



MATERIAL SAFETY DATA SHEET

Revision Date: 09/28/2009

MSDSANSI/ANSI/EN/150000100305/Version 2.2

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name	FutureChem KHQS
Product Identification Number(s)	10964, E109640S, P109640S
Manufacturer/Supplier	FutureFuel Chemical Company Gap Road 2800 Batesville, AR 72503 US
MSDS Prepared by	Product Safety
Chemical Name	potassium hydroquinone sulfonate
Synonym(s)	10964
Molecular Formula	not applicable
Molecular Weight	not applicable
Product Use	photographic chemical
OSHA Status	hazardous

For product information telephone FutureFuel Chemical Company 870-698-3000, 8:00 am - 4:00 pm, Central.

Emergency telephone CHEMTREC: US 800-424-9300, international 703-527-3887

2. COMPOSITION INFORMATION ON INGREDIENTS

(Typical composition is given, and it may vary. A certificate of analysis can be provided, if available.)

<u>Weight %</u>	<u>Component</u>	<u>CAS Registry No.</u>
>96%	potassium hydroquinone-2-sulfonate	21799-87-1
<4%	potassium hydrogensulfate	7646-93-7
<2%	sulfuric acid	7664-93-9
<1.5%	other impurities	not applicable

3. HAZARDS IDENTIFICATION

DANGER!
CAUSES SKIN AND EYE BURNS
DUST IRRITATING TO THE EYES AND RESPIRATORY TRACT
CAN DECOMPOSE AT ELEVATED TEMPERATURES

HMIS® Hazard Ratings: Health - 3, Flammability -1, Chemical Reactivity - 1

HMIS® rating involves data interpretations that may vary from company to company. They are intended only for rapid, general identification of the magnitude of the specific hazard. To deal adequately with the safe handling of this material, all the information contained in this MSDS must be considered.

4. FIRST-AID MEASURES

Inhalation: Move to fresh air. Treat symptomatically. Get medical attention if symptoms persist.

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Eyes: Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses. Call a physician or poison control center immediately. In case of irritation from airborne exposure, move to fresh air. Get medical attention if symptoms persist.

Skin: Immediately flush with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention immediately. Wash contaminated clothing before reuse. Destroy or thoroughly clean contaminated shoes.

Ingestion: Seek medical advice.

5. FIRE FIGHTING MEASURES

Extinguishing Media: water spray, carbon dioxide, dry chemical

Special Fire-Fighting Procedures: Wear self-contained breathing apparatus and protective clothing. Use water spray to keep fire-exposed containers cool.

Hazardous Combustion Products: carbon dioxide, carbon monoxide, hydrogen sulfide, oxides of sulfur

Unusual Fire and Explosion Hazards: Powdered material may form explosive dust-air mixtures. Elevated temperatures can cause decomposition.

6. ACCIDENTAL RELEASE MEASURES

Wear appropriate personal protective equipment. Sweep up and place in a clearly labeled container for chemical waste.

For Large Spills: Flush spill area with water spray. Prevent runoff from entering drains, sewers, or streams. Dike for later disposal.

7. HANDLING AND STORAGE

Personal Precautionary Measures: Avoid breathing dust. Do not get in eyes, on skin, on clothing. Use only with adequate ventilation. Wash thoroughly after handling.

Prevention of Fire and Explosion: Keep from contact with oxidizing materials. Minimize dust generation and accumulation. In the United States of America, refer to NFPA® Pamphlet No. 654, "Prevention of Fire and Dust Explosions in the Chemical, Dye, Pharmaceutical, and Plastics Industries." Exercise caution if heating, especially in a closed container.

Storage: Keep container closed. Store in a cool place.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Country specific exposure limits have not been established or are not applicable unless listed below.

SULFURIC ACID, THORACIC FRACTION, Thoracic fraction.

US. ACGIH Threshold Limit Values

Time Weighted Average (TWA): 0.2 mg/m³

SULFURIC ACID

US. NIOSH: Pocket Guide to Chemical Hazards

Recommended exposure limit (REL): 1 mg/m³

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

PEL: 1 mg/m³

US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants

Time Weighted Average (TWA) Permissible Exposure Limit (PEL): 1 mg/m³

US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants

Short Term Exposure Limit (STEL): 3 mg/m³

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Ventilation: Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

Respiratory Protection: If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. In the United States of America, if respirators are used, a program should be instituted to assure compliance with OSHA Standard 63 FR 1152, January 8, 1998. Respirator type: Air-purifying respirator with an appropriate, government approved (where applicable), air-purifying filter, cartridge or canister. Contact health and safety professional or manufacturer for specific information.

Eye Protection: Wear safety glasses with side shields (or goggles) and a face shield. Wear a full-face respirator, if needed.

Skin Protection: Wear chemical-resistant gloves, footwear, and protective clothing appropriate for the risk of exposure. Contact health and safety professional or manufacturer for specific information.

Recommended Decontamination Facilities: eye bath, washing facilities

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical Form: solid

Color: white

Melting Point: 251 °C

Flash Point: not applicable, combustible solid

Thermal Decomposition Temperature: 295 °C ; 69 (DSC)

Thermal Decomposition Temperature: 354 °C ; 240 (DSC)

10. STABILITY AND REACTIVITY

Stability: Normally stable. Material can decompose at elevated temperatures. Use caution when storing or processing material above 172.8 °C.

Incompatibility: Material reacts with strong oxidizing agents.

Hazardous Polymerization: Will not occur.

11. TOXICOLOGICAL INFORMATION

Acute toxicity data, if available, are listed below. Additional toxicity data may be available on request.

12. ECOLOGICAL INFORMATION

Acute toxicity data, if available, are listed below. Additional toxicity data may be available on request.

This material has not been tested for environmental effects.

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13. DISPOSAL CONSIDERATIONS

Discharge, treatment, or disposal may be subject to national, state, or local laws. Incinerate. Since emptied containers retain product residue, follow label warnings even after container is emptied.

14. TRANSPORT INFORMATION

Important Note: *Shipping descriptions may vary based on mode of transport, quantities, package size, and/or origin and destination. Consult your company's Hazardous Materials/Dangerous Goods expert for information specific to your situation.*

DOT (USA)

Possible Shipping Description(s):

Corrosive solids, n.o.s. (potassium hydrogensulfate,sulfuric acid)
8 UN 1759 III

Sea - IMDG (International Maritime Dangerous Goods)

Possible Shipping Description(s):

CORROSIVE SOLID, N.O.S. (potassium hydrogensulfate,sulfuric acid)
8 UN 1759 III

Air - ICAO (International Civil Aviation Organization)

Possible Shipping Description(s):

Corrosive solid, n.o.s. (potassium hydrogensulfate,sulfuric acid)
8 UN 1759 III

15. REGULATORY INFORMATION

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

WHMIS (Canada) Status: controlled

WHMIS (Canada) Hazard Classification: E

SARA 311-312 Hazard Classification(s):
immediate (acute) health hazard

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SARA 313: none, unless listed below

SULFURIC ACID

Carcinogenicity Classification (components present at 0.1% or more): none, unless listed below

TSCA (US Toxic Substances Control Act): All components of this product are listed on the TSCA inventory. Any impurities present in this product are exempt from listing.

16. OTHER INFORMATION

The information contained herein is based on current knowledge and experience; no responsibility is accepted that the information is sufficient or correct in all cases. Users should consider these data only as a supplement to other information. Users should make independent determinations of suitability and completeness of information from all sources to assure proper use and disposal of these materials, the safety and health of employees and customers, and the protection of the environment.

Highlighted areas indicate new or changed information.