

SECTION 1: Identification

1.1. Identification

Product form : Mixture
 Product name : FCC Solution: Orange Dye Concentrate
 Product code : SEWI-061

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture : Clinical chemistry cleaning chemical

1.3. Details of the supplier of the safety data sheet

ELITechGroup Inc.
 370 West 1700 South
 Logan, UT 84321 - USA
 T +1 (435) 752-6011 - F +1 (435) 752-4127
qara_ebs@elitechgroup.com - www.elitechgroup.com

1.4. Emergency telephone number

Emergency number : Contact your distributor or poison control center in your country.
 InfoTrac Emergency Response: Calls within the USA, phone: 1-800-535-5053. Calls outside the USA, phone: +1 352-323-3500 (call collect)
 Customer ID: #90104 (NOTE: this number is required when a customer calls into either phone number above).

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS US classification

Skin Corr. 1A H314 - Causes severe skin burns and eye damage
 Skin Sens. 1 H317 - May cause an allergic skin reaction
 Resp. Sens. 1 H334 - May cause an allergy or asthma symptoms or breathing difficulties if inhaled
 Muta. 1B H340 - May cause genetic defects
 Carc. 1B H350 - May cause cancer (Inhalation, Dermal)
 Repr. 1B H360 - May damage fertility or the unborn child
 STOT RE 1 H372 - Causes damage to organs through prolonged or repeated exposure (Inhalation, Dermal)

Full text of H statements : see section 16

2.2. Label elements

GHS US labeling

Hazard pictograms (GHS US) :



GHS05

GHS08

Signal word (GHS US) :

Danger

Hazard statements (GHS US) :

H314 - Causes severe skin burns and eye damage
 H317 - May cause an allergic skin reaction
 H334 - May cause an allergy or asthma symptoms or breathing difficulties if inhaled
 H340 - May cause genetic defects
 H350 - May cause cancer (Inhalation, Dermal)
 H360 - May damage fertility or the unborn child
 H372 - Causes damage to organs through prolonged or repeated exposure (Inhalation, Dermal)

Precautionary statements (GHS US) :

P201 - Obtain special instructions before use.
 P260 - Do not breathe mist, spray, vapors, fumes.
 P264 - Wash hands, forearms and face thoroughly after handling
 P270 - Do not eat, drink or smoke when using this product.
 P280 - Wear protective gloves, protective clothing, eye protection, face protection.
 P301+P330+P331 - If swallowed: rinse mouth. Do NOT induce vomiting.
 P302+P352 - If on skin: Wash with plenty of soap and water.
 P303+P361+P353 - If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

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P304+P341 - If inhaled: If breathing is difficult, remove person to fresh air and keep comfortable for breathing.
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P314 - Get medical advice/attention if you feel unwell.
P333+P313 - If skin irritation or rash occurs: Get medical advice/attention.
P342+P311 - If experiencing respiratory symptoms: Call a doctor, a POISON CENTER.
P363 - Wash contaminated clothing before reuse.
P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

2.3. Other hazards

No additional information available

2.4. Unknown acute toxicity (GHS US)

Not applicable

SECTION 3: Composition/Information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	GHS US classification
sulfuric acid	(CAS-No.) 7664-93-9	9.9341	Skin Corr. 1A, H314
potassium dichromate	(CAS-No.) 7778-50-9	1 – 5	Ox. Sol. 2, H272 Acute Tox. 3 (Oral), H301 Acute Tox. 2 (Inhalation), H330 Skin Corr. 1B, H314 Resp. Sens. 1, H334 Skin Sens. 1, H317 Muta. 1B, H340 Carc. 1B, H350 Repr. 1B, H360 STOT RE 1, H372

Full text of H-phrases: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

- First-aid measures general : Never give anything by mouth to an unconscious person. IF exposed or concerned: Get medical advice/attention.
- First-aid measures after inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If experiencing respiratory symptoms: Call a poison center or a doctor. If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.
- First-aid measures after skin contact : Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash with water and soap. If skin irritation or rash occurs: Get medical advice/attention. Wash contaminated clothing before reuse.
- First-aid measures after eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center or doctor/physician.
- First-aid measures after ingestion : Rinse mouth. Do NOT induce vomiting. Immediately call a poison center or doctor/physician.

