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MSDS Information for:

BisulFlash™ DNA Modification Kit
[Cat. # 1026]

A Material Safety Data Sheet (MSDS) for the product as a whole is not required, as it is a kit consisting of individual components.

The following components are defined as hazardous (see MSDS page)

BF1 (Conversion Mix Solution): 6 ml
BF3 (Desulfonation Solution): 60 ul
BF5 (Conversion enhancer) 5 vials
BF6 (Denaturation Enhancer) 600 ul

The following components are defined as non-hazardous and do not require MSDS. The products do not contain any hazardous components above 1% or any carcinogens above 0.1% as defined in 29 CFR 1910. 1200, the OSHA Hazard Communication Standard.

BF2 (Capture solution): 6 ml
BF4 (Elution solution): 15 ml
P-spin M column: 50
P-collection tube: 50

Material Safety Data Sheet

Section 1. Identification

Product Name	BisulFlash™ DNA Modification Kit
Product No.	P-1026
Supplier	Epigentek Group Inc
In Case of Emergency	631-755-0888

Section 2. Composition, Information on Ingredients

Ingredient Name
BF1 (Conversion Mix Solution)
Cas# 4961-41-5

Section 3. Hazards Identification

Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Skin irritation (Category 2), H315

Eye irritation (Category 2A), H319

Specific target organ toxicity - single exposure (Category 3), Respiratory system, H335

For the full text of the H-Statements mentioned in this Section, see Section 16.

Potential Health Effects

Section 4. First Aid Measures

Description of first aid measures

General advice

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact

Wash off with soap and plenty of water. Consult a physician.

In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If swallowed

Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

4.3 Indication of any immediate medical attention and special treatment needed

No data available

Section 5. Fire Fighting Measures

Extinguishing media

Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2 Special hazards arising from the substance or mixture

No data available

5.3 Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

5.4 Further information

No data available

Section 6. Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.

For personal protection see section 8.

6.2 Environmental precautions

Do not let product enter drains.

6.3 Methods and materials for containment and cleaning up

Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

6.4 Reference to other sections

For disposal see section 13. Section 7. Handling and Storage

Keep in a tightly closed container. Protect from physical damage. Store in a cool, dry, ventilated area away from sources of heat, moisture, and incompatibilities. Wash hands thoroughly after handling.

Section 7. Handling and Storage

7.1 Precautions for safe handling

Avoid contact with skin and eyes. Avoid formation of dust and aerosols.

Provide appropriate exhaust ventilation at places where dust is formed. Normal measures for preventive fire protection.

For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities

Keep container tightly closed in a dry and well-ventilated place.

7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

Section 8. Exposure Controls/Personal Protection

8.1 Control parameters

Components with workplace control parameters

Contains no substances with occupational exposure limit values.

8.2 Exposure controls

Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Personal protective equipment

Eye/face protection

Safety glasses with side-shields conforming to EN166 Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Body Protection

Impervious clothing, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection

For nuisance exposures use type P95 (US) or type P1 (EU EN 143) particle respirator. For higher level protection use type OV/AG/P99 (US) or type ABEK-P2 (EU EN 143) respirator cartridges. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure

Do not let product enter drains.

Section 9. Physical and Chemical Properties

9.1 Information on basic physical and chemical properties

- a) Appearance Form: solid
- b) Odour No data available
- c) Odour Threshold No data available
- d) pH No data available
- e) Melting point/freezing point
Melting point/range: 280 °C (536 °F) - dec.
- f) Initial boiling point and boiling range
No data available
- g) Flash point No data available
- h) Evaporation rate No data available
- i) Flammability (solid, gas) No data available
- j) Upper/lower flammability or explosive limits
No data available
- k) Vapour pressure No data available
- l) Vapour density No data available
- m) Relative density No data available
- n) Water solubility No data available
- o) Partition coefficient: noctanol/water
No data available
- p) Auto-ignition temperature
No data available
- q) Decomposition temperature
No data available
- r) Viscosity No data available
- s) Explosive properties No data available
- t) Oxidizing properties No data available

9.2 Other safety information

No data available

Section 10. Stability and Reactivity

10.1 Reactivity

No data available

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

No data available

10.4 Conditions to avoid

Avoid moisture.

