


Safety Data Sheet

Canada

Section 1. Identification

Product name UV Test Kit 1 and 2 mm (Test Liquids with 0 - 1420 mg/l Ferric Sulfate. 9 bottles with 30 ml each.)

Catalogue Number 29276997 

Product type Liquid.

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

Identified uses

Analytical chemistry.
Laboratory chemicals
Scientific research and development
Consumer use -

Supplier Cytiva
Amersham Place
Little Chalfont
Buckinghamshire
HP7 9NA United Kingdom
+44 1494 508000

Importer Cytiva Canada
250 Howe Street, Suite 1400-C
Vancouver, British Columbia, Canada, V6C 3S7
1 800 463 5800

In case of emergency INFOTRAC
Outside of the United States, call 24 Hour number: 001-352-323-3500 (Call Collect)
In the United States, call 24 Hour number: 1-800-535-5053

Section 2. Hazard identification

Classification of the substance or mixture SKIN CORROSION - Category 1
CARCINOGENICITY - Category 1A

GHS label elements

Hazard pictograms



Signal word Danger

Hazard statements Causes severe skin burns and eye damage.
May cause cancer.

Precautionary statements

Prevention Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves, protective clothing, eye protection, face protection, or hearing protection. Do not breathe dust or mist. Wash thoroughly after handling.

| | |
|-----------------|--|
| Response | IF exposed or concerned: Get medical advice or attention. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER or doctor. IF SWALLOWED: Immediately call a POISON CENTER or doctor. Rinse mouth. Do NOT induce vomiting. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. Immediately call a POISON CENTER or doctor. Wash contaminated clothing before reuse. IF IN EYES: 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. Specific treatment (see the label). |
| Storage | Store locked up. |
| Disposal | Dispose of contents and container in accordance with all local, regional, national and international regulations. |

Section 3. Composition/information on ingredients

| | |
|--------------------------------------|----------------|
| Substance/mixture | Mixture |
| Other means of identification | Not available. |

| Ingredient name | Synonyms | % (w/w) | CAS number |
|------------------------|--|----------------|-------------------|
| Sulfuric acid | Sulfuric acid; Sulfuric acid aqueous; Oil of vitriol; Hydrogen sulfate; Battery acid; aqueous solution containing by weight — 38 % or more but not more than 42 % of 2-(3-chloro-5-(trifluoromethyl)pyridin-2-yl) ethanamine (CAS RN 658066-44-5), — 21 % or more but not more than 25 % of sulphuric acid (CAS RN 7664-93-9) and — 1 % or more but not more than 2,9 % of methanol (CAS RN 67-56-1); oleum; dipping acid; matting acid; nordhausen acid; oil of vitriol; spent sulfuric acid; spirit of sulfur; vitriol; vitriol brown oil; E 513; dihydrogen sulphate; battery acid; electrolyte acid; dihydroxodioxidosulfur; brimstone acid; contact acid; sulfur acid; DIHYDROGEN SULFATE; dihydrogen tetraoxosulfate; OIL OF VITREOL; Sulfuric acid 100% | ≥0.1 - ≤1 | CAS: 7664-93-9 |

There are no ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First-aid measures

Description of necessary first aid measures

| | |
|---------------------|---|
| Eye contact | Get medical attention immediately. Call a poison center or physician. Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician. |
| Inhalation | Get medical attention immediately. Call a poison center or physician. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. |
| Skin contact | Get medical attention immediately. Call a poison center or physician. Wash contaminated skin with soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician. Wash clothing before reuse. Clean shoes thoroughly before reuse. |
| Ingestion | Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Chemical burns must be treated promptly by a physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. |

Most important symptoms/effects, acute and delayed



Potential acute health effects

| | |
|---------------------|---|
| Eye contact | Causes serious eye damage. |
| Inhalation | No known significant effects or critical hazards. |
| Skin contact | Causes severe burns. |
| Ingestion | No known significant effects or critical hazards. |

