

SECTION 1: Identification

1.1. Identification

Product form : Substance
Trade name : SRx FLO70, 70% Flowable Sulfur
CAS-No. : 7704-34-9
Formula : S
BIG no : 10085

1.2. Recommended use and restrictions on use

No additional information available

1.3. Supplier

Two Rivers Terminal
3300 North Glade Road
P.O. Box 2327
Pasco, Wa. 99302 - USA
T 509-547-7776 - F 509-546-9508

1.4. Emergency telephone number

Emergency number : 24 Hour Emergency HAZMAT Response: (800) 229-5252; EPA National Response Center (800) 424-8802

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS-US classification

Hazardous to the aquatic environment - Acute H401 Toxic to aquatic life
Hazard Category 2

Full text of H statements : see section 16

2.2. GHS Label elements, including precautionary statements

GHS-US labeling

Hazard statements (GHS-US) : H401 - Toxic to aquatic life
Precautionary statements (GHS-US) : P273 - Avoid release to the environment
P501 - Dispose of contents/container to comply with local, state, and federal regulations

2.3. Other hazards which do not result in classification

No additional information available

2.4. Unknown acute toxicity (GHS US)

Not applicable

SECTION 3: Composition/Information on ingredients

3.1. Substances

Name : 70% Sulfur
CAS-No. : 7704-34-9

Full text of hazard classes and H-statements : see section 16

3.2. Mixtures

Not applicable

SECTION 4: First-aid measures

4.1. Description of first aid measures

First-aid measures general : Check the vital functions. Unconscious: maintain adequate airway and respiration. Respiratory arrest: artificial respiration or oxygen. Cardiac arrest: perform resuscitation. Victim conscious with laboured breathing: half-seated. Victim in shock: on his back with legs slightly raised. Vomiting: prevent asphyxia/aspiration pneumonia. Prevent cooling by covering the victim (no warming up). Keep watching the victim. Give psychological aid. Keep the victim calm, avoid physical strain. Depending on the victim's condition: doctor/hospital.

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First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing. Remove the victim into fresh air. Respiratory problems: consult a doctor/medical service.
First-aid measures after skin contact	: Wash immediately with lots of water. Soap may be used. Do not apply (chemical) neutralizing agents. Take victim to a doctor if irritation persists. Wash skin with plenty of water.
First-aid measures after eye contact	: Rinse immediately with plenty of water. Do not apply neutralizing agents. Take victim to an ophthalmologist if irritation persists. Rinse eyes with water as a precaution.
First-aid measures after ingestion	: Rinse mouth with water. Call Poison Information Centre (www.big.be/antigif.htm). Consult a doctor/medical service if you feel unwell. Ingestion of large quantities: immediately to hospital. Call a poison center/doctor/physician if you feel unwell.

4.2. Most important symptoms and effects (acute and delayed)

Symptoms/injuries after inhalation	: Irritation of the respiratory tract. Coughing. Possible inflammation of the respiratory tract. Irritation of the nasal mucous membranes.
Symptoms/injuries after skin contact	: Tingling/irritation of the skin. Redness. Swelling of the skin.
Symptoms/injuries after eye contact	: May cause slight irritation.
Symptoms/injuries after ingestion	: May cause gastrointestinal discomfort.
Chronic symptoms	: ON CONTINUOUS/REPEATED EXPOSURE/CONTACT: Skin rash/inflammation. Affection of the nasal septum. Possible inflammation of the respiratory tract. Risk of pneumonia. Respiratory difficulties. Conjunctivitis. Gastrointestinal complaints.

4.3. Immediate medical attention and special treatment, if necessary

Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media	: Preferably: water spray. Polyvalent foam. ABC powder. Carbon dioxide. Sand/earth. Water spray. Dry powder. Foam.
Unsuitable extinguishing media	: Solid water jet ineffective as extinguishing medium.

