



## **CHEMICAL BULL PVT LTD**

123/124, Pancharatna, Char Rasta, G.I.D.C ,  
Vapi-396195 (Gujarat) India.

Mob: +91 9696960250

Website: [www.chemicalbull.com](http://www.chemicalbull.com)

Email: [info@chemicalbull.com](mailto:info@chemicalbull.com)

## **MATERIAL SAFETY DATA SHEET**

### **SULFOLANE**

#### **SECTION 01 – PRODUCT AND COMPANY IDENTIFICATION**

**Product Name:** Sulfolane - A Anhydrous

**Molecular formula:** C<sub>4</sub>H<sub>8</sub>SO<sub>2</sub>

**Supplier Name:** CHEMICAL BULL PVT LTD

**Address:** 123-124, 1st floor, Pancharatna Complex, GIDC, Char Rasta, Vapi – 396195

**Emergency Phone:** +91- 96 96 96 0250

#### **SECTION 02 – COMPOSITION/ INFORMATION ON INGREDIENTS**

| Name                    | CAS Number |
|-------------------------|------------|
| Sulfolane - A Anhydrous | 126-33-0   |

**Signal Word:** Danger

**Hazard Statements:**

H360: May damage fertility or the unborn child.

**Precautionary Statements:**

**Prevention:**

P201 Obtain special instructions before use.

P202 Do not handle until all safety precautions have been read and understood.

P281 Use personal protective equipment as required.

**Response:**

P308 + P313 IF exposed or concerned: Get medical advice/ attention.

**Storage:**

P405 Store locked up.

**Disposal:**

P501 Dispose of contents/ container to an approved waste disposal plant.

Carcinogenicity:

#### IARC

No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

#### NTP

No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

#### ACGIH

No ingredient of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

### SECTION 03 – HAZARD IDENTIFICATION

#### Synonyms:

Tetramethylene Sulfone

Sulfolane Anhydrous

Tetrahydrothiophene 1,1-dioxide

### SECTION 04 – FIRST AID MEASURES

#### General advice:

Move out of dangerous area. Show this material safety data sheet to the doctor in attendance. Do not leave the victim unattended.

#### If inhaled:

If unconscious place in recovery position and seek medical advice. If symptoms persist, call a physician.

#### In case of eye contact:

Flush eyes with water as a precaution. Remove contact lenses. Protect unharmed eye. Keep eye wide open while rinsing. If eye irritation persists, consult a specialist.

#### If swallowed:

Induce vomiting immediately and call a physician. Keep respiratory tract clear. Do not give milk or alcoholic beverages. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician.

### SECTION 05- FIRE FIGHTING MEASURES

#### Flash point:

166 °C (331 °F)

Method: Cleveland Open Cup

#### Auto ignition temperature:

No data available

#### Unsuitable extinguishing media:

High volume water jet.

#### Special protective equipment for fire-fighters:

Wear self-contained breathing apparatus for firefighting if necessary.

#### Further information:

Standard procedure for chemical fires. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

#### Fire and explosion protection:

Normal measures for preventive fire protection.

**Hazardous decomposition products :**  
**Carbon oxides. Sulfur oxides.**

## **SECTION 06 – ACCIDENTAL RELEASE MEASURES**

**Environmental precautions:**

Prevent further leakage or spillage if safe to do so. If the product contaminates rivers and lakes or drains inform respective authorities.

**Methods for cleaning up:**

Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Keep in suitable, closed containers for disposal.

## **SECTION 07 – HANDLING AND STORAGE**

### **Handling**

**Advice on safe handling:**

Do not breathe vapors/dust.

Smoking, eating and drinking should be prohibited in the application area. Dispose of rinse water in accordance with local and national regulations.

**Advice on protection against fire and explosion:**

Normal measures for preventive fire protection

### **Storage**

Requirements for storage areas and containers:

Keep container tightly closed in a dry and well-ventilated place. Electrical installations / working materials must comply with the technological safety standards

## **SECTION 08 – PERSONAL PROTECTION**

### **Personal protective equipment**

**Respiratory protection:**

Wear a supplied-air NIOSH approved respirator unless ventilation or other engineering controls are adequate to maintain minimal oxygen content of 19.5% by volume under normal atmospheric pressure. Wear a NIOSH approved respirator that provides protection when working with this material if exposure to harmful levels of airborne material may occur, such as: Air-Purifying Respirator for Dusts and Mists / P100. 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.

**Hand protection:**

The suitability for a specific workplace should be discussed with the producers of the protective gloves. Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time. Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough.

**Eye protection:**

Eye wash bottle with pure water. Tightly fitting safety goggles

**Skin and body protection:**

Choose body protection according to the amount and concentration of the dangerous substance at the work place. Wear as appropriate: Lightweight protective clothing.