Over-exposure signs/symptoms

| | |
|---------------------|--|
| Eye contact | Adverse symptoms may include the following: pain watering redness |
| Inhalation | No specific data. |
| Skin contact | Adverse symptoms may include the following: pain or irritation redness blistering may occur |
| Ingestion | Adverse symptoms may include the following: stomach pains |

Indication of immediate medical attention and special treatment needed, if necessary

| | |
|-----------------------------------|---|
| Notes to physician | Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled. |
| Specific treatments | Specific treatment is required. |
| Protection of first-aiders | No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. |

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

| | |
|---------------------------------------|---|
| Suitable extinguishing media | Use an extinguishing agent suitable for the surrounding fire. |
| Unsuitable extinguishing media | None known. |

Specific hazards arising from the chemical In a fire or if heated, a pressure increase will occur and the container may burst.

Hazardous thermal decomposition products No specific data.

Special protective actions for fire-fighters Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Special protective equipment for fire-fighters Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Do not breathe vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).



Methods and materials for containment and cleaning up

| | |
|-------------|--|
| Small spill | Stop leak if without risk. Move containers from spill area. Absorb with an inert material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor. |
| Large spill | Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. The spilled material may be neutralized with sodium carbonate, sodium bicarbonate or sodium hydroxide. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations. |

Section 7. Handling and storage

Precautions for safe handling

| | |
|--|---|
| Protective measures | Put on appropriate personal protective equipment (see Section 8). Avoid exposure - obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not breathe dust or mist. Do not ingest. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Keep away from alkalis. Empty containers retain product residue and can be hazardous. Do not reuse container. |
| Advice on general occupational hygiene | Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures. |
| Conditions for safe storage, including any incompatibilities | Store between the following temperatures: 10 to 30°C (50 to 86°F). Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Separate from alkalis. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use. |

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

| | |
|-----------------|---|
| Ingredient name | Exposure limits |
| Sulfuric acid | CA Saskatchewan Provincial (Canada, 4/2021) STEL 15 minutes: 0.6 mg/m³. TWA 8 hours: 0.2 mg/m³. CA British Columbia Provincial (Canada, 9/2024) Carc 2A, Carc 1. Notes: Refers to sulfuric acid contained in strong inorganic acid mists. TWA 8 hours: 0.2 mg/m³. Form: thoracic. CA Ontario Provincial (Canada, 6/2019) TWA 8 hours: 0.2 mg/m³. Form: Thoracic particulate matter.. CA Quebec Provincial (Canada, 2/2024) C2. TWA _{AEV} 8 hours: 0.2 mg/m³. Form: thoracic aerosol fraction. CA Alberta Provincial (Canada, 3/2023) A2. OEL 15 minutes: 3 mg/m³. OEL 8 hours: 1 mg/m³. |

Biological exposure indices

No exposure indices known.

| | |
|----------------------------------|--|
| Appropriate engineering controls | If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. |
| Environmental exposure controls | Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels. |

Individual protection measures



| | |
|------------------------|--|
| Hygiene measures | Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location. |
| Eye/face protection | Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles and/or face shield. If inhalation hazards exist, a full-face respirator may be required instead. |
| Skin protection | |
| Hand protection | Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated. |
| Body protection | Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. |
| Other skin protection | Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. |
| Respiratory protection | Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use. |

Section 9. Physical and chemical properties and safety characteristics

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

Appearance

| | |
|--|-----------------|
| Physical state | Liquid. |
| Color | Colorless. |
| Odor | Odorless. |
| Odor threshold | Not available. |
| pH | 1.3 |
| Melting point/freezing point | Not available. |
| Boiling point or initial boiling point and boiling range | Not available. |
| Flash point | Not applicable. |
| Burning time | Not applicable. |
| Burning rate | Not applicable. |
| Evaporation rate | Not available. |
| Flammability | Not available. |
| Lower and upper explosive (flammable) limits | Not available. |
| Vapor pressure | Not available. |