10.5 Incompatible materials

Strong oxidizing agents

Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Carbon oxides, Nitrogen oxides (NO_x), Hydrogen chloride gas

Other decomposition products - No data available

In the event of fire: see section 5

Section 11. Toxicological Information

11.1 Information on toxicological effects

Acute toxicity

No data available

Dermal: No data available

No data available

Skin corrosion/irritation

No data available

Serious eye damage/eye irritation

No data available

Respiratory or skin sensitisation

No data available

Germ cell mutagenicity

No data available

Carcinogenicity

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity

No data available

No data available

Specific target organ toxicity - single exposure

Inhalation - May cause respiratory irritation.

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

Additional Information

RTECS: Not available

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Section 12. Ecological Information

12.1 Toxicity

No data available

12.2 Persistence and degradability

No data available

12.3 Bioaccumulative potential

No data available

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

12.6 Other adverse effects

No data available No data available

Section 13. Disposal Considerations

13.1 Waste treatment methods

Product

Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.

Contaminated packaging

Dispose of as unused product.

Section 14. Transport Information**DOT (US)**

Not dangerous goods

IMDG

Not dangerous goods

IATA

Not dangerous goods

Section 15. Regulatory Information**OSHA Hazard Communication Evaluation**

Meets criteria for hazardous material, as defined by 29 CFR 1910.1200

Section 16. Other Information

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Material Safety Data Sheet

Section 1. Identification

Product Name	BisulFlash™ DNA Modification Kit
Product No.	P-1026
Supplier	Epigentek Group Inc
In Case of Emergency	631-755-0888

Section 2. Composition, Information on Ingredients

Ingredient Name
BF3 (Desulfonation Solution)
Cas# 1310-73-2

Section 3. Hazards Identification

Emergency Overview

Causes severe irritation and burns. Harmful if swallowed. Avoid breathing vapor or dust. Use with adequate ventilation. Avoid contact with eyes, skin, and clothes. Wash hands thoroughly after handling. Keep container closed.

Potential Health Effects

- Inhalation:** Severe irritant. Effects from inhalation of mist vary from mild irritation to serious damage of the upper respiratory tract, depending on severity of exposure. Symptoms may include sneezing, sore throat, or runny nose. Severe pneumonitis may occur.
- Ingestion:** Corrosive! Swallowing may cause severe burns of mouth, throat, and stomach. Severe scarring of tissue and death may result. Symptoms may include bleeding, vomiting, diarrhea, and decrease of blood pressure. Damage may appear days after exposure.
- Skin Contact:** Corrosive! Contact with skin can cause irritation or severe burns and scarring with greater exposures.
- Eye Contact:** Corrosive! Causes irritation of eyes, and with greater exposures it can cause burns that may result in permanent impairment of vision, even blindness.
- Chronic Exposure:** Prolonged contact with dilute solutions or dust has a destructive effect upon tissue.

Section 4. First Aid Measures

- Inhalation:** Quickly move victim to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen supply. Call a physician.
- Ingestion:** DO NOT INDUCE VOMITING! Give large quantities of water or milk if available. Never give anything by mouth to an unconscious person. Get medical attention immediately.
- Skin Contact:** Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Call a physician, immediately. Wash clothing before reuse.
- Eye Contact:** Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately.

Note to Physician:

Perform endoscopy in all cases of suspected sodium hydroxide ingestion. In cases of severe esophageal corrosion, the use of therapeutic doses of steroids should be considered. General supportive measures with continual monitoring of gas exchange, acid-base balance, electrolytes, and fluid intake are also required.

