

Quality Animal Health Pharmaceuticals - Dedicated Service Since 1950

1199 Sanford Street - Winnipeg, Manitoba R3E 3A1

Telephone: (204) 589.7361 / 589.7362 - Fax: (204) 943.9612

Toll Free: 1.800.465.7122 - www.domvet.com

# **Safety Data Sheet**

Date: October 22, 2021

**Product:** 

Sulfur

Synonyms:

Formed Sulfur,

**Product Codes:** 

00P-SULFU

Manufacturer/Supplier:

Dominion Veterinary Labs LTD.

1199 Sanford St Winnipeg, Manitoba

R3E 3A1

Telephone: (204)-589-7361 Fax: (204)-943-9612

## 1. IDENTIFICATION

**Product Identifier** 

Chemical Identity:

Sulfur

CAS No. and name:

7704-34-9

Formula:

Sg

Product use:

Animal feed, metal refining, and various industrial applications

Restrictions on Use:

Keep away from heat sources, sparks, or open flames

**Emergency Contact:** 

Telephone: (204)-589-7361, Fax: (204)-943-9612 Monday-Friday 09:00 - 17:00

#### 2. HAZARD IDENTIFICATION

Pictogram:

**(1)** 

Classification: Skin irritation, Category 2

Signal Word:

Warning

**Hazard Statements:** 

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Hazard Statement	H290: May be corrosive to metals. H303: May be harmful if swallowed. H316: May cause mild skin irritation. H320: May cause eye irritation. H335: May cause respiratory irritation.		
Prevention Statement	P210: Keep away from heat/sparks/open flames/hot surfaces. No smoking. P220: Keep away from oxidizing agents. P424: Use non-sparking tools when available. P243: Take precautionary measures against static discharge. P261: Avoid breathing dust/fume/gas/mist/vapors/spray. P264: Wash hands thoroughly after handling and before eating. P284: In case of inadequate ventilation, wear respiratory protection.		
P362: Take off contaminated clothing. P363: Wash contaminated clothing before reuse. P370+P378: In case of a fire, use water fog, spray, or regular for Do not use a direct water stream. P381: Eliminate all ignition sources.			
Storage Statement	P402: Store in a dry place. P403: Store in a well ventilated place. P404: Store in a closed container.		

## **SECTION 3: INFORMATION ON INGREDIENT**

Product	Percentage Contained	CAS Number
Sulfur	>99.5%	7704-34-9

Hazardous Ingredient: None

## **SECTION 4: FIRST-AID MEASURES**

ROUTE	FIRST AID
Inhalation	Move victim to fresh air. Watch for signs of an allergic reaction. Use a bronchodilator inhaler if directed by asthma patient. Keep victim warm and quiet. If not breathing, give artificial respiration. If heart has stopped beating, start cardiopulmonary resuscitation (CPR). SEEK MEDICAL ATTENTION.



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Ingestion	Give one tablespoon of Syrup of Ipecac to induce vomiting. If vomiting does occur, give fluids again. If vomiting has not occurred in twenty minutes, the same dose of Syrup of Ipecac may be repeated one additional time.  Alternatively, vomiting may be induced by touching the back of the throat with a finger.  Do not give anything by mouth to an unconscious or convulsing person. SEEK MEDICAL ATTENTION.
Skin	Wash skin thoroughly with mild soap and water. Wash exposed clothing separately before reuse.
Eyes	Immediately flush eyes with plenty of water for 15 minutes, while holding upper and lower lid apart to insure rinsing of entire eye surface and lids. Do not use boric acid to rinse with. FOR SEVERE IRRITATION, SEEK MEDICAL ATTENTION, preferably an ophthalmologist.

#### **SECTION 5: FIRE-FIGHTING MEASURES**

Suitable Extinguishing Media Water fog, spray, or regular foam. Do not use a direct water stream.

Unsuitable Extinguishing

Media

Do not use solid streams of water, which could create sulfur dust clouds and cause an explosion

or could move burning sulfur to adjacent areas.

**Exposure Hazards** 

Prevent human exposure to smoke, fumes, or products of combustion (sulfur oxide gases). Evacuate nonessential personnel from the fire area. If large fire, evacuate people downwind from

fire. Consider evacuation for 1/2 mile in all directions.

Advice for Firefighters

Firemen exposed to contaminated smoke should be immediately relieved and checked for symptoms of exposure of toxic gases. This should not be mistaken for heat exhaustion or smoke

inhalation. SEEK MEDICAL ATTENTION IMMEDIATELY.

**Protective Equipment** 

Wear full-faced, self-contained breathing apparatus and full protective clothing.