| | Ingredient name | Vapor Pressure at 20°C | | | Vapor pressure at 50°C | | |
|--|-----------------|------------------------|-----|--------|------------------------|-----|--------|
| | | mm Hg | kPa | Method | mm Hg | kPa | Method |
| | water | 17.5 | 2.3 | | | | |

| | |
|------------------------|----------------|
| Relative vapor density | Not available. |
| Relative density | Not available. |
| Solubility(ies) | |

| Media | Result |
|------------|----------------|
| cold water | Easily soluble |
| hot water | Easily soluble |

| | |
|---|--|
| Solubility in water | Not available. |
| Partition coefficient: n-octanol/ water | Not applicable. |
| Auto-ignition temperature | Not available. |
| Decomposition temperature | Not available. |
| SADT | Not available. |
| Viscosity | Dynamic (room temperature): Not available. Kinematic (room temperature): Not available. Kinematic (40°C (104°F)): Not available. |
| Flow time (ISO 2431) | Not available. |



| Particle characteristics | |
|--------------------------|-----------------|
| Median particle size | Not applicable. |

Section 10. Stability and reactivity

| | |
|------------------------------------|---|
| Reactivity | No specific test data related to reactivity available for this product or its ingredients. |
| Chemical stability | The product is stable. |
| Possibility of hazardous reactions | Under normal conditions of storage and use, hazardous reactions will not occur. |
| Conditions to avoid | No specific data. |
| Incompatible materials | Attacks many metals producing extremely flammable hydrogen gas which can form explosive mixtures with air. Reactive or incompatible with the following materials: alkalis |
| Hazardous decomposition products | Under normal conditions of storage and use, hazardous decomposition products should not be produced. |

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

| Product/ingredient name | Result |
|------------------------------|---------------------------------|
| Sulfuric acid | Rat - Oral - LD50 2140 mg/kg |
| Conclusion/Summary [Product] | Not available. |

Skin corrosion/irritation

| | |
|---|----------------|
| Not available. | |
| Conclusion/Summary [Product] | Not available. |

Serious eye damage/eye irritation

| | |
|---|----------------|
| Not available. | |
| Conclusion/Summary [Product] | Not available. |

Respiratory corrosion/irritation

| | |
|---|----------------|
| Not available. | |
| Conclusion/Summary [Product] | Not available. |

Respiratory or skin sensitization

| | |
|------------------------------|----------------|
| Not available. | |
| Skin | |
| Conclusion/Summary [Product] | Not available. |
| Respiratory | |
| Conclusion/Summary [Product] | Not available. |

Germ cell mutagenicity



Not available.

**Conclusion/Summary
[Product]** Not available.

Carcinogenicity

Not available.

**Conclusion/Summary
[Product]** Not available.

Classification

| Product/ingredient name | IARC | NTP | ACGIH |
|-------------------------|------|---------------------------------|-------|
| Sulfuric acid | 1 | Known to be a human carcinogen. | A2 |

Reproductive toxicity

Not available.

**Conclusion/Summary
[Product]** Not available.

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on the likely routes of exposure Routes of entry anticipated: Oral, Dermal, Inhalation, Eyes.

Potential acute health effects

| | |
|---------------------|---|
| Eye contact | Causes serious eye damage. |
| Inhalation | No known significant effects or critical hazards. |
| Skin contact | Causes severe burns. |
| Ingestion | No known significant effects or critical hazards. |

Symptoms related to the physical, chemical and toxicological characteristics

| | |
|---------------------|--|
| Eye contact | Adverse symptoms may include the following: pain watering redness |
| Inhalation | No specific data. |
| Skin contact | Adverse symptoms may include the following: pain or irritation redness blistering may occur |
| Ingestion | Adverse symptoms may include the following: stomach pains |

