SAFETY DATA SHEET

Revision Date: 11/20/14

SECTION 1: IDENTIFICATION

1.1 Product Name: K-Flow™

1.2 Other Identification: Chemical Formula — Inorganic salt solution (KTS)

Formula — $K_5S_2O_3$

1.3 Recommended Use of Chemical: Photo-processing, de-sulfurization

1.4 Manufacturer:

ProPlus Products, Inc.
149 County Line Road East
Bowling Green, FL 33834

Information Number: (863)375-2487

1.5 Emergency Contact: ProPlus Products, Inc. (863)375-2487

SECTION 2: HAZARD(S) IDENTIFICATION

2.1 Hazard Classification: Health None

2.2 Signal Word: Not Applicable

2.3 Hazard Statement(s) Not Applicable

2.4 Symbol(s):

2.5 Precautionary Statements(s):

Avoid Contact with eyes.
Use/store in cool, well ventilated areas.
Avoid prolonged/repeated breathing of vapors.
Avoid prolonged/repeated contact with skin.
Keep away from any sources of heat or flames.
Store totes or small containers out of direct sunlight.
Wear protective apron, gloves, and eye/face protection.
Do not allow release to aquatic waterways.

2.6 Unclassified Hazard(s) None

2.7 Unknown Toxicity Ingredient(s): None

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Chemical Ingredients: (See Section 8 for exposure guidelines)

Chemical	Synonym Common Name	CAS No.	EINECS No.	% by Wt.
Thiosulfuric acid ($H_2S_2O_3$), dipotassium salt	Potassium thiosulfate	10294-66-3	233-666-8	50 (Typical)
Water	Water	7732-18-5	231-791-2	50

SECTION 4: FIRST AID MEASURES

4.1 Symptoms/Effects:

Acute: Eye contact may cause eye irritation. Repeated or prolonged skin contact may cause skin irritation. Ingestion may irritate the gastrointestinal tract.

Chronic: No known chronic effects.

4.2 Eyes: Immediately flush with large quantities of water for 15 minutes. Hold eyelids apart during irrigation to insure thorough ensure thorough flushing of the entire area of the eye and lids. Obtain medical attention if irritation occurs.

4.3 Skin: Immediately flush with large quantities of water. Remove contaminated clothing under a safety shower. Obtain medical attention if irritation occurs.

4.4 Ingestion: If victim is conscious, give 2 to 4 glasses of water and induce vomiting by touching finger t back of throat. Obtain medical attention.

4.5 Inhalation: Remove victim from contaminated atmosphere. If breathing is labored, administer oxygen If breathing has ceased, clear airway and start mouth to mouth resuscitation. If heart has stopped beating, external heart massage should be applied. Obtain medical attention.

SECTION 5: FIRE FIGHTING MEASURES

5.1 FLAMMABLE PROPERTIES: (See section 9, for additional flammable properties)

NFPA: **Health - 0** **Flammability - 0** **Reactivity - 0**

5.2 EXTINGUISHING MEDIA:

5.2.1 Suitable Extinguishing Media: Not flammable, use media suitable for combustibles involved in fire.

5.2.2 Unsuitable Extinguishing Media: None Known

5.3 SPECIFIC HAZARD(S) ARISING FROM THE CHEMICAL:

5.3.1 Physical Hazards: Heating (flames) of closed or sealed containers may cause rupture of container due to thermal expansion of compressed gases.

5.3.2 Chemical Hazards: Heating causes release of oxides of sulfur. Sulfur dioxide is highly irrating to the eyes, respiratory tract and moist skin.

5.4 PROTECTION OF FIREFIGHTERS:

5.4.1 Protective equipment and precautions for firefighters: Firefighters should wear self-contained breathing apparatus and full fire-fighting turnout gear. Keep containers/storage vessels in fire area colled with water spray.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal Precautions:

Use personal protective equipment (PPE) specified in Section 8. Isolate the hazard area and deny entry to unnecessary untrained and unprotected personnel.

6.2 Evironmental Precautions:

Keep out of "waters of the US" because of potential aquatic eutrophication. (See Section 12). This product is a non-hazardous liquid fertilizer solution designed to supply potassium and sulfur to various agriculture crops.

6.3 Methods of Containment:

Small Release: Confine and absorb small releases with sand, earth or other inert absorbent.

Large Release: Shut off release if safe to do so. Dike spill area with earth, sand or other inert absorbent to prevent runoff into surface waterways (potential aquatic eutrophication). Recover as much of the solution as possible. Treat remaining material as a small release (above).

6.4 Methods for Cleanup:

Small Release: For small areas shovel up the absorbed material and place in drums for disposal as a chemical waste or recycle as a fertilizer as the original product was intended.

Large Release: Recover as much of the spilled product as possible using portable pump and hoses. Treat remaining material as small release (above). Spread fertilizer material over a wide area to avoid over fertilizing effects.

6.5 Other Information: Not applicable.

SECTION 7: HANDLING and STORAGE

7.1 Handling: Avoid contact with eyes. Use only in a well ventilated area. Wash thoroughly after handlin Avoid prolonged or repeated contact with the skin.

7.2 Storage: Store in well ventilated areas. Do not store combustibles in the area of storage vessels. Keep away from any sources of heat or flame. Store tote and smaller containers out of direct sunlight at moderate temperatures (See Section 10.5 for materials of construction).