4.2. Most important symptoms and effects, both acute and delayed

- Symptoms/effects : Causes severe skin burns and eye damage.
- Symptoms/effects after inhalation : Danger of serious damage to health by prolonged exposure through inhalation. May cause an allergy or asthma symptoms or breathing difficulties if inhaled. May cause an allergic skin reaction.
- Symptoms/effects after skin contact : Burns. May cause an allergic skin reaction.
- Symptoms/effects after eye contact : Serious damage to eyes.
- Symptoms/effects after ingestion : Burns.

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

- Suitable extinguishing media : Foam. Dry powder. Carbon dioxide. Water spray. Sand.
- Unsuitable extinguishing media : Do not use a heavy water stream.

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5.2. Special hazards arising from the substance or mixture

Reactivity : Corrosive vapors.

5.3. Advice for firefighters

Firefighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire-fighting water from entering environment.

Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures : Evacuate unnecessary personnel.

6.1.2. For emergency responders

Protective equipment : Equip cleanup crew with proper protection.

Emergency procedures : Ventilate area.

6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters. Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials.

Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapor. Use only outdoors or in a well-ventilated area. Avoid breathing dust/fume/gas/mist/vapors/spray. Do not breathe dust/fume/gas/mist/vapors/spray. Avoid contact during pregnancy/while nursing. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Eliminate all ignition sources if safe to do so.

Hygiene measures : Wash hands thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Comply with applicable regulations.

Storage conditions : Keep only in the original container in a cool, well ventilated place away from : Keep container closed when not in use.

Incompatible products : Strong bases. Strong acids.

Incompatible materials : Sources of ignition. Direct sunlight.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

potassium dichromate (7778-50-9)		
ACGIH	ACGIH TWA (mg/m ³)	0.0002 mg/m ³ (Inhalable fraction)
ACGIH	ACGIH STEL (mg/m ³)	0.0005 mg/m ³ (Inhalable fraction)

8.2. Exposure controls

Appropriate engineering controls : Ensure good ventilation of the work station.

Personal protective equipment : Avoid all unnecessary exposure.

Hand protection : Wear protective gloves.

Eye protection : Chemical goggles or face shield.

Skin and body protection : Wear suitable protective clothing.

Respiratory protection : In case of inadequate ventilation wear respiratory protection.

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Environmental exposure controls : Avoid release to the environment.
Other information : Do not eat, drink or smoke during use.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Liquid
Color : Orange
Odor : No data available
Odor threshold : No data available
pH : No data available
Melting point : Not applicable
Freezing point : No data available
Boiling point : No data available
Flash point : No data available
Relative evaporation rate (butyl acetate=1) : No data available
Flammability (solid, gas) : No data available
Explosion limits : No data available
Explosive properties : No data available
Oxidizing properties : No data available
Vapor pressure : No data available
Relative density : No data available
Relative vapor density at 20 °C : No data available
Solubility : No data available
Partition coefficient n-octanol/water (Log Pow) : No data available
Auto-ignition temperature : No data available
Decomposition temperature : No data available
Viscosity : No data available
Viscosity, kinematic : No data available
Viscosity, dynamic : No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Corrosive vapors.

10.2. Chemical stability

Not established.

10.3. Possibility of hazardous reactions

Not established.

10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures.

10.5. Incompatible materials

Strong acids. Strong bases.

10.6. Hazardous decomposition products

fume. Carbon monoxide. Carbon dioxide. Thermal decomposition generates : Corrosive vapors.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified

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potassium dichromate (7778-50-9)	
LD50 oral rat	90.5 – 168 mg/kg body weight (Equivalent or similar to OECD 401, Rat, Male / female, Experimental value, Oral, 14 day(s))
LD50 dermal rabbit	> 2000 mg/kg body weight (Equivalent or similar to OECD 402, 24 h, Rabbit, Male / female, Experimental value, Dermal, 14 day(s))
LC50 Inhalation - Rat	0.094 mg/l (Equivalent or similar to OECD 403, 4 h, Rat, Male / female, Experimental value, Inhalation (aerosol), 14 day(s))
ATE US (oral)	90.5 mg/kg body weight
ATE US (gases)	100 ppmV/4h
ATE US (vapors)	0.094 mg/l/4h
ATE US (dust, mist)	0.094 mg/l/4h

Skin corrosion/irritation	: Causes severe skin burns.
Serious eye damage/irritation	: Assumed to cause serious eye damage
Respiratory or skin sensitization	: May cause an allergy or asthma symptoms or breathing difficulties if inhaled. May cause an allergic skin reaction.
Germ cell mutagenicity	: May cause genetic defects.
Carcinogenicity	: May cause cancer (Inhalation, Dermal).