5.2. Specific hazards arising from the chemical

Fire hazard	: DIRECT FIRE HAZARD: Combustible. INDIRECT FIRE HAZARD: Temperature above flashpoint: higher fire/explosion hazard. May build up electrostatic charges: risk of ignition. Reactions involving a fire hazard: see "Reactivity Hazard".
Explosion hazard	: DIRECT EXPLOSION HAZARD: Fine dust is explosive with air. INDIRECT EXPLOSION HAZARD: Dust cloud can be ignited by a spark. Reactions with explosion hazards: see "Reactivity Hazard".

5.3. Special protective equipment and precautions for fire-fighters

Precautionary measures fire	: Exposure to fire/heat: keep upwind. Exposure to fire/heat: consider evacuation. Exposure to fire/heat: have neighbourhood close doors and windows.
Firefighting instructions	: Dilute toxic gases with water spray.
Protection during firefighting	: Heat/fire exposure: compressed air/oxygen apparatus. Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Protective equipment	: Gloves. Face-shield. Protective clothing. Dust cloud production: compressed air/oxygen apparatus. Dust cloud production: dust-tight suit. See "Material-Handling" to select protective clothing.
Emergency procedures	: Ventilate spillage area. Mark the danger area. Prevent dust cloud formation, e.g. by wetting. No naked flames. Wash contaminated clothes. In case of hazardous reactions: keep upwind. In case of reactivity hazard: consider evacuation.
Measures in case of dust release	: In case of dust production: keep upwind. Dust production: have neighbourhood close doors and windows. In case of dust production: stop engines and no smoking. In case of dust production: no naked flames or sparks. Dust: spark-/explosionproof appliances/lighting equipment.

6.1.2. For emergency responders

Protective equipment	: Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".
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6.2. Environmental precautions

Avoid release to the environment.

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6.3. Methods and material for containment and cleaning up

- For containment : Contain released product, pump into suitable containers. Consult "Material-handling" to select material of containers. Plug the leak, cut off the supply. Knock down/dilute dust cloud with water spray. Provide equipment/receptacles with earthing. Powdered form: no compressed air for pumping over spills. Collect spillage.
- Methods for cleaning up : Recover mechanically the product. Stop dust cloud by humidifying. Scoop solid spill into closing containers. See "Material-handling" for suitable container materials. Powdered: do not use compressed air for pumping over spills. Clean contaminated surfaces with an excess of water. Wash clothing and equipment after handling.
- Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 8 : Exposure-controls/personal protection".

SECTION 7: Handling and storage

7.1. Precautions for safe handling

- Precautions for safe handling : Ensure good ventilation of the work station. Wear personal protective equipment. Comply with the legal requirements. Remove contaminated clothing immediately. Clean contaminated clothing. Thoroughly clean/dry the installation before use. Powdered form: no compressed air for pumping over. Avoid raising dust. Take precautions against electrostatic charges. Keep away from naked flames/heat. In finely divided state: use spark-/explosionproof appliances. Finely divided: keep away from ignition sources/sparks. Observe normal hygiene standards. Keep container tightly closed. Carry operations in the open/under local exhaust/ventilation or with respiratory protection.
- Hygiene measures : Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

- Storage conditions : Store in a well-ventilated place. Keep cool.
- Heat-ignition : KEEP SUBSTANCE AWAY FROM: heat sources. ignition sources.
- Information on mixed storage : KEEP SUBSTANCE AWAY FROM: oxidizing agents. (strong) bases. oils-fats. metals. halogens. water/moisture.
- Storage area : Store in a dry area. Keep container in a well-ventilated place. Fireproof storeroom. Provide the tank with earthing. Meet the legal requirements.
- Special rules on packaging : SPECIAL REQUIREMENTS: hermetical. watertight. dry. clean. correctly labelled. meet the legal requirements. Secure fragile packagings in solid containers.
- Packaging materials : SUITABLE MATERIAL: stainless steel. aluminium. plastics. paper. cardboard. textile. MATERIAL TO AVOID: copper.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

SRx FLO70, 70% Flowable Sulfur (7704-34-9)

ACGIH	ACGIH TWA (mg/m ³)	3 mg/m ³
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8.2. Appropriate engineering controls

- Appropriate engineering controls : Ensure good ventilation of the work station.
- Environmental exposure controls : Avoid release to the environment.

