



## SAFETY DATA SHEETS

M-23742/E-4

DATE: 21May2015

SUPPLIER ADDRESS: 1290 COMBERMERE STREET

TROY, MI 48083

EMERGENCY PHONE NUMBER: (248) 589-2950

### 1. CHEMICAL PRODUCT

PRODUCT NAME: SULFUR DIOXIDE IN NITROGEN

SYNONYMS: None

### 2. COMPOSITION, INFORMATION ON INGREDIENTS

| Ingredient Name | Formula | CAS#      | Concentration | Exposure Limits (PPM) |          |      |            |
|-----------------|---------|-----------|---------------|-----------------------|----------|------|------------|
|                 |         |           |               | ACGIH TLV             | OSHA PEL | MAC  | Other STEL |
| SULFUR DIOXIDE  | SO2     | 7446-09-5 | .0003-16 PCT  | 2                     | 5        | 0.50 | 0.25       |
| NITROGEN        | N2      | 7727-37-9 | BALANCE       | S/A                   | S/A      | S/A  | S/A        |

Note: S/A = SIMPLE ASPHYXIANT

### 3. HAZARD IDENTIFICATION

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

Corrosive, high pressure gas.

Can cause rapid suffocation.

Can cause eye, skin, and respiratory tract burns.

POTENTIAL HEALTH EFFECTS

ROUTES OF ENTRY: Inhalation , Skin

ACUTE EFFECTS: Mixture can act as a simple asphyxiant by displacing air necessary for life. Corrosive and irritating to respiratory tract, skin and eyes. Inhalation at high concentrations may be fatal due to spasm, inflammation and edema of the lungs, chemical pneumonitis and pulmonary edema. Eye contact may result in irritation and inflammation of conjunctiva and cornea and destruction of the eye tissue.

CHRONIC EFFECTS: None known

MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE: None known

OTHER EFFECTS OF OVEREXPOSURE: None

CARCINOGENICITY (US Only):

NTP - No

IARC MONOGRAPHS - No

OSHA REGULATED - No

### 4. FIRST AID MEASURES

INHALATION: Immediately remove victim to fresh air. If breathing has stopped, give artificial respiration. If breathing is difficult, give oxygen.

EYE CONTACT: Immediately flush with copious amounts of water for at least 15 minutes.

SKIN CONTACT: Immediately flush with copious amounts of water for at least 15 minutes while removing contaminated clothing.

INGESTION: None

IN EVENT OF EXPOSURE, CONSULT A PHYSICIAN

NOTE TO PHYSICIAN: None

### 5. FIRE FIGHTING MEASURES

FLASH POINT: Nonflammable

AUTOIGNITION TEMPERATURE: N/Ap

FLAMMABLE LIMITS: Nonflammable

LOWER:

UPPER:

EXTINGUISHING MEDIA: Use what is appropriate for surrounding fire.

SPECIAL FIRE FIGHTING INSTRUCTION AND EQUIPMENT: Wear self-contained breathing apparatus and full protective clothing.

Keep fire exposed cylinders cool with water spray. If possible, stop the product flow.

HAZARDOUS COMBUSTION PRODUCTS: None

UNUSUAL FIRE AND EXPLOSION HAZARDS: Cylinder rupture may occur under fire conditions.

### 6. ACCIDENTAL RELEASE MEASURES

CLEAN UP PROCEDURES: Evacuate and ventilate area. Remove leaking cylinder to exhaust hood or safe outdoor area. Shut off source if possible and remove source of heat.

SPECIALIZED EQUIPMENT: None

**7. HANDLING AND STORAGE**

PRECAUTIONS TO BE TAKEN IN HANDLING: Secure cylinder when using to protect from falling. Use suitable hand truck to move cylinders.

PRECAUTIONS TO BE TAKEN IN STORAGE:  
Store in well ventilated areas. Keep valve protection cap on cylinders when not in use.

**8. EXPOSURE CONTROLS/ PERSONAL PROTECTION**

ENGINEERING CONTROLS: Provide adequate general and local exhaust ventilation to maintain concentrations below exposure limits and to avoid asphyxiation.

