|  |  |
| --- | --- |
| Metro Welding Supply Corp. logo | Safety Data Sheet  Sulfur Dioxide |
|  |

# Section 1: Product and Company Identification

**Metro Welding Supply Corp.**

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Detroit, MI 48223
  
(313) 834-1660 [phone]
  
(313) 835-3562 [fax]
  
http://www.metrowelding.com/

Product Code: Sulfur Dioxide

# Section 2: Hazards Identification



**Danger**

## Hazard Classification:

Acute Gas Inhale Toxicity (Category 3)

Aspiration Hazard (Category 1)

Corrosive To Metal (Category 1)

Eye Effects (Category 1)

Gases Under Pressure

Skin Corrosion (Category 1.C)

## Hazard Statements:

Causes serious eye damage

Causes severe skin burns and eye damage

Contains gas under pressure; may explode if heated

May be corrosive to metals

May be fatal if swallowed and enters airways

Toxic if inhaled

Toxic to aquatic life

## Precautionary Statements

**Prevention:**

Wash thoroughly after handling.

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

[In case of inadequate ventilation] wear respiratory protection.

Use only outdoors or in a well-ventilated area.

Keep only in original container.

Wear protective gloves, protective clothing, eye protection and face protection.

**Response:**

If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

Immediately call a poison center or doctor.

Do NOT induce vomiting.

Absorb spillage to prevent material damage.

If swallowed: Rinse mouth. Do NOT induce vomiting.

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

If inhaled: Remove person to fresh air and keep comfortable for breathing.

**Storage:**

Store in a well-ventilated place. Keep container tightly closed.

Protect from sunlight.

Store locked up.

Store in corrosive resistant container with a resistant inner liner.

**Disposal:**

Dispose of contents and/or container in accordance with applicable regulations.

# Section 3: Composition/Information on Ingredients

| CAS # |
| --- |
| 7446-09-5 |

| Chemical Substance | Chemical Family | Trade Names |
| --- | --- | --- |
| SULFUR DIOXIDE | inorganic, gas | SULFUROUS ACID ANHYDRIDE; SULFUROUS OXIDE; SULPHUR DIOXIDE; SULFUROUS ANHYDRIDE; FERMENTICIDE LIQUID; SULFUR DIOXIDE(SO2); SULFUR OXIDE; SULFUR OXIDE(SO2); STCC 4904290; UN 1079; O2S |

# Section 4: First Aid Measures

| Skin Contact | Eye Contact | Ingestion | Inhalation | Note to Physicians |
| --- | --- | --- | --- | --- |
| Wash skin with soap and water for at least 15 minutes while removing contaminated clothing and shoes. Get immediate medical attention. Thoroughly clean and dry contaminated clothing before reuse. Destroy contaminated shoes. | Immediately flush eyes with plenty of water for at least 15 minutes. Then get immediate medical attention. | If a large amount is swallowed, get medical attention. | If adverse effects occur, remove to uncontaminated area. Give artificial respiration if not breathing. If breathing is difficult, oxygen should be administered by qualified personnel. Get immediate medical attention. | For inhalation, consider oxygen. |

# Section 5: Fire Fighting Measures

| Suitable Extinguishing Media | Products of Combustion | Protection of Firefighters |
| --- | --- | --- |
| Non-flammable. Use suitable extinguishing media for surrounding fire. | None known | * Non-flammable * Non-flammable |

# Section 6: Accidental Release Measures

| Personal Precautions | Environmental Precautions | Methods for Containment |
| --- | --- | --- |
| Keep unnecessary people away, isolate hazard area and deny entry. Stay upwind and keep out of low areas. Ventilate closed spaces before entering. Evacuation radius: 150 feet. | Avoid contamination of environment. | Stop leak if possible without personal risk. Reduce vapors with water spray. Do not get water directly on material. |

| Methods for Cleanup | Other Information |
| --- | --- |
| Stop leak, evacuate area. Contact emergency personnel. | Notify Local Emergency Planning Committee and State Emergency Response Commission for release greater than or equal to RQ (U.S. SARA Section 304). If release occurs in the U.S. and is reportable under CERCLA Section 103, notify the National Response Center at (800)424-8802 (USA) or (202)426-2675 (USA). |

