:	Prevent further leakage or spillage if safe to do so. Use sorbent socks for containment
Methods for Clean Up:	Avoid dust formation; clean up released material using vacuum or wet sweep and shovel to minimize generation of dust. Bag and drum for disposal; properly label containers; dispose as a hazardous waste.
Environmental Precautions:	Prevent material from entering storm sewers or conveyances to 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:	Keep product in tightly closed container in a cool area. Use in well ventilated area. Clean used equipment prior to storage.

Incompatible Products:	Do not mix with other extinguishing agents. Do not allow contact with lime. Avoid acids, or contact with aluminum, lead, tin, zinc, or other alkali sensitive metals or alloys.
Hazardous Decomposition Products:	Carbon oxides, potassium oxides
Hazardous Polymerization:	Will not occur

Section 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Chemical Name	OSHA PEL	ACGIH TLV	DFG MAK *	EU BLV
Water	NA	NA	NA	NA
Potassium Carbonate	PNOR** Total dust, 15 mg/m^3 Respirable fraction, 5 mg/m^3	PNOC Total dust, 10 mg/m^3	NA	NA
Potassium Acetate	PNOR** Total dust, 15 mg/m^3 Respirable fraction, 5 mg/m^3	PNOC Total dust, 10 mg/m^3	Total dust, 4 mg/m^3 Respirable fraction, 1.5 mg/m^3	NA
Monoazo Yellow Dye S-319	NA	NA	NA	NA

*German regulatory limits **PNOC = Particulates not otherwise classified (ACGIH) also known as Particulates not otherwise regulated (OSHA) *** 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:	Chemical goggles
Skin and Body Protection:	Wear nitrile or similar gloves/coveralls
Respiratory Protection:	If exposure limits are exceeded or irritation is experienced, NIOSH approved respiratory protection should be worn. Use air-purifying respirator (APR) with high efficiency particulate air (HEPA) filters for prolonged exposure. Positive-pressure 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:	As shipped: yellow to white dry powder, As mixed: yellow liquid; odorless
Molecular Weight:	K_2CO_3-138.21; C2H3KO2-98.14
Odor:	Odorless
Odor Threshold:	No information available
Decomposition Temperature ^oC:	100 - 120
Freezing Point ^oC:	No information available
Initial Boiling Point ^oC:	Approximately 105
Physical State:	Crystalline powder when shipped
pH:	Approximately 12.44 in solution/as mixed
Flash Point ^oC:	None
Autoignition Temperature ^oC:	None
Boiling Point/Range ^oC:	Not Applicable
Melting Point/Range ^oC:	K_2CO_3: 139.88, C2H3KO2 : 292
Flammability Limits in Air ^oC:	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 at 25 ^oC (mmhg):	K_2CO_3 Est: 3.25e-015 C2H3KO2 Est:1.37e-008
Specific gravity at 25 ^oC:	Approximately 1.32 (K_2CO_3:2.29; C2H3KO2:1.60)
Solubility at 25 ^oC:	Soluble in water (K_2CO_3:8.42e+5 mg/L; C2H3KO2: 3.13e+5 mg/L)
Partition Coefficient:	Log Kow: K_2CO_3 Est: -6.16: C2H3KO2 Est: -3.72
Viscosity:	Not Applicable

NOTE: K_2CO_3 – Potassium Carbonate; C2H3KO2 – Potassium Acetate

Section 10. STABILITY AND REACTIVITY

Stability:	Stable under recommended storage and handling conditions.
Incompatibles:	Strong acids and oxidizers, lime, inorganic bases. Avoid contact with aluminum, lead, tin, zinc, or other alkali sensitive metals or alloys
Conditions to Avoid:	Storage or handling near incompatibles.
Hazardous Decomposition Products:	Heat of fire may release carbon monoxide, carbon dioxide, and oxides of potassium.
Possibility of Hazardous Reactions:	None
Hazardous Polymerization	Does not occur

Section 11. TOXICOLOGICAL INFORMATION

Likely Routes of Exposure:	Inhalation, skin, and eye contact.
Symptoms:	
Immediate:	
Inhalation:	Irritation, coughing.
Eyes:	Severe 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:	As with all dusts, pneumoconiosis, or “dusty lung” disease, may result from chronic exposure.

Acute Toxicity Values - Health

Chemical Name	LD50		LC50 (Inhalation)
	Oral	Dermal	
Water	NA	NA	NA
Potassium Carbonate	1870 mg/kg (rat)	>2000 mg/kg (rabbit)	43 mg/m3 (rat)
Potassium Acetate	3250 mg/kg (rat)	NA	NA
Monoazo Yellow Dye S-319	NA	NA	NA

Reproductive Toxicity:	This product’s ingredients are not known to have reproductive or teratogenic effects.
Target Organs and Effects (TOST):	When mixed with water, as in fire extinguishers, the pH is greater than 12. Therefore: This product is an irritant to the respiratory system, is corrosive 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
Water	None	None	None	None	None	None
Potassium Carbonate	None	None	None	Cat 3	None	None
Potassium Acetate	None	None	None	None	None	None
Monoazo Yellow Dye S-319	None	None	None	None	None	None

Section 12. ECOLOGICAL INFORMATION

Ecotoxicity: Localized damage as a strong base.
Persistence/Degradability: Soluble in water; degrades rapidly in moist soil.
Probability of rapid biodegradation: K_2CO_3 Est: 0.718 (Rapid); C2H3KO2 Est: 0.792 (Rapid)
Anaerobic biodegradation probability: K_2CO_3 Est: 0.943 (Rapid), C2H3KO2 Est: - 0.943
Bioaccummulation potential: Low.
Bioconcentration factor: K_2CO_3 Est: 3.16 L/kg; C2H3KO2 Est: 3.16 L/kg (wet weight)
Mobility in soil: Slow evaporation rate; water soluble, may leach to groundwater
Log Koc: K_2CO_3 Est: -3.27; C2H3KO2 Est: -1.90

NOTE: K_2CO_3 – Potassium Carbonate; C2H3KO2 – Potassium Acetate

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

Aquatic Toxicity Values – Environment - Research

Chemical Name	Acute (LC50)	Chronic (LC50)
Water	N/A	N/A
Potassium Carbonate	313 mg/L (Ceriodaphnia dubia- 48); 298 mg/L (Pimephales promelas- 48)	N/A
Potassium Acetate	N/A	N/A
Monoazo Yellow Dye S-319	N/A	N/A

Aquatic Toxicity Values – Environment – Calculated Estimates

Chemical Name	Acute (LC50)	EC50
Water	N/A	N/A
Potassium Carbonate	8259 mg/L Fish 96 hr; 3737 mg/l Daphnid 48 hr;	1088 mg/L Gr. Algae 96 hr
Potassium Acetate	25786 mg/L Fish 96 hr; 12270 mg/l Daphnid 48 hr;	4403 mg/L Gr. Algae 96 hr
Monoazo Yellow Dye S-319	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.

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
Water	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable
Potassium Carbonate	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable
Potassium Acetate	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable
Monoazo Yellow Dye S-319	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
Water	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable
Potassium Carbonate	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable
Potassium Acetate	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable
Monoazo Yellow Dye S-319	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable

European Risk and Safety phrases:

EU Classification: Irritant

R Phrases:	20	Harmful by inhalation.
	36/37	Irritating to eyes, respiratory system.
S Phrases:	22	Do not breath dust.
	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	No
Reactive Hazard	No

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: None
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.

Other:

Mexico – Grade	No component listed
Canada – WHMIS Hazard Class	No component listed

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	29-October-2013
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.