

K-2825



# Material Safety Data Sheet

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## 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

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### SULFUR DIOXIDE

#### COMPANY IDENTIFICATION

Chevron Products Company  
575 Market St.  
San Francisco, CA 94105-2856

#### EMERGENCY TELEPHONE NUMBERS

HEALTH (24 hr): (800)231-0623 or  
(510)231-0623 (International)  
TRANSPORTATION (24 hr): CHEMTREC  
(800)424-9300 or (703)527-3887  
Emergency Information Centers  
are located in U.S.A.  
Int'l collect calls accepted

PRODUCT INFORMATION: (800)689-3998 MSDS Requests and Technical

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## 2. COMPOSITION/INFORMATION ON INGREDIENTS

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100.0 % SULFUR DIOXIDE

#### CONTAINING

#### COMPONENTS

#### AMOUNT

#### LIMIT/QTY

#### AGENCY/TYPE

SULFUR DIOXIDE

Chemical Name: SULFUR DIOXIDE

CAS7446095

100.00%

2 ppm

ACGIH TWA

13 mg/m3

ACGIH STEL

13 mg/m3

OSHA PEL

500 LBS

SARA 302 TPQ

1 LBS

SARA 304 RQ

**COMPOSITION COMMENT:**

All the components of this material are on the Toxic Substances Control Act Chemical Substances Inventory.

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### 3. HAZARDS IDENTIFICATION

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#### \*\*\*\*\* EMERGENCY OVERVIEW \*\*\*\*\*

Colorless low-boiling liquid or gas, with a strong irritating odor.

- CORROSIVE - CAUSES IRREVERSIBLE EYE AND SKIN DAMAGE
- MAY BE HARMFUL OR FATAL IF INHALED
- CAUSES RESPIRATORY TRACT IRRITATION IF INHALED

#### \*\*\*\*\*

#### IMMEDIATE HEALTH EFFECTS

##### EYE:

Contact with the eyes causes permanent damage, including blindness.

##### SKIN:

Contact with the skin causes permanent damage, including burns and scarring.

##### INGESTION:

Material is a gas and cannot usually be swallowed.

##### INHALATION:

Toxic; may be harmful or fatal if inhaled.

##### SIGNS AND SYMPTOMS OF EXPOSURE:

Eye damage or irritation: may include pain, tearing, reddening, swelling, and impaired vision. Skin injury: may include pain, discoloration, swelling, and blistering. INHALATION: Respiratory tract irritation may include, but may not be limited to, one or more of the following: nasal discharge, sore throat, coughing, bronchitis, pulmonary edema and difficulty in breathing.

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### 4. FIRST AID MEASURES

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##### EYE:

Flush eyes with water immediately while holding the eyelids open. Remove contact lenses, if worn, after initial flushing, and continue flushing for

at least 15 minutes. Get immediate medical attention.

**SKIN:**

Wash skin immediately with plenty of water and remove contaminated clothing and shoes. Get medical attention. Discard contaminated clothing and shoes or thoroughly clean before reuse.

**INGESTION:**

No specific first aid measures are required because this material is a gas and cannot usually be swallowed.

**INHALATION:**

For emergencies, wear a NIOSH approved air-supplying respirator. Move the exposed person to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get immediate medical attention.

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## 5. FIRE FIGHTING MEASURES

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### FLAMMABLE PROPERTIES:

FLASH POINT: NA

AUTOIGNITION: NA

FLAMMABILITY LIMITS (% by volume in air): Lower: NA Upper: NA

EXTINGUISHING MEDIA:

Material will not burn.

NFPA RATINGS: Health 3; Flammability 0; Reactivity 0.

### FIRE FIGHTING INSTRUCTIONS:

For fires involving this material, do not enter any enclosed or confined fire space without proper protective equipment, including self-contained breathing apparatus.

### COMBUSTION PRODUCTS:

None

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## 6. ACCIDENTAL RELEASE MEASURES

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CHEMTREC EMERGENCY NUMBER (24 hr): (800)424-9300 or (703)527-3887

International Collect Calls Accepted

### ACCIDENTAL RELEASE MEASURES:

If this material is released into a work area, evacuate the area immediately. Persons entering the contaminated area to correct the problem or to determine whether it is safe to resume normal activities must comply with all instructions in the Exposure Controls/Personal Protection section.

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## 7. HANDLING AND STORAGE

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Do not get in eyes, on skin, or on clothing. Do not breathe vapor or fumes. Wash thoroughly after handling.