# Section 7: Handling and Storage

| Handling | Storage |
| --- | --- |
| Store and handle in accordance with all current regulations and standards. Protect from physical damage. Store outside or in a detached building. Store in a well-ventilated area. Notify State Emergency Response Commission for storage or use at amounts greater than or equal to the TPQ (U.S. EPA SARA Section 302). SARA Section 303 requires facilities storing a material with a TPQ to participate in local emergency response planning (U.S. EPA 40 CFR 355.30). | Keep separated from incompatible substances. Use in ventilated area. |

# Section 8: Exposure Controls/Personal Protection

| Exposure Guidelines |
| --- |
| SULFUR DIOXIDE: 2 ppm (5 mg/m3) OSHA TWA (vacated by 58 FR 35338, June 30, 1993) 5 ppm (13 mg/m3) OSHA STEL (vacated by 58 FR 35338, June 30, 1993) 5 ppm (13 mg/m3) OSHA TWA 2 ppm ACGIH TWA 5 ppm ACGIH STEL 2 ppm (5 mg/m3) NIOSH recommended TWA 10 hour(s) 5 ppm (13 mg/m3) NIOSH recommended STEL |

## Engineering Controls

Handle only in fully enclosed systems.

| Eye Protection | Skin Protection | Respiratory Protection |
| --- | --- | --- |
| Wear splash resistant safety goggles with a face shield. Provide an emergency eye wash fountain and quick drench shower in the immediate work area. | For the gas: Wear appropriate chemical resistant clothing. For the liquid: Wear appropriate protective, cold insulating clothing. | Non-flammable |

## General Hygiene considerations

* Avoid breathing vapor or mist
* Avoid contact with eyes and skin
* Wash thoroughly after handling and before eating or drinking

# Section 9: Physical and Chemical Properties

| Physical State | Appearance | Color | Change in Appearance | Physical Form | Odor | Taste |
| --- | --- | --- | --- | --- | --- | --- |
| Gas | Clear | Colorless | N/A | Gas | Irritating odor | N/A |

| Flash Point | Flammability | Partition Coefficient | Autoignition Temperature | Upper Explosive Limits | Lower Explosive Limits |
| --- | --- | --- | --- | --- | --- |
| Not flammable | Not available | Not available | Nonflammable | Nonflammable | Nonflammable |

| Boiling Point | Freezing Point | Vapor Pressure | Vapor Density | Specific Gravity | Water Solubility | pH | Odor Threshold | Evaporation Rate | Viscosity |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 14 F (-10 C) | -99 F (-73 C) | 2432 mmHg @ 20 C | 2.26 (Air=1) | 1.462 @ -10 C | 22.8% @ 0 C | Acidic in solution | 3-5 ppm | >1 (butyl acetate=1) | Not available |

| Molecular Weight | Molecular Formula | Density | Weight per Gallon | Volatility by Volume | Volatility | Solvent Solubility |
| --- | --- | --- | --- | --- | --- | --- |
| 64.06 | S-O2 | 0.169 | Not available | Not available | Not applicable | Soluble: Alcohol, acetic acid, sulfuric acid, ether, chloroform, benzene, sulfuryl chloride, nitrobenzenes, toluene, acetone |

# Section 10: Stability and Reactivity

| Stability | Conditions to Avoid | Incompatible Materials |
| --- | --- | --- |
| Stable at normal temperatures and pressure. | Stable at normal temperatures and pressure. | Combustible materials, metals, bases, oxidizing materials, halogens, metal carbide, metal oxides, peroxides, reducing agents, potassium, sodium, nitryl chloride, acrolein, metal oxides, carbide |

| Hazardous Decomposition Products | Possibility of Hazardous Reactions |
| --- | --- |
| Forms sulfurous acid solution on reaction with water. | Will not polymerize. |

