



a xylem brand

SAFETY DATA SHEET

1. Product and company identification

Material name YSI ~Zobell Solution 061320, 061321, 061322
Version No. 01
Issue date 05-December-2013
Revision date -
Supersedes date -
CAS No. Mixture
Manufacturer information YSI, Inc
 1700/1725 Brannum Lane
 Yellow Springs, Ohio 45387
 MSDSinfo@ysi.com
 (937) 767-7241
 CHEMTREC (US/Canada) (800) 424-9300
 CHEMTREC (International) 011 703-527-3887
 (Collect calls accepted)

2. Hazards Identification

Emergency overview Exposure to powder or dusts may be irritating to eyes, nose and throat.
Potential health effects
Routes of exposure Inhalation.
Eyes Dust in the eyes will cause irritation.
Skin Avoid contact with the skin.
Inhalation Dust may irritate respiratory system.
Ingestion Do not ingest.
Signs and Symptoms Direct contact with eyes may cause temporary irritation.
Potential environmental effects May cause long-term adverse effects in the environment.

3. Composition/Information on Ingredients

Components	CAS No.	Percent
Potassium chloride	7447-40-7	72 - 78
Potassium ferricyanide	13746-66-2	10 - 15
Potassium ferrocyanide trihydrate	14459-95-1	10 - 15

4. First aid measures

First aid procedures
Eye contact Rinse with water. Get medical attention if irritation develops and persists.
Skin contact Rinse skin with water/shower. Get medical attention if irritation develops and persists.
Inhalation If dust from the material is inhaled, remove the affected person immediately to fresh air. Call a physician if symptoms develop or persist.
Ingestion Rinse mouth. If ingestion of a large amount does occur, call a poison control centre immediately.

5. Fire Fighting Measures

Extinguishing media
Suitable extinguishing media Water fog. Foam. Dry chemical powder.
Unsuitable extinguishing media Carbon dioxide (CO₂).

Protection of firefighters	
Specific hazards arising from the chemical	Hydrochloric acid. Hydrogen cyanide.
Protective equipment for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Fire fighting equipment/instructions	In the event of fire, cool tanks with water spray.
Specific methods	Cool containers exposed to flames with water until well after the fire is out.
Explosion data	
Sensitivity to static discharge	Not available.
Sensitivity to mechanical impact	Not available.

6. Accidental release measures

Personal precautions	Keep people away from and upwind of spill/leak. Keep unnecessary personnel away. Avoid inhalation of dust from the spilled material. Ensure adequate ventilation. Wear appropriate personal protective equipment. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8.
Environmental precautions	Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground.
Methods for containment	If sweeping of a contaminated area is necessary use a dust suppressant agent which does not react with the product.
Methods for cleaning up	Minimise dust generation and accumulation. Sweep up or vacuum up spillage and collect in suitable container for disposal. Collect dust using a vacuum cleaner equipped with HEPA filter. Following product recovery, flush area with water. For waste disposal, see section 13.

7. Handling and storage

Handling	Minimise dust generation and accumulation. Do not breathe dust. Ensure adequate ventilation. Avoid contact with eyes, skin, and clothing. Observe good industrial hygiene practices.
Storage	Keep container tightly closed. Store in a well-ventilated place. Guard against dust accumulation of this material.

8. Exposure controls / personal protection

Occupational exposure limits	No exposure limits noted for ingredient(s).
Engineering controls	Ventilation should be sufficient to effectively remove and prevent buildup of any dusts or fumes that may be generated during handling or thermal processing.
Personal protective equipment	
Eye / face protection	Use tight fitting goggles if dust is generated.
Skin protection	Wear suitable protective clothing.
Respiratory protection	Wear respirator with dust filter.

9. Physical & Chemical Properties

Appearance	Not available.
Physical state	Solid. Powder
Form	White.
Colour	None known.
Odour	Not available.
Odour threshold	Not available.
pH	Not available.
Vapour pressure	Not available.
Vapour density	Not available.
Boiling point	Not available.
Melting point/freezing point	Infinitely soluble
Solubility (water)	

MSDS Canada

Specific gravity	Not available.
Flash point	Not available.
Flammability limits in air, upper, % by volume	Not available.
Flammability limits in air, lower, % by volume	Not available.
Auto-ignition temperature	Not available.

10. Chemical Stability & Reactivity Information

Chemical stability	Material is stable under normal conditions.
Conditions to avoid	Avoid dispersal of dust in the air (i.e., clearing dust surfaces with compressed air).
Incompatible materials	Strong oxidising agents. Strong acids.
Hazardous decomposition products	Nitrogen oxides. Hydrogen cyanide.

11. Toxicological information

Toxicological data

Components	Species	Test results
Potassium chloride (CAS 7447-40-7)		
Acute		
ORAL		
LD50	Rat	2600 mg/kg
Potassium ferricyanide (CAS 13746-66-2)		
Acute		
ORAL		
LD50	Rat	4520 mg/kg
Local effects	Inhalation of dusts may cause respiratory irritation.	
Chronic effects	Not expected to be hazardous by WHMIS criteria.	
Symptoms and target organs	Direct contact with eyes may cause temporary irritation.	

12. Ecological information

Ecotoxicological data

Components	Species	Test results
Potassium chloride (CAS 7447-40-7)		
Aquatic		
Crustacea	EC50	Water flea (<i>Daphnia magna</i>) 83 mg/l, 48 hours
Fish	LC50	Western mosquitofish (<i>Gambusia affinis</i>) 435 mg/l, 96 hours
Potassium ferricyanide (CAS 13746-66-2)		
Aquatic		
Fish	LC50	Guppy (<i>Poecilia reticulata</i>) 19 mg/l, 96 hours
Potassium ferrocyanide trihydrate (CAS 14459-95-1)		
Aquatic		
Fish	LC50	Rainbow trout, donaldson trout (<i>Oncorhynchus mykiss</i>) 28.7 - 37.9 mg/l, 96 hours
Ecotoxicity	Harmful to aquatic life with long lasting effects.	
Environmental effects	An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.	
Persistence and degradability	Not available.	

13. Disposal considerations

Disposal instructions	Dispose of contents/container in accordance with local/regional/national/international regulations.
Waste from residues / unused products	Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

Contaminated packaging

Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. Transport information**TDG**

Not regulated as dangerous goods.

IATA

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

15. Regulatory information**Canadian regulations**

This product has been classified in accordance with the hazard criteria of the CPR and the MSDS contains all the information required by the CPR.

WHMIS status

Non-Controlled

Inventory status

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s).

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. OTHER INFORMATION**HMIS® ratings**

Health: 1
Flammability: 0
Physical Hazard: 0

NFPA ratings

Health: 1
Flammability: 0
Instability: 0

Disclaimer

The information in the sheet was written based on the best knowledge and experience currently available.