Section 5. Fire Fighting Measures

- Fire:** Not considered to be a fire hazard. Hot or molten material can react violently with water. Can react with certain metals, such as aluminum, to generate flammable hydrogen gas.
- Explosion:** May cause fire and explosions when in contact with incompatible materials.
- Extinguishing Media:** Use any appropriate means suitable for extinguishing surrounding fire. Adding water to caustic solution generates large amounts of heat.

Special

Information: In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus.

Section 6. Accidental Release Measures

Ventilate area of leak or spill. Keep unnecessary and unprotected people away from area of spill. Absorb spill with inert material, then place in a chemical waste container. Neutralize with a weak acid.

Section 7. Handling and Storage

Keep in a tightly closed container. Protect from physical damage. Store in a cool, dry, ventilated area away from sources of heat, moisture, and incompatibilities. Wash hands thoroughly after handling.

Section 8. Exposure Controls/Personal Protection**Respiratory**

Protection: NIOSH/MSHA-approved respirator

Skin Protection: Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.

Eye Protection: Use chemical safety goggles. Maintain eye wash fountain and quick-drench facilities in work area.

Section 9. Physical and Chemical Properties

Appearance: Clear, colorless solution.

Odor: Odorless.

Solubility: Completely miscible with water.

pH: 14.0

% Volatiles No information found.

Boiling Point: Information not available

Melting Point: Not applicable

Vapor Density No information found.

Vapor Pressure: Information not available.

Evaporation

Rate: No information found.

Section 10. Stability and Reactivity

Stability: Stable under ordinary conditions of use and storage.

Hazardous Decomposition: Not established.

Hazardous Polymerization: Will not occur.

Materials to Avoid: Acids, flammable liquids, organic halogens, metals, nitrocompounds.

Conditions to Avoid: Heat, incompatibles.

Section 11. Toxicological Information

Irritation Data: Skin, rabbit: 500 mg/24H severe; eye rabbit: 50 ug/24H severe.

Carcinogen: Not considered to be carcinogenic by ACGIH and IARC

Section 12. Ecological Information

Environmental Fate: No information found.

Environmental Toxicity: No information found.

Section 13. Disposal Considerations

Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste facility. Although not a listed RCRA hazardous waste, this material may exhibit one or more characteristics of a hazardous waste and require appropriate analysis to determine specific disposal requirements. Processing, use, or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

Section 14. Transport Information

Information not available.

Section 15. Regulatory Information

OSHA Hazard Communication Evaluation

Meets criteria for hazardous material, as defined by 29 CFR 1910.1200

Section 16. Other Information

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Material Safety Data Sheet

Section 1. Identification

Product Name	BisulFlash™ DNA Modification Kit
Product No.	P-1026
Supplier	Epigentek Group Inc
In Case of Emergency	631-755-0888

Section 2. Composition, Information on Ingredients

Ingredient Name

BF6 (Denaturation Enhancer)

Section 3. Hazards Identification

Emergency Overview

Causes severe irritation and burns. Harmful if swallowed. Avoid breathing vapor or dust. Use with adequate ventilation. Avoid contact with eyes, skin, and clothes. Wash hands thoroughly after handling. Keep container closed.

Potential Health Effects

- Inhalation:** Severe irritant. Effects from inhalation of mist vary from mild irritation to serious damage of the upper respiratory tract, depending on severity of exposure. Symptoms may include sneezing, sore throat, or runny nose. Severe pneumonitis may occur.
- Ingestion:** Corrosive! Swallowing may cause severe burns of mouth, throat, and stomach. Severe scarring of tissue and death may result. Symptoms may include bleeding, vomiting, diarrhea, and decrease of blood pressure. Damage may appear days after exposure.
- Skin Contact:** Corrosive! Contact with skin can cause irritation or severe burns and scarring with greater exposures.
- Eye Contact:** Corrosive! Causes irritation of eyes, and with greater exposures it can cause burns that may result in permanent impairment of vision, even blindness.
- Chronic Exposure:** Prolonged contact with dilute solutions or dust has a destructive effect upon tissue.