# Section 11: Toxicology Information

## Acute Effects

| Oral LD50 | Dermal LD50 | Inhalation |
| --- | --- | --- |
| LC50, 1 hr, rat = 2520 ppm | Not available | Allergic reactions, burns, toxic |

| Eye Irritation | Skin Irritation | Sensitization |
| --- | --- | --- |
| Corrosive, burns | Corrosive, burns | Respiratory tract burns, skin burns, eye burns, allergic reactions |

## Chronic Effects

| Carcinogenicity | Mutagenicity | Reproductive Effects | Developmental Effects |
| --- | --- | --- | --- |
| IARC: Human Inadequate Evidence, Animal Limited Evidence, Group 3; ACGIH: A4 -Not Classifiable as a Human Carcinogen | Available. | Available. | No data |

# Section 12: Ecological Information

## Fate and Transport

|  |  |  |  |
| --- | --- | --- | --- |
| Eco toxicity | Persistence / Degradability | Bioaccumulation / Accumulation | Mobility in Environment |
| Fish toxicity: 3000 ug/L 0.667-0.833 hour(s) (Avoidance) Atlantic menhaden (Brevoortia tyrannus)  Invertibrate toxicity: Not available  Algal toxicity: 500 ug/L 6 day(s) (Cellular) Green algae (Rhizoclonium hieroglyphicum)  Phyto toxicity: Not available  Other toxicity: >=150 ug/L NR hour(s) (Biochemical) Duckweed (Lemna minor) | Not available | Not available | Not available |

# Section 13: Disposal Considerations

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| --- |
| Dispose in accordance with all applicable regulations. |

# Section 14: Transportation Information

## U.S. DOT 49 CFR 172.101

| Proper Shipping Name | ID Number | Hazard Class or Division | Packing Group | Labeling Requirements | Passenger Aircraft or Railcar Quantity Limitations | Cargo Aircraft Only Quantity Limitations | Additional Shipping Description |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Sulfur dioxide | UN1079 | 2.3 | Not applicable | 2.3; 8 | Forbidden | Forbidden | Toxic-Inhalation Hazard Zone C |

## Canadian Transportation of Dangerous Goods

|  |  |  |  |
| --- | --- | --- | --- |
| Shipping Name | UN Number | Class | Packing Group / Risk Group |
| Sulfur dioxide | UN1079 | 2.3; 8 | Not applicable |

# Section 15: Regulatory Information

## U.S. Regulations

|  |  |  |
| --- | --- | --- |
| CERCLA Sections | SARA 355.30 | SARA 355.40 |
| Not regulated. | 500 LBS TPQ | 500 LBS RQ |

## SARA 370.21

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Acute | Chronic | Fire | Reactive | Sudden Release |
| Yes | Yes | No | No | Yes |

## SARA 372.65

|  |
| --- |
| Not regulated. |

## OSHA Process Safety

|  |
| --- |
| 1000 LBS TQ |

## State Regulations

|  |
| --- |
| CA Proposition 65 |
| Not regulated. |

## Canadian Regulations

|  |
| --- |
| WHMIS Classification |
| AD1 |

## National Inventory Status

|  |  |  |
| --- | --- | --- |
| US Inventory (TSCA) | TSCA 12b Export Notification | Canada Inventory (DSL/NDSL) |
| Listed on inventory. | Not listed. | Not determined. |

# Section 16: Other Information

|  |
| --- |
| NFPA Rating |
| HEALTH=3 FIRE=0 REACTIVITY=0 |

0 = minimal hazard, 1 = slight hazard, 2 = moderate hazard, 3 = severe hazard, 4 = extreme hazard