Before entry into confined spaces that may have contained hazardous material, determine concentrations and take appropriate measures for personal protection. Material presents a hazard that may require personal protective equipment for entry. Persons handling this material should observe all protective equipment recommendations described in section 8.

Avoid work practices that may release volatile components into the atmosphere. Local air pollution regulations should be consulted to determine if the release of volatile components is regulated or restricted in the area in which this material is used.

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#### **8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

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#### **GENERAL CONSIDERATIONS:**

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Consider the potential hazards of this material (see Section 3), applicable exposure limits, job activities, and other substances in the work place when designing engineering controls and selecting personal protective equipment. If engineering controls or work practices are not adequate to prevent exposure to harmful levels of this material, the personal protective equipment listed below is recommended. The user should read and understand all instructions and limitations supplied with the equipment since protection is usually provided for a limited time or under certain circumstances.

**ENGINEERING CONTROLS**

Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below the recommended exposure limits.

**PERSONAL PROTECTIVE EQUIPMENT****EYE/FACE PROTECTION:**

Wear chemical goggles AND a face shield!

**SKIN PROTECTION:**

Wear protective clothing to prevent skin contact. Selection of protective clothing may include gloves, apron, boots, and complete facial protection depending on operations conducted. Suggested materials for protective gloves include: <Chlorinated Polyethylene (or Chlorosulfonated Polyethylene or CPE)> <Silver Shield> <4H (Polyethylene-Ethylene Vinyl Alcohol Laminate)> <Polyvinyl Chloride (Also referred to as "Vinyl" or "PVC")> <Polyethylene (or PE)> <Teflon> <Viton>

**RESPIRATORY PROTECTION:**

Determine if airborne concentrations are below the recommended exposure limits. If not, wear a NIOSH approved respirator that provides adequate protection from measured concentrations of this material. Use the following element(s) for air-purifying respirators: Acid Gases.

Use a positive pressure, air-supplying respirator if there is potential for uncontrolled release, exposure levels are not known, or other circumstances where air-purifying respirators may not provide adequate protection.

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**9. PHYSICAL AND CHEMICAL PROPERTIES**

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**PHYSICAL DESCRIPTION:**

Colorless low-boiling liquid or gas, with a strong

irritating odor.

pH: NDA  
VAPOR PRESSURE: NA  
VAPOR DENSITY  
(AIR=1): 2.26  
BOILING POINT: 14F (-10C)  
MELTING POINT: -104F  
SOLUBILITY: Soluble in water and alcohol.  
SPECIFIC GRAVITY: 1.43 (Liquid)  
EVAPORATION RATE: NA  
PERCENT VOLATILE  
(VOL): 100%  
MOLECULAR WEIGHT: 64

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**10. STABILITY AND REACTIVITY**

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**HAZARDOUS DECOMPOSITION PRODUCTS:**

NDA

**CHEMICAL STABILITY:**

Stable.

**CONDITIONS TO AVOID:**

No data available.

**INCOMPATIBILITY WITH OTHER MATERIALS:**

May react violently with water or strong alkalies. May liberate hydrogen gas on contact with zinc, aluminum, magnesium or cadmium.

**HAZARDOUS POLYMERIZATION:**

Polymerization will not occur.

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**11. TOXICOLOGICAL INFORMATION**

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**EYE EFFECTS:**

No product toxicology data available.

**SKIN EFFECTS:**

No product toxicology data available.

**ACUTE ORAL EFFECTS:**

No product toxicology data available.

**ACUTE INHALATION EFFECTS:**

No product toxicology data available.

**ADDITIONAL TOXICOLOGY INFORMATION:**

This material emits sulfur dioxide which can be intensely irritating to the eyes, nose, throat, and respiratory tract. Inhalation of low concentrations of SO<sub>2</sub> may produce coughing, hoarseness, sneezing, a feeling of constriction of the chest, asthma-like symptoms, burning and tearing of the eyes. When SO<sub>2</sub> concentrations approach 150 ppm, irritation becomes extreme and exposure can be endured for only a few minutes. Exposure to high concentrations may result in ulceration of the cornea, severe inflammation of the bronchi and alveolar membranes, pulmonary edema, pneumonitis, respiratory paralysis, and death.

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## 12. ECOLOGICAL INFORMATION

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### ECOTOXICITY:

No data available.