8.3. Individual protection measures/Personal protective equipment

Materials for protective clothing:

GIVE GOOD RESISTANCE: butyl rubber. PVC. neoprene

Hand protection:

Gloves

Eye protection:

Face shield. In case of dust production: protective goggles. Safety glasses

Skin and body protection:

Protective clothing. In case of dust production: head/neck protection

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Respiratory protection:

Dust production: dust mask with filter type P2. On heating: gas mask with filter type E

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Appearance	: Yellow liquid. : yellow : Rotten eggs.
Odor threshold	: No data available
pH	: No data available
Melting point	: 112 - 119 °C
Freezing point	: Not applicable
Boiling point	: 445 °C
Critical temperature	: 1040 °C
Critical pressure	: 117508 hPa
Flash point	: 168 - 207 °C
Relative evaporation rate (butyl acetate=1)	: No data available
Flammability (solid, gas)	: Non flammable.
Vapor pressure	: 2 E-6
Vapor pressure at 50 °C	: 25 E-6
Relative vapor density at 20 °C	: No data available
Relative density	: 1.5
Molecular mass	: 32.06 g/mol
Solubility	: Insoluble in water. Substance sinks in water. Soluble in ethanol. Soluble in ether. Soluble in chloroform. Soluble in tetrachloromethane. Soluble in toluene. Soluble in aniline. Soluble in carbondisulfide. Soluble in ammonia. Soluble in turpentine. Soluble in oil.
Log Pow	: 0.23 (Estimated value)
Auto-ignition temperature	: 235 °C
Decomposition temperature	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosion limits	: Not applicable 35 - 1400 g/m ³
Explosive properties	: No data available
Oxidizing properties	: No data available

9.2. Other information

Saturation concentration	: 0.000003 g/m ³
VOC content	: Not applicable
Other properties	: May generate electrostatic charges.

SECTION 10: Stability and reactivity

10.1. Reactivity

Reacts with water (moisture): release of corrosive products. On burning: release of toxic and corrosive gases/vapours (sulphur dioxide). Violent to explosive reaction with many compounds e.g.: with (some) metal powders. With (some) metals and their compounds. And with (some) halogens. Reacts violently with (strong) oxidizers: heat release resulting in increased fire or explosion risk. Oxidizes slowly in dry air: release of (highly) toxic gases/vapours (sulphur dioxide). Oxidizes slowly under increased oxygen concentration: release of (highly) toxic gases/vapours (sulphur dioxide).

10.2. Chemical stability

Unstable on exposure to moisture. Unstable on exposure to air.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

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10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

No additional information available

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral) : Not classified
Acute toxicity (dermal) : Not classified
Acute toxicity (inhalation) : Not classified