**Hygiene measures:**

When using do not eat or drink. When using do not smoke. Wash hands before breaks and at the end of workday

**SECTION 09 – PHYSICAL AND CHEMICAL PROPERTIES**

Appearance Form:

Liquid

Physical state:

Liquid

Color:

Clear

Odor:

Mild

Safety data

Flash point:

166 °C (331 °F)

Method: Cleveland Open Cup

Lower explosion limit :

No data available

Upper explosion limit :

No data available

Oxidizing properties:

No

Auto ignition temperature :

No data available

Molecular weight :

120.18 g/mol

pH :

Not applicable

Freezing point :

26 °C (79 °F)

Pour point

No data available

Boiling point/boiling range:

282 - 288 °C (540 - 550 °F)

Vapor pressure

: 1.14 MMHG

at 37.8 °C (100.0 °F)

Relative density:

1.26

at 30 °C (86 °F)

Density:

1.26 G/ML

Water solubility:

Partly soluble

Partition coefficient: n-octanol/water:

No data available

Viscosity, kinematic:

No data available

Evaporation rate :

1

Percent volatile :

> 99 %

## SECTION 10 – STABILITY AND REACTIVITY

### **Chemical stability:**

This material is considered stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

### **Possibility of hazardous reactions**

Conditions to avoid :

No data available.

### **Materials to avoid:**

May react with oxygen and strong oxidizing agents, such as chlorates, nitrates, peroxides, etc.

### **Hazardous decomposition products:**

Carbon oxides

Sulfur oxides

### **Other data:**

No decomposition if stored and applied as directed.

## SECTION 11 – TOXICOLOGICAL INFORMATION

### **Acute oral toxicity**

**Sulfolane** :

**LD50: 2,068 mg/kg**

**Species: Rat**

**Sex: male and female**

**Method: OECD Test Guideline 401**

### **Acute inhalation toxicity**

**Sulfolane :**

**LC50: > 12 mg/l**

**Exposure time: 4 h**

**Species: Rat**

**An LC50/inhalation/4h/rat could not be determined because no mortality of rats was observed at the maximum achievable concentration.**

**LC50: > 12000 mg/m<sup>3</sup> Exposure time: 4 h**

**Species: Rat**

**Sex: male and female**

**Test atmosphere: vapor**

**Skin irritation**

**Sulfolane :**

**No skin irritation**

**Eye irritation**

**Sulfolane :**

**No eye irritation**

**Sensitization**

**Sulfolane :**

**Did not cause sensitization on laboratory animals.**

**Repeated dose toxicity**

**Sulfolane :**

**Species: Rat**

**Application Route: Oral**

**Dose: 60, 200, 700 mg/kg bw/day**

**Exposure time: 28 days**

**Number of exposures: Daily**

**NOEL: 200 mg/kg bw/day**

**Lowest observable effect level: 700 mg/kg bw/day**

**Species: Rat**

**Application Route: Inhalation**

**Dose: 2.8, 4.0, 20 mg/m<sup>3</sup>**

**Exposure time: 90-110 days**

**Number of exposures: 23 hrs/d, 7d/wk**

**NOEL: 20 mg/m<sup>3</sup>**

**Reproductive toxicity**

**Sulfolane :**

**Species: Rat**

**Sex: female**

**Application Route: oral gavage**

**Dose: 60, 200, 700 mg/kg**

**Number of exposures: Daily**

**Test period: 2 wk pre mating to lactation D4**

**Method: OECD Guideline 421**

**NOAEL Parent: 200 mg/kg bw/day**

**NOAEL F1: 60 mg/kg bw/day**

**Decrease birth index and number of pups**

**Developmental Toxicity**

**Sulfolane :**

**Species: Rat**

**Application Route: oral gavage**

**Dose: 60, 200, 700 mg/kg**

**Number of exposures: Daily**

**Test period: 2 wk pre mating to lactation D4**

**NOAEL Teratogenicity: 60 mg/kg bw/day**

**NOAEL Maternal: 200 mg/kg bw/day**

**Application Route: oral gavage**

**Dose: 100, 200, 500 mg/kg/day**

**Number of exposures: Daily**

**Test period: GD 1 - 19**

**NOAEL Teratogenicity: 200 mg/kg**

**NOAEL Maternal: 100 mg/kg**

**May damage the unborn child.**

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**Aspiration toxicity:**

**No aspiration toxicity classification.**

**CMR effects**

**Sulfolane:**

**Carcinogenicity: Not available**

**Mutagenicity: Did not show mutagenic effects in animal experiments.**

**Teratogenicity: Clear evidence of adverse effects on sexual function and fertility, and/or on development, based on animal experiments**

**Reproductive toxicity: No toxicity to reproduction**

**Sulfolane - A Anhydrous**

**Further information:**

**No data available.**

|  |
|--|
| <b>SECTION 12 – ECOLOGICAL INFORMATION</b> |
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**Toxicity to fish**