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

| | |
|------------------------------------|----------------|
| Potential immediate effects | Not available. |
| Potential delayed effects | Not available. |



| | |
|---|---|
| Long term exposure | |
| Potential immediate effects | Not available. |
| Potential delayed effects | Not available. |
| Potential chronic health effects | |
| Not available. | |
| Conclusion/Summary [Product] | Not available. |
| General | No known significant effects or critical hazards. |
| Carcinogenicity | May cause cancer. Risk of cancer depends on duration and level of exposure. |
| Mutagenicity | No known significant effects or critical hazards. |
| Reproductive toxicity | No known significant effects or critical hazards. |

Numerical measures of toxicity

| | | | | | |
|---------------------------------|--------------|----------------|--------------------------|----------------------------|-------------------------------------|
| Acute toxicity estimates | | | | | |
| Product/ingredient name | Oral (mg/kg) | Dermal (mg/kg) | Inhalation (gases) (ppm) | Inhalation (vapors) (mg/l) | Inhalation (dusts and mists) (mg/l) |
| Sulfuric acid | 2140 | N/A | N/A | N/A | 0.05 |

Section 12. Ecological information

Toxicity

| | |
|------------------------------|---|
| Product/ingredient name | Result |
| Sulfuric acid | Acute - LC50 - Marine water Crustaceans - Aesop shrimp - <i>Pandalus montagui</i> - Adult 42.5 mg/l [48 hours] <u>Effect:</u> Mortality Acute - LC50 - Marine water Fish - Hooknose - <i>Agonus cataphractus</i> <u>Size:</u> 50 to 100 mm; <u>Weight:</u> 2 to 8 g 36 µl/l [96 hours] <u>Effect:</u> Mortality |
| Conclusion/Summary [Product] | Not available. |

Persistence and degradability

| | |
|------------------------------|----------------|
| Not available. | |
| Conclusion/Summary [Product] | Not available. |

Bioaccumulative potential

| | |
|----------------|--|
| Not available. | |
|----------------|--|

Mobility in soil

| | |
|----------------------------------|----------------|
| Soil/Water partition coefficient | Not available. |
|----------------------------------|----------------|






| | |
|-----------------------|---|
| Other adverse effects | No known significant effects or critical hazards. |
|-----------------------|---|

Section 13. Disposal considerations

Disposal methods

The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

| | TDG Classification | DOT Classification | ADR/RID | IMDG | IATA |
|-----------------------------------|---|--|--|--|--|
| UN number | UN2796 | UN2796 | UN2796 | UN2796 | UN2796 |
| UN proper shipping name | Sulphuric acid | Sulphuric acid | Sulphuric acid | Sulphuric acid | Sulphuric acid |
| Transport hazard class(es) | 8  | 8  | 8  | 8  | 8  |
| Packing group | II | II | II | II | II |
| Environmental hazards | No. | No. | No. | No. | No. |
| Additional information | Product classified as - per the following sections of the Transportation of Dangerous Goods Regulations: 2.40-2.42 (Class 8). | | | | |

Special precautions for user

Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Transport in bulk according to IMO instruments

Not available.

Section 15. Regulatory information

Canadian lists

Canadian NPRI None of the components are listed.

CEPA Toxic substances None of the components are listed.

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals



Not listed.**Inventory list**

| | |
|----------------------|--|
| Canada | All components are listed or exempted. |
| United States | All components are active or exempted. |

Section 16. Other information**History**

| | |
|---------------------------------------|-----------------------|
| Date of printing | 9/8/2025 |
| Date of issue/Date of revision | 9/8/2025 |
| Date of previous issue | 3/30/2022 |
| Version | 6 |
| | sds_author@cytiva.com |

Key to abbreviations

ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
HPR = Hazardous Products Regulations
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient
MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
N/A = Not available
UN = United Nations

Procedure used to derive the classification

| Classification | Justification |
|-------------------------------|-----------------------|
| SKIN CORROSION - Category 1 | On basis of test data |
| CARCINOGENICITY - Category 1A | Calculation method |

References

Not available.



Indicates information that has changed from previously issued version.

Notice to reader

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