Section 4. First Aid Measures

- Inhalation:** Quickly move victim to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen supply. Call a physician.
- Ingestion:** DO NOT INDUCE VOMITING! Give large quantities of water or milk if available. Never give anything by mouth to an unconscious person. Get medical attention immediately.
- Skin Contact:** Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Call a physician, immediately. Wash clothing before reuse.
- Eye Contact:** Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately.

Note to Physician:

Perform endoscopy in all cases of suspected sodium hydroxide ingestion. In cases of severe esophageal corrosion, the use of therapeutic doses of steroids should be considered. General supportive measures with continual monitoring of gas exchange, acid-base balance, electrolytes, and fluid intake are also required.

Section 5. Fire Fighting Measures

- Fire:** Not considered to be a fire hazard. Hot or molten material can react violently with water. Can react with certain metals, such as aluminum, to generate flammable hydrogen gas.
- Explosion:** May cause fire and explosions when in contact with incompatible materials.

Extinguishing

Media: Use any appropriate means suitable for extinguishing surrounding fire. Adding water to caustic solution generates large amounts of heat.

Special

Information: In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus.

Section 6. Accidental Release Measures

Ventilate area of leak or spill. Keep unnecessary and unprotected people away from area of spill. Absorb spill with inert material, then place in a chemical waste container. Neutralize with a weak acid.

Section 7. Handling and Storage

Keep in a tightly closed container. Protect from physical damage. Store in a cool, dry, ventilated area away from sources of heat, moisture, and incompatibilities. Wash hands thoroughly after handling.

Section 8. Exposure Controls/Personal Protection

Respiratory

Protection: NIOSH/MSHA-approved respirator

Skin Protection: Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.

Eye Protection: Use chemical safety goggles. Maintain eye wash fountain and quick-drench facilities in work area.

Section 9. Physical and Chemical Properties

Appearance: Clear, colorless solution.

Odor: Odorless.

Solubility: Completely miscible with water.

pH: 14.0

% Volatiles No information found.

Boiling Point: Information not available

Melting Point: Not applicable

Vapor Density No information found.

Vapor Pressure: Information not available.

Evaporation

Rate: No information found.

Section 10. Stability and Reactivity

Stability: Stable under ordinary conditions of use and storage.

Hazardous Decomposition: Not established.

Hazardous Polymerization: Will not occur.

Materials to Avoid: Acids, flammable liquids, organic halogens, metals, nitrocompounds.

Conditions to Avoid: Heat, incompatibles.

Section 11. Toxicological Information

Irritation Data: Skin, rabbit: 500 mg/24H severe; eye rabbit: 50 ug/24H severe.
Carcinogen: Not considered to be carcinogenic by ACGIH and IARC

Section 12. Ecological Information

Environmental Fate: No information found.
Environmental Toxicity: No information found.

Section 13. Disposal Considerations

Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste facility. Although not a listed RCRA hazardous waste, this material may exhibit one or more characteristics of a hazardous waste and require appropriate analysis to determine specific disposal requirements. Processing, use, or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

Section 14. Transport Information

Information not available.

Section 15. Regulatory Information

OSHA Hazard Communication Evaluation

Meets criteria for hazardous material, as defined by 29 CFR 1910.1200

Section 16. Other Information

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Material Safety Data Sheet

Section 1. Identification

Product Name: BisuFlash™ DNA Modification Kit
Product No. P-1026
Supplier Epigentek Group Inc.
In Case of Emergency 631-755-0888

Section 2. Composition, Information on Ingredients

Ingredient Name

BF5 Conversion Enhancer

Section 3. Hazards Identification

Emergency Overview

Harmful if swallowed. Contact with acids liberates toxic gas.
Irritating to eyes and respiratory system. Moisture sensitive. Air sensitive.