**Sulfolane:**

**LC50: > 100 mg/l**

**Exposure time: 96 h**

**Species: Oryzias latipes (Orange-red killifish)**

**static test Method: OECD Test Guideline 203**

**Toxicity to daphnia and other aquatic invertebrates**

**Sulfolane:**

**EC50: 852 mg/l**

**Exposure time: 48 h**

**Species: Daphnia magna (Water flea)**

**static test Method: OECD Test Guideline 202**

**Toxicity to algae**

**Sulfolane:**

**EC50: 500 mg/l**

**Exposure time: 72 h**

**Species: Pseudokirchneriella subcapitata (green algae)**

**Method: OECD Test Guideline 201**

**NOEC: 171 mg/l**

**Exposure time: 72 h**

**Species: Pseudokirchneriella subcapitata (green algae)**

**Bioaccumulation**

**Sulfolane :**

**Bioconcentration factor (BCF): < 1.3**

**This material is not expected to bioaccumulate.**

**Biodegradability**

**Sulfolane :**

**Result: Not readily biodegradable.**

**10.1 %**

**Testing period: 14 d**

**Method: OECD Test Guideline 301C**

## **Ecotoxicology Assessment**

### **Results of PBT assessment**

#### **Sulfolane:**

**Non-classified vPvB substance, Non-classified PBT substance**

#### **Additional ecological information:**

**This material is not expected to be harmful to aquatic organisms.**

## **SECTION - 13 DISPOSAL CONSIDERATION**

The information in this SDS pertains only to the product as shipped.

Use material for its intended purpose or recycle if possible. This material, if it must be discarded, may meet the criteria of a hazardous waste as defined by US EPA under RCRA (40 CFR 261) or other State and local regulations. Measurement of certain physical properties and analysis for regulated components may be necessary to make a correct determination. If this material is classified as a hazardous waste, federal law requires disposal at a licensed hazardous waste disposal facility.

#### **Product:**

Do not dispose of waste into sewer. Do not contaminate ponds, waterways or ditches with chemical or used container. Send to a licensed waste management company.

#### **Contaminated packaging:**

Empty remaining contents. Dispose of as unused product. Do not re-use empty containers..

## **SECTION - 14 TRANSPORT INFORMATION**

The shipping descriptions shown here are for bulk shipments only, and may not apply to shipments in non-bulk packages (see regulatory definition).

Consult the appropriate domestic or international mode-specific and quantity-specific Dangerous Goods Regulations for additional shipping description requirements (e.g., technical name or names, etc.)

Therefore, the information shown here, may not always agree with the bill of lading shipping description for the material. Flashpoints for the material may vary slightly between the SDS and the bill of lading.

US DOT (UNITED STATES DEPARTMENT OF TRANSPORTATION)

NOT REGULATED AS A HAZARDOUS MATERIAL OR DANGEROUS GOODS FOR

TRANSPORTATION BY THIS AGENCY.

IMO / IMDG (INTERNATIONAL MARITIME DANGEROUS GOODS)

NOT REGULATED AS A HAZARDOUS MATERIAL OR DANGEROUS GOODS FOR  
TRANSPORTATION BY THIS AGENCY.

IATA (INTERNATIONAL AIR TRANSPORT ASSOCIATION)

NOT REGULATED AS A HAZARDOUS MATERIAL OR DANGEROUS GOODS FOR

TRANSPORTATION BY THIS AGENCY.

ADR (AGREEMENT ON DANGEROUS GOODS BY ROAD (EUROPE))

NOT REGULATED AS A HAZARDOUS MATERIAL OR DANGEROUS GOODS FOR  
TRANSPORTATION BY THIS AGENCY.

RID (REGULATIONS CONCERNING THE INTERNATIONAL TRANSPORT OF DANGEROUS  
GOODS (EUROPE))

NOT REGULATED AS A HAZARDOUS MATERIAL OR DANGEROUS GOODS FOR  
TRANSPORTATION BY THIS AGENCY.



ADN (EUROPEAN AGREEMENT CONCERNING THE INTERNATIONAL CARRIAGE OF DANGEROUS GOODS BY INLAND WATERWAYS)

NOT REGULATED AS A HAZARDOUS MATERIAL OR DANGEROUS GOODS FOR TRANSPORTATION BY THIS AGENCY.

## **SECTION 15 – REGULATORY INFORMATION**

National legislation  
SARA 311/312 Hazards:

Acute Health Hazard  
CERCLA Reportable Quantity:

This material does not contain any components with a CERCLA RQ.  
SARA 302 Reportable Quantity:

This material does not contain any components with a SARA 302 RQ.  
SARA 302 Threshold Planning Quantity:

No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.  
SARA 304 Reportable Quantity:  
This material does not contain any components with a section 304 EHS RQ.

## **SECTION 16 – OTHER INFORMATION**

The information presented here is believed to be accurate and pertains only to the product when stored in a sealed condition, as prescribed here. The information is given in good faith, but no warranty, express or implied, is made. Users should make their own investigations, for their specific applications and processes, to determine the suitability of the safety information mentioned here. Chemical Bull Pvt Ltd will in no way be liable for any claims, losses and / or damages of any third party, or for lost profits, or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, from the use of this product