### ENVIRONMENTAL FATE:

This material is volatile and is expected to partition to air.

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## 13. DISPOSAL CONSIDERATIONS

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Place contaminated materials in disposable containers and dispose of in a

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manner consistent with applicable regulations. Contact local environmental or health authorities for approved disposal of this material.

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#### 14. TRANSPORT INFORMATION

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The description shown may not apply to all shipping situations. Consult 49CFR, or appropriate Dangerous Goods Regulations, for additional description requirements (e.g., technical name) and mode-specific or quantity-specific shipping requirements.

DOT SHIPPING NAME: NDA  
DOT HAZARD CLASS: NDA  
DOT IDENTIFICATION NUMBER: NDA  
DOT PACKING GROUP: NDA

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#### 15. REGULATORY INFORMATION

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SARA 311 CATEGORIES:

|                                       |     |
|---------------------------------------|-----|
| 1. Immediate (Acute) Health Effects:  | YES |
| 2. Delayed (Chronic) Health Effects:  | NO  |
| 3. Fire Hazard:                       | NO  |
| 4. Sudden Release of Pressure Hazard: | NO  |
| 5. Reactivity Hazard:                 | NO  |

#### REGULATORY LISTS SEARCHED:

|                         |                         |                       |
|-------------------------|-------------------------|-----------------------|
| 01=SARA 313             | 11=NJ RTK               | 22=TSCA Sect 5(a) (2) |
| 02=MASS RTK             | 12=CERCLA 302.4         | 23=TSCA Sect 6        |
| 03=NTP Carcinogen       | 13=MN RTK               | 24=TSCA Sect 12(b)    |
| 04=CA Prop 65-Carcin    | 14=ACGIH TWA            | 25=TSCA Sect 8(a)     |
| 05=CA Prop 65-Repro Tox | 15=ACGIH STEL           | 26=TSCA Sect 8(d)     |
| 06=IARC Group 1         | 16=ACGIH Calc TLV       | 27=TSCA Sect 4(a)     |
| 07=IARC Group 2A        | 17=OSHA PEL             | 28=Canadian WHMIS     |
| 08=IARC Group 2B        | 18=DOT Marine Pollutant | 29=OSHA CEILING       |
| 09=SARA 302/304         | 19=Chevron TWA          | 30=Chevron STEL       |
| 10=PA RTK               | 20=EPA Carcinogen       |                       |

The following components of this material are found on the regulatory lists indicated.

**SULFUR DIOXIDE**

is found on lists: 02,09,10,11,13,14,15,17,28,

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**16. OTHER INFORMATION**

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**NFPA RATINGS: Health 3; Flammability 0; Reactivity 0;**

**HMIS RATINGS: Health 3; Flammability 0; Reactivity 0;**

(0-Least, 1-Slight, 2-Moderate, 3-High, 4-Extreme, PPE:- Personal Protection Equipment Index recommendation, \*- Chronic Effect

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Indicator). These values are obtained using the guidelines or published evaluations prepared by the National Fire Protection Association (NFPA) or the National Paint and Coating Association (for HMIS ratings).

**REVISION STATEMENT:**

Changes have been made throughout this Material Safety Data Sheet. Please read the entire document.

**ABBREVIATIONS THAT MAY HAVE BEEN USED IN THIS DOCUMENT:**

|                                  |  |
|----------------------------------|--|
| TLV - Threshold Limit Value      | TWA - Time Weighted Average            |
| STEL - Short-term Exposure Limit | TPQ - Threshold Planning Quantity      |
| RQ - Reportable Quantity         | PEL - Permissible Exposure Limit       |
| C - Ceiling Limit                | CAS - Chemical Abstract Service Number |
| A1-5 - Appendix A Categories     | () - Change Has Been Proposed          |
| NDA - No Data Available          | NA - Not Applicable                    |

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Prepared according to the OSHA Hazard Communication Standard (29 CFR 1910.1200) and the ANSI MSDS Standard (Z400.1) by the Toxicology and Health Risk Assessment Unit, CRTC, P.O. Box 1627, Richmond, CA 94804

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The above information is based on the data of which we are aware and is believed to be correct as of the date hereof. Since this information may be applied under conditions beyond our control and with which we may be unfamiliar and since data made available subsequent to the date hereof may suggest modification of the information, we do not assume any responsibility for the results of its use. This information is furnished upon condition that the person receiving it shall make his own determination of the suitability of the material for his particular purpose.

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