Potential Health Effects

Eye: Cause eye irritation.
Skin: May cause skin irritation.
Ingestion: Harmful if swallowed. May cause irritation of the digestive tract.
Inhalation: Causes respiratory tract irritation.
Chronic: Not available.

Section 4. First Aid Measures

Eye: Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower lids. Seek medical attention.
Skin: Flush skin with plenty of soap and water for at least 15 minutes while removing contaminated clothing and shoes.
Ingestion: Get medical aid. Rinse mouth out with water.
Inhalation: Quickly move victim from exposure to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen supply.

Section 5. Fire Fighting Measures

General

Information: As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Substance is noncombustible.

Extinguishing

Media: Substance is noncombustible; use agent most appropriate to extinguish surrounding fire.

Autoignition

Temperature: Not applicable.

Flash Point: Not available

NFPA Rating: Health 1; Flammability 0; instability 0.

Explosion Limits: Not available.

Section 6. Accident Release Measures

General

Information: Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks: Sweep up then place into a suitable container for disposal. Avoid generating dusty conditions.

Section 7. Handling and Storage

Handling: Wash hands thoroughly after handling. Use with adequate ventilation. Minimize dust generation and accumulation. Avoid contact with skin and eyes. Keep container tightly closed. Avoid breathing dust.

Storage: Store in a cool, dry place. Store in a tightly closed container.

Section 8. Exposure Control and Personal Protection

Engineering

Controls: Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits.

Eye: Wear safety glasses and chemical goggles if splashing is possible.

Skin: Wear appropriate protective gloves to prevent skin exposure.

Clothing: Wear appropriate protective clothing to minimize contact with skin.

Respirators: Following the OSHA respirator regulations found in 29CFR 1910.134 or European Standard EN 149.

Section 9. Physical and Chemical Properties

Physical State:	Solid
Appearance:	White
Odor:	Sulfur dioxide odor
pH:	Acidic in solution
Vapor Pressure:	Not applicable
Viscosity:	Not applicable
Vapor Density:	Not applicable
Boiling Point:	Not applicable
Freeze/Melting Point:	Not applicable
Decomposition Temperature:	Not applicable
Solubility:	Soluble
Specific Gravity/Density:	1.48

Section 10. Stability and Reactivity

Chemical Stability: Stable. However, may decompose if heated. Oxidizes when exposure to air. Moisture sensitive.

Conditions to Avoid: Incompatible materials, exposure to air, acids, exposure to moist air or water, temperatures above 125°C.

Incompatibilities with

Other Materials: Strong oxidizing agents, acids, sodium nitrate.

Hazardous

Decomposition Products: Oxides of sulfur

Hazardous

Polymerization: Has not been reported.

Section 11. Toxicological Information

RTECS#: CAS# 7681-57-4: UX8225000

LD50/LC50: CAS# 7681-57-4: Dermal, guinea pig: LD50 > 1 g/kg; Oral, rat: LD50 = 1130-1900 mg/kg

Carcinogenicity: CAS# 7681-57-4. ACS - ACGIH: A4 - Not Classifiable as a Human Carcinogen
See actual entry in RTECS for complete information.

Section 12. Ecological Information

No information available.

Section 13. Disposal Considerations

Dispose of in a manner consistent with federal, state, and local regulations.

Section 14. Transport Information

No information available

Section 15. Regulatory Information

US FEDERAL: Listed on the TSCA inventory.
International Regulations: European Labeling in Accordance with EC Directives
Hazard Symbols: XN

Section 16. Other Information

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Material Safety Data Sheet

Section 1. Identification

Product Name: *BisuFlash™* DNA Modification Kit
Product No. P-1026
Supplier Epigentek Group Inc.
In Case of Emergency 631-755-0888

Section 2. Composition, Information on Ingredients

Ingredient Name
BF1 Conversion Mix Solution Ingredient 1

Section 3. Hazards Identification

Emergency Overview

Solutions are slightly acidic (pH 5.5)

Contact may cause eye irritation.
Repeated/prolonged skin contact may cause irritation.
Avoid inhalation of fumes in vapor space (sulfur dioxide).
Ingestion may irritate gastrointestinal tract.
Heating may lead to rapid thermal decomposition resulting in release of heat, SO₂, and associated gas pressure.

