



## Safety Data Sheet

### 1. Identification of the substance/mixture and of the company/undertaking

#### Product identifier:

Product name: Sulfix 0.8-2.4mm(8-20mesh)

Product code (SDS NO): Q7430E-1

#### Details of the supplier of the safety data sheet

Manufacturer/Supplier: KISHIDA CHEMICAL CO., LTD.

Address: 3-1, Honmachibashi, Chuo-ku, Osaka 540-0029, JAPAN

Division: Safety Management Dept. of Chemicals

Telephone number: +81-6-6946-8061

FAX: +81-6-6946-1607

e-mail address: kagakuhinanzankenri@kishida.co.jp

### 2. Hazards identification

#### GHS classification and label elements of the product

#### Classification of the substance or mixture

##### HEALTH HAZARDS

Serious eye damage/eye irritation: Category 2B

Respiratory sensitization: Category 1

Skin sensitization: Category 1

Carcinogenicity: Category 2

Specific target organ toxicity - single exposure: Category 1(respiratory apparatus/system)

Specific target organ toxicity - repeated exposure: Category 1(eye, respiratory apparatus, glandula thyreoidea, blood system)

(Note) GHS classification without description: Not applicable/Out of classification/Not classifiable

#### Label elements



Signal word: Danger

#### HAZARD STATEMENT

Causes eye irritation

May cause allergy or asthma symptoms or breathing difficulties if inhaled

May cause an allergic skin reaction

Suspected of causing cancer

Causes damage to organs after single exposure

Causes damage to organs through prolonged or repeated exposure

#### PRECAUTIONARY STATEMENT

##### Prevention

Do not breathe dust/fume/gas/mist/vapors/spray.

In case of inadequate ventilation wear respiratory protection. (as specified by the manufacturer/supplier or the competent authority.)

Wash contaminated parts thoroughly after handling.

Wear protective gloves.

Contaminated work clothing should not be allowed out of the workplace.

Do not eat, drink or smoke when using this product.

##### Response



Sulfix 0.8–2.4mm(8–20mesh),KISHIDA CHEMICAL CO., LTD.,Q7430E–1,15/01/2019

Get medical advice/attention if you feel unwell.

If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

IF ON SKIN: Wash with plenty of soap and water.

If skin irritation or rash occurs: Get medical advice/attention.

Take off contaminated clothing and wash it before reuse.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

If eye irritation persists: Get medical advice/attention.

Disposal

Dispose of contents/container in accordance with local/national regulation.

---

### 3. Composition/information on ingredients

Mixture/Substance selection:

Mixture

Ingredient name:tri-Cobalt tetra-oxide

Content(%):40~61

Chemical formula:Co<sub>3</sub>O<sub>4</sub>

Chemicals No, Japan:1-267

CAS No.:1308-06-1

MW:240.80

ECNO:215-157-2

Ingredient name:Silver

Content(%):39~60

Chemical formula:Ag

CAS No.:7440-22-4

MW:107.9

ECNO:231-131-3

Note : The figures shown above are not the specifications of the product.

---

### 4. First-aid measures

Descriptions of first-aid measures

General measures

Get medical attention/advice if you feel unwell.

IF INHALED

Remove person to fresh air and keep comfortable for breathing.

If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.

Call a POISON CENTER or doctor/physician if you feel unwell.

IF ON SKIN (or hair)

Take off immediately all contaminated clothing. Rinse skin with water/shower.

Wash with plenty of soap and water.

If skin irritation or rash occurs: Get medical advice/attention.

IF IN EYES

Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

If eye irritation persists: Get medical advice/attention.

IF SWALLOWED

Rinse mouth.

Call a POISON CENTER or doctor/physician if you feel unwell.

**5. Fire-fighting measures**

## Extinguishing media

## Suitable extinguishing media

Use appropriate extinguishing media suitable for surrounding facilities.

## Specific hazards arising from the substance or mixture

Containers may explode when heated.

Fire may produce irritating, corrosive and/or toxic gases.

## Advice for firefighters

## Specific fire-fighting measures

Evacuate non-essential personnel to safe area.

## Special protective equipment and precautions for fire-fighters

Wear fire/flame resistant/retardant clothing.