## PERSONAL PROTECTION

EYE/FACE PROTECTION: Safety glasses  
SKIN PROTECTION: Impervious gloves, coveralls, boots, and/or other resistant protective clothing.  
RESPIRATORY PROTECTION: In case of leakage, use self-contained breathing apparatus.  
OTHER PROTECTIVE EQUIPMENT: Safety shoes when handling cylinders.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

APPEARANCE: Colorless  
ODOR: Irritating pungent odor. (SO2)  
PHYSICAL STATE: Gas  
VAPOR PRESSURE: N/Ap  
VAPOR DENSITY (AIR=1): 1.066  
BOILING POINT (C): N/Ap  
SOLUBILITY IN WATER: cm3/100cm3 H2O:  
1.485  
SPECIFIC GRAVITY (H2O=1): Gas  
EVAPORATION RATE: Gas  
ODOR THRESHOLD: 0.33 - 5 ppm (SO2)

**10. STABILITY AND REACTIVITY**

STABILITY: Stable under normal storage conditions.

CONDITIONS TO AVOID: Storage in poorly ventilated areas. Storage near a heat source.

MATERIALS TO AVOID: Avoid aluminum, cesium oxide, chlorates, chromium, iron oxide, fluorine, manganese, potassium chlorate, sodium, tin oxide, bases, oxidizing materials, unsaturated organics. Will react with water or steam to produce toxic and corrosive fumes.

HAZARDOUS POLYMERIZATION: Will not occur.

HAZARDOUS DECOMPOSITION: Sulfur dioxide dissolves in water to form corrosive sulfuric acid.

**11. TOXICOLOGICAL INFORMATION**

LETHAL CONCENTRATION (LC50): 2520 ppm, Rat 1 hour. (SO2)  
LETHAL DOSE 50 (LD50): N/Ap  
TERATOGENICITY: N/Ap  
REPRODUCTIVE EFFECTS: N/Ap  
MUTAGENICITY: N/Ap

**12. ECOLOGICAL INFORMATION**

No adverse ecological effects are expected.

**13. DISPOSAL CONSIDERATIONS**

WASTE DISPOSAL METHOD: Try to prevent any direct release of sulfur dioxide to the atmosphere. When leaks can not be stopped, discharge cylinders at a controlled rate into a large amount of water solution of 15% NaOH or other alkali. Return cylinders to supplier with any valve outlet plugs or caps secured and valve protection cap in place. Dispose of non-refillable cylinders in accordance with federal, state, and local regulations.

**14. TRANSPORT INFORMATION**

CONCENTRATION: 3ppm-16%  
DOT DESCRIPTION (US ONLY):  
PROPER SHIPPING NAME: Compressed gas, n.o.s.  
HAZARD CLASS: 2.2 (nonflammable)  
IDENTIFICATION NUMBER: UN1956  
REPORTABLE QUANTITIES: None  
LABELING: NONFLAMMABLE GAS  
ADR/RID (EU Only): Class 2, 1A

SPECIAL PRECAUTIONS: Cylinders should be transported in a secure upright position in a well ventilated truck.

#### 15. REGULATORY INFORMATION

OSHA: Process Safety Management: Minor component is listed in appendix A 29 CFR 1910.119 as a highly hazardous chemical.

TSCA: Mixtures are not listed in TSCA inventory.

SARA: The threshold planning quantity for this material is 500 lb.

EU NUMBER: N/Ap

NUMBER IN ANNEX 1 OF DIR 67/548:

Materials are listed in annex 1.

EU CLASSIFICATION: N/Av

R: 20, 36/37/38

S: 9

#### 16. OTHER INFORMATION

OTHER PRECAUTIONS: Protect containers from physical damage. Do not deface cylinders or labels. Cylinders should be refilled by qualified producers of compressed gas. Shipment of a compressed gas cylinder which has not been filled by the owner or with his written consent is a violation of federal law (49 CFR).

ABBREVIATIONS:

N/Ap - Not Applicable

N/Av - Not Available

SA - Simple Asphyxiant

NE - None Established

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