Fire and Explosion Hazards

Fire will rekindle until mass is cooled below 310°F (154°C). Cool surrounding areas with water fog to prevent re-igniting. Sulfur dust is HIGHLY FLAMMABLE. If suspended in air, it will ignite

by friction, static electricity, heat, sparks, or flames. Sulfur dust clouds may explode.

**Combustion Products** 

Sulfur oxide gases.

#### SECTION 6: ACCIDENTAL RELEASE

Minor spills such as torn or ruptured containers should be repaired or patched with tape if possible. Place spilled material in a disposable container. Avoid
getting dust in eyes.



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Protective Equipment	Maintain adequate ventilation. Wear a dust mask when dust is present or a respirator if smoke is present. Wear safety glasses  As an immediate precautionary measure isolate spills or leak areas. Eliminate all sources of ignition, such as flares, sparks, or flames, in the immediate area. No smoking. Ventilate closed spaces before entering		
Emergency Procedures			
Environmental Precautions:	Do not allow runoff to enter lakes or waterways.		
Containment/Cleanup:	Gently sweep or shovel up spilled material using a natural fiber broom and/or aluminum shovel to prevent sparking, to avoid creating a dust cloud. Place sweepings in an appropriate chemical waste container for reclaiming or disposal in an approved facility. Wash spill site after clean-up is complete.		

#### **SECTION 7: HANDLING AND STORAGE**

Precautions for Safe Handling All handling and conveying equipment should be properly grounded and bonded. Be careful not to create dust during handling. Avoid any conditions that might tend to create a dust explosion. Maintain good housekeeping practices to minimize dust build-up and dispersion. Eliminate sources of ignition. Keep away from heat, sparks, and flames. Use nonferrous tools, when available, to reduce sparking. Gently sweep or shovel up spilled materials using a natural fiber broom and/or aluminum shovel to prevent sparking. Maintain adequate ventilation in all areas.

## Conditions for Safe Storage, Including any Incompatibilities:

Containers should be stored in a cool, dry, well-ventilated area. Keep container tightly closed. Store away from flammable materials, sources of heat, flames, and sparks. Separate from chlorates, nitrates, and other oxidizing agents. Exercise due caution to prevent damage to or leakage from container

Incompatible Materials: Keep away from flammable materials, sources of heat, flame, sparks, chlorates, nitrates and other oxidizing agents.

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Measures/Control: Maintain adequate ventilation in all areas. No flares or

flames in area. Be careful not to create dust. Eliminate

sources of ignition.

Personal Protective Equipment:

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Respiratory

Wear dust masks and use NIOSH/MSHA approved dust respirator if

airborne concentrations exceed exposure limits

Eyes/Face

Wear suitable, protective safety glasses to prevent eye irritation from dust

Hands

Wash hands thoroughly after handling and before eating or smoking.

Skin/Body

Wear suitable, protective clothing to prevent skin irritation from dust. Wash skin thoroughly after handling and before eating or smoking. Wash

contaminated clothing separately before reuse.

**Environmental Exposure** 

Controls

Follow best practice for site management and disposal of waste. Avoid

release to the environment.

General Industrial Hygiene

Considerations

Protective equipment should be used in any situation that may result in hazardous exposure. Maintain good housekeeping practices to minimize

dust build-up and dispersion. Eliminate sources of ignition, Use

nonferrous tools to reduce sparking. Sweep or shovel up spilled material using a natural fiber broom and/or aluminum shovel to prevent sparking.

Maintain adequate ventilation in all areas

## **SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**

**Physical State** 

Solid

Appearance

Formed shaped sulfur

Formula

S8 (Rhombic or monoclinic)

Odor

Odorless, or faint odor of rotten eggs

**Odor Threshold** рH

No data available No data available

**Boiling Point** Melting/Freezing Point 832° F (444° C) 118-120°C (244-248°F)

Flash Point

207°C (405°F) Closed Cup

**Evaporation Rate** 

No data available

Flammability

Sulfur dust may form combustible concentrations

Flammable/Explosion Limits

Upper: 6.38% (v) Lower: 0.17% (v)

Vapor Pressure

8 mmHg at 246°C (475°F) 1 mmHg at 183.8°C (362.8°F)

Vapor Density

No data available

**Purity** 

99.5% Min.

Auto-Ignition Temperature 240°C (464°F)

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**Decomposition Temperature** 

Does not decompose

Viscosity

Not applicable

**Specific Gravity** 

2.07 @ 70° F

Solubility in Water

Insoluble

Bulk Density Lumps: 75-115 lbs. /ft3; Pellets, Flake: 65-75 lbs. /ft3

#### SECTION 10: STABILITY AND REACTIVITY

Chemical Stability

Stable

Conditions to Avoid

Keep from heat sources, sparks, and open flames.

**Incompatible Materials** 

Oxidizing agents, copper, copper alloys, steel, chlorates, nitrates.