Wear protective gloves/protective clothing/eye protection/face protection.

Firefighters should wear self-contained breathing apparatus with full face piece operated positive pressure mode.

---

**6. Accidental release measures**

## Personnel precautions, protective equipment and emergency procedures

Ventilate area until material pick up is complete.

Wear proper protective equipment.

## Methods and materials for containment and cleaning up

Sweep up, place in a bag and hold for waste disposal.

## Preventive measures for secondary accident

Collect spillage.

---

**7. Handling and storage**

## Precautions for safe handling

## Preventive measures

(Exposure Control for handling personnel)

Do not breathe dust/fume/gas/mist/vapors/spray.

(Protective measures against fire and explosion)

Keep away from heat/sparks/open flames/hot surfaces. – No smoking.

## Exhaust/ventilator

Exhaust/ventilator should be available.

## Safety treatments

Avoid contact with skin.

Avoid contact with eyes.

## Safety Measures/Incompatibility

Wear protective gloves, protective clothing or face protection.

When using do not eat, drink or smoke.

## Conditions for safe storage, including any incompatibilities

## Recommendation for storage

Keep container tightly closed.

Store in a cool, dry place. Do not store in direct sunlight.

---

**8. Exposure controls/personal protection**

## Control parameters

## Adopted value

(tri-Cobalt tetra-oxide)

ACGIH(1993) TWA: (0.02mg-Co/m<sup>3</sup>) (Asthema; pulm func; myocardial eff)



(Silver)

ACGIH(1992) TWA: 0.1mg–Ag/m<sup>3</sup> (Argyria)

OSHA–PEL

(Silver)

TWA: 0.01mg–Ag/m<sup>3</sup>

#### Exposure controls

Appropriate engineering controls

Do not use in areas without adequate ventilation.

Eye wash station should be available.

Washing facilities should be available.

Individual protection measures

Respiratory protection

Wear respiratory protection.

Hand protection

Wear protective gloves.

Eye protection

Wear eye/face protection.

Safety and Health measures

Wash ... thoroughly after handling.

Do not eat, drink or smoke when using this product.

Contaminated work clothing should not be allowed out of the workplace.

Take off contaminated clothing and wash it before reuse.

---

## 9. Physical and Chemical Properties

Information on basic physical and chemical properties

Physical properties

Appearance: Solid

Color: Black (luster)

Odor data N.A.

pH data N.A.

Phase change temperature

Initial Boiling Point/Boiling point data N.A.

Boiling range data N.A.

Melting point/Freezing point data N.A.

Decomposition temperature data N.A.

Flash point data N.A.

Auto-ignition temperature data N.A.

Explosive properties data N.A.

Vapor pressure data N.A.

Specific gravity/Density data N.A.

Solubility

Solubility in water data N.A.

n-Octanol/water partition coefficient data N.A.

---

## 10. Stability and Reactivity

Reactivity

N.A.

Chemical stability

Stable under normal storage/handling conditions.

Possibility of hazardous reactions

(Silver)

Mixtures with acetylene are shock-sensitive. Reacts with acids. This generates fire hazard.



Sulfix 0.8–2.4mm(8–20mesh),KISHIDA CHEMICAL CO., LTD.,Q7430E–1,15/01/2019

Contact with strong hydrogen peroxide solution causes violent decomposition to oxygen gas.  
Contact with ammonia may cause formation of compounds that are explosive when dry. (ICSC 0810)

Conditions to avoid

Contact with incompatible materials.  
Contact with fire source.

Incompatible materials

Acids, Acetylene, Strong hydrogen peroxide solution, Ammonia

Hazardous decomposition products

Cobalt oxide, Silver oxide

---

## 11. Toxicological Information

### Information on toxicological effects

#### Acute toxicity

##### Acute toxicity (Oral)

[Company proprietary data]  
(tri-Cobalt tetra-oxide)  
rat LD50 > 5000 mg/kg

##### Acute toxicity (Inhalation)

[Company proprietary data]  
(tri-Cobalt tetra-oxide)  
vapor: rat LC50 > 5060 mg/L/4hr

#### Irritant properties

##### Serious eye damage /irritation

[GHS Cat. Japan, base data]  
(Silver)  
rabbit recover in 48hours (IUCLID, 2000)