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Exposure Guidelines:

OSHA (PELs)		ACGIH (TLVs)	
TWA	STEL	TLV	STEL
NA	NA	NA	NA

8.2 Engineering Controls: None

8.3 Personal Protective Equipment (PPE):

8.3.1 Eye/Face Protection: Chemical goggles and a full face shield.

8.3.2 Skin Protection: Neoprene rubber gloves and apron should be worn to prevent repeated or prolonged contact with the liquid. Wash contaminated clothing prior to reuse.

8.3.3 Respiratory Protection: None generally required. If conditions exist where mist may be generated, a NIOSH/MSHA approved mist respirator should be worn.

8.3.4 General Hygiene Considerations: There are no known hazards associated with this product when used as recommended, however common good industrial hygiene practices should be followed, such as, washing thoroughly after handling and before eating or drinking.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Appearance/State/Odor:	Clear, colorless/liquid/possible slight sulfur odor
9.2 pH:	7 to 9
9.3 Boiling Point:	~222°F (106°C)
9.4 Flash Point:	Not Applicable
9.5 Evaporation Rate:	Not Applicable
9.6 Flammability:	Not Applicable
9.7 Flammability Limits:	Not Applicable
9.8 Vapor Pressure:	Not Determined
9.9 Vapor Density:	Not Determined
9.10 Specific Gravity:	1.46 (12.2 lb/gal) (Typical)
9.11 Solubility: (in water):	Complete
9.12 Partition Coefficient:	Data not available
9.13 Auto-Ignition Temperature:	Not Applicable
9.14 Decomposition Temperature:	Data not available
9.15 Viscosity:	1.806 centistokes at 25°C (77°C)

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity: Avoid Interaction with heat (flames), oxidizers or acids.

10.2 Chemical Stability: This is a stable product under normal temperatures [60-120°F (15-49°C)].

10.3 Possibility of Hazardous Reactions: Acids or acidic materials may cause the release of sulfur dioxide.

Do not mix with acids - it can be volatile.

10.4 Conditions to Avoid: Heating above 120°F (49°C)

10.5 Incompatible Materials: Avoid strong **oxidizers** such as nitrates or chlorates. Acids may cause the release of sulfur dioxide, a severe respiratory hazard. **The following materials are not compatible: lead or mercury or their alloys.** These materials of construction should not be used in handling systems or storage containers for this product.

10.6 Hazardous Decomposition Products: Potassium sulfate & oxides of sulfur. Sulfur dioxide is a severe respiratory irritant.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Oral:	Data not available
11.2 Dermal:	Data not available
11.3 Inhalation:	No evidence available
11.4 Chronic/Carcinogenicity:	No evidence available
11.5 Eye:	Data not available
11.6 Teratology:	Data not available
11.7 Reproduction:	Data not available
11.8 Mutagenicity:	Data not available

SECTION 12: ECOLOGICAL INFORMATION

12.1 Ecotoxicity:

Static acute 96 hour-LC_{50} for sheepshead minnow: >1,000 mg/L

Static acute 96 hour-LC50 for mysid shrimp is: 89 mg/L

12.2 Persistence & Degradability:	No data available
12.3 Bioaccumulative potential:	This product is not Bioaccumulative

12.4 Mobility in Soil: No data available

12.5 Other adverse effects: None

SECTION 13: DISPOSAL CONSIDERATIONS

Consult federal, state and local regulations for disposal requirements.

SECTION 14: TRANSPORT INFORMATION

14.1 Basic Shipping Description:

14.1.1 Proper Shipping Name: Potassium Thiosulfate Solution (not regulated by DOT)

14.1.2 Hazard Class(s): Not applicable

14.1.3 Identification Number: Not applicable

14.1.4 Packing Group: Not applicable

14.1.5 Hazardous Substance: No

14.1.6 Marine Pollutant: No

14.2 Additional Information:

14.2.1 Other DOT Requirements:

14.2.1.1 Reportable Quantity: Not applicable

14.2.1.2 Placard(s): Not applicable

14.2.1.3 Label(s): Not applicable

14.2.2 USCG Classification: Class 43, Misc. water solutions

14.2.4 Emergency Response Guide: Not applicable

14.2.5 Emergency Response Assistance Plan: Not applicable

14.2.6 Special Precautions: None

SECTION 15: REGULATORY INFORMATION

15.1 US Federal Regulations:

15.1.1 OSHA: This product meets the criteria of the Federal OSHA Hazard communication Standard (29 CFR 1910.1200).

15.1.2 TSCA: Product is contained in USEPA Toxic Substance Control Act Inventory

15.1.3 CERCLA: Reportable Quantity - Not Applicable

15.1.4 SARA Title III:

15.1.4.1 Extremely Hazardous Substance (EHS): Not listed

15.1.4.2 Section 312 (Tier II) Ratings:

Immediate (acute)	Yes
Fire	No
Sudden release	No
Reactivity	No
Delayed (chronic)	No

15.1.4.3 Section 313 (FORM R): Not applicable

15.1.5 RCRA: Not applicable

15.1.6 CAA (Hazardous Air Pollutants/HAPs): Not applicable

SECTION 16: OTHER INFORMATION

This SDS sheet has been created to comply with current changes to the SDS format using Global Harmonized System guidelines, by Proplus Products, Inc. Revision Date: 11-20-14

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