sulfuric acid (7664-93-9)	
National Toxicology Program (NTP) Status	2 - Known Human Carcinogens
Reproductive toxicity	: May damage fertility or the unborn child.
STOT-single exposure	: Not classified
STOT-repeated exposure	: Causes damage to organs through prolonged or repeated exposure (Inhalation, Dermal).
Aspiration hazard	: Not classified
Potential Adverse human health effects and symptoms	: Harmful if inhaled. Based on available data, the classification criteria are not met.
Symptoms/effects after inhalation	: Danger of serious damage to health by prolonged exposure through inhalation. May cause an allergy or asthma symptoms or breathing difficulties if inhaled. May cause an allergic skin reaction.
Symptoms/effects after skin contact	: Burns. May cause an allergic skin reaction.
Symptoms/effects after eye contact	: Serious damage to eyes.
Symptoms/effects after ingestion	: Burns.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general	: Before neutralisation, the product may represent a danger to aquatic organisms.
Ecology - water	: Harmful to aquatic life with long lasting effects.

potassium dichromate (7778-50-9)	
LC50 fish 1	63.6 mg/l (96 h, Oncorhynchus mykiss, Fresh water, Read-across)
EC50 Daphnia 1	0.035 mg/l (48 h, Daphnia magna, Fresh water, Read-across)
ErC50 (algae)	0.233 mg/l (72 h, Selenastrum capricornutum, Static system, Fresh water, Read-across, Growth rate)

12.2. Persistence and degradability

FCC Solution: Orange Dye Concentrate	
Persistence and degradability	May cause long-term adverse effects in the environment.
potassium dichromate (7778-50-9)	
Persistence and degradability	Biodegradability: not applicable.
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable
BOD (% of ThOD)	Not applicable
sulfuric acid (7664-93-9)	
Persistence and degradability	Biodegradability in soil: not applicable. Biodegradability: not applicable.

12.3. Bioaccumulative potential

FCC Solution: Orange Dye Concentrate	
Bioaccumulative potential	Not established.
potassium dichromate (7778-50-9)	
BCF fish 1	17.4 (Salmo gairdneri)
BCF other aquatic organisms 1	32 (48 h, Mytilidae, Salt water)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).

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sulfuric acid (7664-93-9)	
Bioaccumulative potential	Does not contain bioaccumulative component(s).

12.4. Mobility in soil

potassium dichromate (7778-50-9)	
Ecology - soil	Adsorbs into the soil.
sulfuric acid (7664-93-9)	
Ecology - soil	No (test)data on mobility of the components available.

12.5. Other adverse effects

Other information : Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.
Product/Packaging disposal recommendations : Dispose in a safe manner in accordance with local/national regulations. Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.
Ecology - waste materials : Avoid release to the environment.

SECTION 14: Transport information

Department of Transportation (DOT)

In accordance with DOT

Transport document description : UN2796 Sulfuric acid, 8, II
UN-No.(DOT) : UN2796
Proper Shipping Name (DOT) : Sulfuric acid
Class (DOT) : 8 - Class 8 - Corrosive material 49 CFR 173.136
Hazard labels (DOT) : 8 - Corrosive



Packing group (DOT) : II - Medium Danger
DOT Packaging Non Bulk (49 CFR 173.xxx) : 202
DOT Packaging Bulk (49 CFR 173.xxx) : 242