Potential Health Effects

Eye: Cause eye irritation.
Skin: May cause skin irritation.
Ingestion: Harmful if swallowed. May cause irritation of the digestive tract.
Inhalation: Causes respiratory tract irritation.
Chronic: Not available.

Section 4. First Aid Measures

Eye: Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower lids. Seek medical attention.
Skin: Flush skin with plenty of soap and water for at least 15 minutes while removing contaminated clothing and shoes.
Ingestion: Get medical aid. Rinse mouth out with water.
Inhalation: Quickly move victim from exposure to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen supply.

Section 5. Fire Fighting Measures

General

Information: As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Substance is noncombustible.

Extinguishing

Media: Substance is noncombustible; use agent most appropriate to extinguish surrounding fire.

Fire & Explosive Hazards: When heated, sulfur dioxide vapors will evolve. This gas is a severe respiratory hazard. Further heating may cause rapid thermal decomposition resulting in rapid release of heat, sulfur dioxide and associated pressure. Keep containers/storage vessels in fire area cooled with water spray..

Flash Point: Not available

NFPA Rating: Health 1; Flammability 0; instability 0.

Explosion Limits: Not available.

Section 6. Accident Release Measures

General

Information: Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks: Sweep up then place into a suitable container for disposal. Avoid generating dusty conditions.

Section 7. Handling and Storage

Handling: Wash hands thoroughly after handling. Use with adequate ventilation. Minimize dust generation and accumulation. Avoid contact with skin and eyes. Keep container tightly closed. Avoid breathing dust.

Storage: Store in a cool, dry place. Store in a tightly closed container.

Section 8. Exposure Control and Personal Protection

Engineering

Controls: Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits.

Eye: Wear safety glasses and chemical goggles if splashing is possible.

Skin: Wear appropriate protective gloves to prevent skin exposure.

Clothing: Wear appropriate protective clothing to minimize contact with skin.

Respirators: Following the OSHA respirator regulations found in 29CFR 1910.134 or European Standard EN 149.

Section 9. Physical and Chemical Properties

Physical State:	liquid
Appearance:	clear liquid
Odor:	Sulfur dioxide odor
pH:	Acidic in solution
Vapor Pressure:	Not applicable
Viscosity:	Not applicable
Vapor Density:	Not applicable
Boiling Point:	Not applicable
Freeze/Melting Point:	Not applicable
Decomposition Temperature:	Not applicable
Solubility:	Soluble
Specific Gravity/Density:	1.48

Section 10. Stability and Reactivity

Chemical Stability: Stable. However, may decompose if heated. Oxidizes when exposure to air. Moisture sensitive.

Conditions to Avoid: Incompatible materials, exposure to air, acids, exposure to moist air or water, temperatures above 125°C.

Incompatibilities with

Other Materials: Strong oxidizing agents, acids, sodium nitrate.

Hazardous

Decomposition Products: Oxides of sulfur

Hazardous

Polymerization: Has not been reported.

Section 11. Toxicological Information

Oral: Data not available

Dermal: Data not available

Inhalation: Data not available

Chronic/carcinogenicity: No evidence available

Teratology: Data not available

Reproduction: Data not available

Mutagenicity: Data not available

Section 12. Ecological Information

No information available.

Section 13. Disposal Considerations

Dispose of in a manner consistent with federal, state, and local regulations.

Section 14. Transport Information

No information available

Section 15. Regulatory Information

US FEDERAL: Listed on the TSCA inventory.

International Regulations: European Labeling in Accordance with EC Directives

Hazard Symbols: XN

Section 16. Other Information

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