Possibility of Hazardous Reactions

Oxidizing agents may react violently.

Hazardous

**Decomposition Products** 

Oxides of sulfur gases produced by burning sulfur.

Hazardous Polymerization Will not occur.

## **SECTION 11: TOXICOLOGICAL INFORMATION**

Likely Routes of Exposure

Inhalation, ingestion, skin contact, and eye contact

Signs and Symptoms of

Overexposure

Nose or throat irritation, coughing, chest discomfort, asthma, difficulty breathing, skin irritation, nausea, vomiting, stinging eye irritation, and hives.

**Exposure Limits** 

No exposure limits have been established.

Acute Symptoms and Effects

Inhalation

Prolonged inhalation may cause irritation of respiratory tract. Breathing of dust

may aggravate asthma and other pulmonary diseases.

**Eye Contact** 

Sulfur dust is an eye irritant.

Skin Contact

No adverse effects. Skin irritation may be aggravated in persons with existing

skin lesions.

Ingestion

Ingested sulfur is converted to sulfides in the gastrointestinal tract (GI), and

ingestion of 10 to 20 grams has caused irritation of the GI tract and renal injury.

Swallowing large amounts may cause nausea and vomiting.

Long Term Effects

None known to humans

Toxicity

**LD50** 

Oral: >5050 mg/kg (rats) Dermal: >2020 mg/kg (rats)

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LC50

Inhalation @ 90%: >5.49-mg/L air concentration (rats)

Skin

Slightly irritating (rabbits)

Eye

Minimal irritation in non washed eyes-(rabbits)

<u>Sensitization</u>	Reproductive Effects	Developmental Effects	Endocrine Disruptor		
Not Established	Not Established	Not Established	Not Established		
Carcinogenicity	Teratogenicity		Mutagenicity		
This product does not contain any ingredient designated by NTP, IARC, or OSHA as a probable human carcinogen.					

#### SECTION 12: ECOLOGICAL INFORMTION

Toxicity

Toxicity to Fish

LC50

Oncorhynchus mykiss (rainbow trout) -> 180 mg/l -96h

LC50

Other fish-866 mg/l-96h

Toxicity to Daphnia

and Other

Aquatic Invertebrates

EC50

Daphnia magna (Water flea) -> 5,000 mg/l -48h

**Ecotoxicity** 

Mobility

No data available No data available

Degradation Bioaccumulation

No data available No data available

Results of PBT and

vPvB Assessment

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

conducted.

#### **SECTION 13: DISPOSAL**

**Waste Treatment Methods** 

**Product Waste** 

Dispose of content and/or container in accordance with local, regional, national and/or

international regulations.

**Packaging** 

Waste Dispose of content and/or container in accordance with local, regional, national

and/or international regulations.

#### **SECTION 14: TRANSPORT INFORMATION**

According to the US Department of Transportation, Office of Hazard Materials Standards 49 CFR, sulfur is not subject to the requirements of this subchapter if transported in a non-bulk packaging or if formed to a specific shape (for example, prills, granules, pellets, pastilles, or flakes). A bulk packaging containing sulfur is not subjected to the placarding requirements of

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subpart F of this part, if it is marked with the appropriate identification number as required by subset D of this part.

#### **DOT DOMESTIC:**

**Shipping Name:** 

Sulfur Granules, Sulfur Pellets, Sulfur Flake, Arrow Roll

Hazard Class:

Not regulated

**ID Number:** 

None

Packing Group:

Not applicable

Label:

None required

Placard:

None required

Hazardous Substance/Rq: Not applicable

This product is not a Marine Pollutant as defined in 40 CFR part 172.

## **SECTION 15: REGULATORY INFORMATION**

**TSCA** This product is listed on the TSCA Inventory at CAS Registry Number 7704-34-9.

CERCLA Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)

If this product is accidentally spilled, it is not subject to any special reporting. We recommend that you contact state and local authorities to determine if there are other local reporting requirements.

#### SARA TITLE III Superfund Amendments and Reauthorization Act, Title III

Sections 311/312: None. Section 313: None. Section 302; None.

#### **RCRA** Resource Conservation and Recovery Act

Not subject to reporting because sulfur is not identified as a hazardous waste.

### **SECTION 16: OTHER INFORMATION**

The information contained herein is, to the best of our knowledge, true and accurate. Any recommendations or suggestions are made without obligation on our part and the Company accepts no liability to any customers, their employees or any other person whatsoever for any loss, injury or damage whether direct or consequential, which may be caused by an error or emission from this sheet even if negligence or otherwise.

Preparation Date: 07/03/08 Revision Date: 10/22/21

Issued By: Dominion Vet Labs. Ltd. Carol Lamirande/Office Manager

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