SRx FLO70, 70% Flowable Sulfur (7704-34-9)	
LD50 oral rat	> 5000 mg/kg (Rat)
LD50 dermal rabbit	> 2000 mg/kg (Rabbit)
LC50 inhalation rat (mg/l)	> 9.23 mg/l/4h (Rat)
Skin corrosion/irritation	: Not classified
Serious eye damage/irritation	: Not classified
Respiratory or skin sensitization	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
Specific target organ toxicity – single exposure	: Not classified
Specific target organ toxicity – repeated exposure	: Not classified
Aspiration hazard	: Not classified
Viscosity, kinematic	: No data available
Symptoms/injuries after inhalation	: Irritation of the respiratory tract. Coughing. Possible inflammation of the respiratory tract. Irritation of the nasal mucous membranes.
Symptoms/injuries after skin contact	: Tingling/irritation of the skin. Redness. Swelling of the skin.
Symptoms/injuries after eye contact	: May cause slight irritation.
Symptoms/injuries after ingestion	: May cause gastrointestinal discomfort.
Chronic symptoms	: ON CONTINUOUS/REPEATED EXPOSURE/CONTACT: Skin rash/inflammation. Affection of the nasal septum. Possible inflammation of the respiratory tract. Risk of pneumonia. Respiratory difficulties. Conjunctivitis. Gastrointestinal complaints.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : Toxic to aquatic life.
Ecology - air : Not classified as dangerous for the ozone layer (Regulation (EC) No 1005/2009). TA-Luft Klasse 5.2.1.
Ecology - water : No water pollutant (surface water). Slightly harmful to fishes (LC50(96h) 100-1000 mg/l). Slightly harmful to invertebrates (Daphnia). Inhibition of activated sludge.

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LC50 fish 1	866 mg/l (96 h; Brachydanio rerio)
LC50 fish 2	> 100 mg/l 96 h; Salmo gairdneri (Oncorhynchus mykiss)
TLM fish 1	10000 ppm (96 h; Gambusia affinis)
Threshold limit other aquatic organisms 1	> 10000 mg/l (24 h; Daphnia magna)

12.2. Persistence and degradability

SRx FLO70, 70% Flowable Sulfur (7704-34-9)	
Persistence and degradability	Biodegradability: not applicable. Biodegradability in soil: not applicable. Adsorbs into the soil.
Biochemical oxygen demand (BOD)	Not applicable
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable

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SRx FLO70, 70% Flowable Sulfur (7704-34-9)	
BOD (% of ThOD)	Not applicable

12.3. Bioaccumulative potential

SRx FLO70, 70% Flowable Sulfur (7704-34-9)	
Log Pow	0.23 (Estimated value)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).

12.4. Mobility in soil

SRx FLO70, 70% Flowable Sulfur (7704-34-9)	
Ecology - soil	Not toxic to bees.

12.5. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Disposal methods

Product/Packaging disposal recommendations : Remove waste in accordance with local and/or national regulations. Hazardous waste shall not be mixed together with other waste. Different types of hazardous waste shall not be mixed together if this may entail a risk of pollution or create problems for the further management of the waste. Hazardous waste shall be managed responsibly. All entities that store, transport or handle hazardous waste shall take the necessary measures to prevent risks of pollution or damage to people or animals. Recycle/reuse. Remove to an authorized dump. Do not discharge into surface water.

Additional information : LWCA (the Netherlands): KGA category 06. Hazardous waste according to Directive 2008/98/EC.

SECTION 14: Transport information

Department of Transportation (DOT)

In accordance with DOT

Not applicable

TDG

Not applicable

Transport by sea

Not applicable

Air transport

Not applicable

SECTION 15: Regulatory information

15.1. US Federal regulations

SRx FLO70, 70% Flowable Sulfur (7704-34-9)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	

15.2. International regulations

CANADA

No additional information available

EU-Regulations

No additional information available

National regulations

No additional information available

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15.3. US State regulations

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State or local regulations	U.S. - New Jersey - Right to Know Hazardous Substance List
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SECTION 16: Other information

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

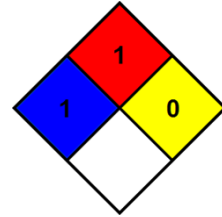
Full text of H-phrases:

H401	Toxic to aquatic life
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NFPA health hazard : 1 - Exposure could cause irritation but only minor residual injury even if no treatment is given.

NFPA fire hazard : 1 - Must be preheated before ignition can occur.

NFPA reactivity : 0 - Normally stable, even under fire exposure conditions, and are not reactive with water.



SDS US (GHS HazCom 2012)

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