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DOT Special Provisions (49 CFR 172.102)	: 386 - Notwithstanding the provisions of §177.834(l) of this subchapter, cargo heaters may be used when weather conditions are such that the freezing of a wetted explosive material is likely. Shipments must be made by private, leased or contract carrier vehicles under exclusive use of the offeror. Cargo heaters must be reverse refrigeration (heat pump) units. Shipments made in accordance with this Special provision are excepted from the requirements of §173.60(b)(4) of this subchapter. A3 - For combination packaging, if glass inner packaging (including ampoules) are used, they must be packed with absorbent material in tightly closed metal receptacles before packing in outer packaging. A7 - Steel packaging must be corrosion-resistant or have protection against corrosion. B2 - MC 300, MC 301, MC 302, MC 303, MC 305, and MC 306 and DOT 406 cargo tanks are not authorized. B15 - Packaging must be protected with non-metallic linings impervious to the lading or have a suitable corrosion allowance. IB2 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized. N6 - Battery fluid packaged with electric storage batteries, wet or dry, must conform to the packaging provisions of 173.159 (g) or (h) of this subchapter. N34 - Aluminum construction materials are not authorized for any part of a packaging which is normally in contact with the hazardous material. T8 - 4 178.274(d)(2) Normal..... Prohibited TP2 - a. The maximum degree of filling must not exceed the degree of filling determined by the following: (image) Where: t_r is the maximum mean bulk temperature during transport, t_f is the temperature in degrees celsius of the liquid during filling, and a is the mean coefficient of cubical expansion of the liquid between the mean temperature of the liquid during filling (t_f) and the maximum mean bulk temperature during transportation (t_r) both in degrees celsius. b. For liquids transported under ambient conditions may be calculated using the formula: (image) Where: d_{15} and d_{50} are the densities (in units of mass per unit volume) of the liquid at 15 C (59 F) and 50 C (122 F), respectively.
DOT Packaging Exceptions (49 CFR 173.xxx)	: 154
DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27)	: 1 L
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75)	: 30 L
DOT Vessel Stowage Location	: B - (i) The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel carrying a number of passengers limited to not more than the larger of 25 passengers, or one passenger per each 3 m of overall vessel length; and (ii) "On deck only" on passenger vessels in which the number of passengers specified in paragraph (k)(2)(i) of this section is exceeded.
Emergency Response Guide (ERG) Number	: 157
Other information	: No supplementary information available.

Transportation of Dangerous Goods

No additional information available

Transport by sea

UN-No. (IMDG)	: 2796
Proper Shipping Name (IMDG)	: SULPHURIC ACID
Class (IMDG)	: 8 - Corrosive substances
Packing group (IMDG)	: II - substances presenting medium danger

Air transport

UN-No. (IATA)	: 2796
Proper Shipping Name (IATA)	: Sulphuric acid
Class (IATA)	: 8 - Corrosives
Packing group (IATA)	: II - Medium Danger

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SECTION 15: Regulatory information

15.1. US Federal regulations

potassium dichromate (7778-50-9)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory Subject to reporting requirements of United States SARA Section 313	
CERCLA RQ	10 lb
sulfuric acid (7664-93-9)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory Subject to reporting requirements of United States SARA Section 313 Not subject to reporting requirements of the United States SARA Section 313	
CERCLA RQ	1000 lb
SARA Section 302 Threshold Planning Quantity (TPQ)	1000 lb
SARA Section 313 - Emission Reporting	1 %

15.2. International regulations

CANADA

potassium dichromate (7778-50-9)	
Listed on the Canadian DSL (Domestic Substances List)	
sulfuric acid (7664-93-9)	
Listed on the Canadian DSL (Domestic Substances List)	

EU-Regulations

No additional information available

National regulations

sulfuric acid (7664-93-9)	
Listed as carcinogen on NTP (National Toxicology Program)	

15.3. US State regulations

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm

potassium dichromate (7778-50-9)	
U.S. - Massachusetts - Right To Know List U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) List	
sulfuric acid (7664-93-9)	
U.S. - Massachusetts - Right To Know List U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) List	

SECTION 16: Other information

Data sources	: REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labeling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006.
Abbreviations and acronyms	: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways. European Agreement concerning the International Carriage of Dangerous Goods by Road. Acute Toxicity Estimate. Biological limit value. Chemical Abstract Service number. Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008. Derived Minimal Effect level. Derived-No Effect Level. Median effective concentration. European Community number. European Standard. International Air Transport Association. International Maritime Dangerous Goods. Median lethal concentration. Median lethal dose. Lowest Observed Adverse Effect Level. No-Observed Adverse Effect Concentration. No-Observed Adverse Effect Level. No-Observed Effect Concentration. Occupational Exposure Limit. Persistent Bioaccumulative Toxic. Predicted No-Effect Concentration. Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006. Regulations concerning the International Carriage of Dangerous Goods by Rail. Safety Data Sheet. Very Persistent and Very Bioaccumulative. Water Hazard Class.
Other information	: None.

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Full text of H-phrases:

H272	May intensify fire; oxidizer
H301	Toxic if swallowed
H314	Causes severe skin burns and eye damage
H317	May cause an allergic skin reaction
H330	Fatal if inhaled
H334	May cause an allergy or asthma symptoms or breathing difficulties if inhaled
H340	May cause genetic defects
H350	May cause cancer
H360	May damage fertility or the unborn child
H372	Causes damage to organs through prolonged or repeated exposure

SDS US Custom - EBS

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

Reason for Change: generated new SDS for reagent and updated to latest format to meet compliance.