#### Sensitization

##### Skin sensitization

[GHS Cat. Japan, base data]  
(Silver)  
cat. 1; ACGIH, 2001

#### No Mutagenic effects data available

#### Carcinogenicity

(tri-Cobalt tetra-oxide)  
IARC-Gr.2B : Possibly carcinogenic to humans  
(tri-Cobalt tetra-oxide)  
ACGIH-A3(1993) : Confirmed Animal Carcinogen with Unknown Relevance to Humans

#### No Teratogenic effects data available

#### No reproductive toxicity data available

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

#### STOT

##### STOT-single exposure

[cat.1]  
[GHS Cat. Japan, base data]  
(Silver)  
respiratory apparatus/system (ACGIH, 2001)

##### STOT-repeated exposure

[cat.1]  
[GHS Cat. Japan, base data]  
(Silver)  
eye (ACGIH, 2001)  
(Silver)



Sulfix 0.8–2.4mm(8–20mesh),KISHIDA CHEMICAL CO., LTD.,Q7430E–1,15/01/2019

Inhalation: respiratory apparatus (HSDB, 2003)

[Company proprietary data]

(tri-Cobalt tetra-oxide)

(As Cobalt(II) oxide)

respiratory apparatus, glandula thyreoidea, blood system (MOE risk assessment vol.11(2013),  
CICAD 69(2006), ACGIH (7th, 2001))

No Aspiration hazard data available

---

## 12. Ecological Information

Ecotoxicity

No Aquatic toxicity data available

Water solubility

(Silver)

none (ICSC, 1997)

No Persistence and degradability data available

No Bioaccumulative potential data available

No Mobility in soil data available

Ozone depleting chemical data not available

---

## 13. Disposal considerations

Waste treatment methods

Dispose of contents/container in accordance with local/national regulation.

---

## 14. Transport Information

Not applicable to UN No.

IMDG Code (International Maritime Dangerous Goods Regulations)

Not applicable to IMDG Code

IATA Dangerous Goods Regulations

Not applicable to IATA Dangerous Goods Regulations

Environmental hazards

MARPOL Annex III – Prevention of pollution by harmful substances

Marine pollutants (yes/no) : no

MARPOL Annex V – Prevention of pollution by garbage discharge

Specific target organ toxicity – repeated exposure: cat.1

Silver , tri-Cobalt tetra-oxide

---

## 15. Regulatory Information

Safety, health and environmental regulations/legislation specific for the substance or mixture

US major regulations

TSCA

tri-Cobalt tetra-oxide; Silver

Other regulatory information

Ensure this material in compliance with federal requirements and ensure conformity to local regulations.

**16. Other information****GHS classification and labelling**

Eye Irrit. 2B: H320 Causes eye irritation

Resp. Sens. 1: H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled

Skin Sens. 1: H317 May cause an allergic skin reaction

Carc. 2: H351 Suspected of causing cancer

STOT SE 1: H370 Causes damage to organs after single exposure

STOT RE 1: H372 Causes damage to organs through prolonged or repeated exposure

**Reference Book**

Globally Harmonized System of classification and labelling of chemicals, (5th ed., 2013), UN

Recommendations on the TRANSPORT OF DANGEROUS GOODS 20th edit., 2017 UN

IMDG Code (Amendment 38–16) 2016

IATA Dangerous Goods Regulations (59th Edition) 2018

Classification, labelling and packaging of substances and mixtures (table3–1 ECNO6182012)

2016 EMERGENCY RESPONSE GUIDEBOOK (US DOT)

2018 TLVs and BEIs. (ACGIH)

<http://monographs.iarc.fr/ENG/Classification/index.php>

Supplier's data/information

**General Disclaimer**

This information contained in this data sheet represents the best information currently available to us. However, no warranty is made with respect to its completeness and we assume no liability resulting from its use. It are advised to make their own tests to determinate the safety and suitability of each such product or combination for their own purposes.

The data given here is based on current knowledge and experience. The purpose of this Safety Data Sheet is to describe the products in terms of their safety requirements. The data does not signify any warranty with regard to the products' properties.

The GHS classification data given here is based on current Japan official data (NITE published in 2017).