

Material Safety Data Sheet (MSDS / SDS)

Sulfolane (Anhydrous) - High Purity Grade

SECTION 1: Identification

Product Name	Sulfolane (Tetramethylene Sulfone), Anhydrous
Synonyms	Sulfolane, Tetramethylene Sulfone, Tetrahydrothiophene 1,1-Dioxide
CAS No.	126-33-0
Recommended Use	Solvent for aromatics extraction (BTX/paraxylene separation) and natural gas sweetening (Sulfinol process)
Manufacturer / Supplier	Ochnology Solution Pvt. Ltd., B-153, Sector-4 Defence Colony, Dehradun, Uttarakhand, India - 248001
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SECTION 2: Hazard(s) Identification

GHS Classification: Acute Toxicity Category 4, Oral (H302); Eye Irritation Category 2 (H319). Combustible liquid (flash point >93°C, above the GHS Flammable Liquid classification threshold).

Signal Word: Warning

Hazard Statements:

- H302 - Harmful if swallowed
- H319 - Causes serious eye irritation
- Combustible liquid - can burn if heated above its flash point ($\approx 165^{\circ}\text{C}$) or exposed to a strong ignition source

Precautionary Statements:

- P210 - Keep away from heat, hot surfaces, sparks, open flames - No smoking
- P264 - Wash hands thoroughly after handling
- P270 - Do not eat, drink or smoke when using this product
- P280 - Wear protective gloves/eye protection

- P301+P312 – IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell
- P305+P351+P338 – IF IN EYES: Rinse cautiously with water for several minutes; remove contact lenses if present and easy to do; continue rinsing
- P273 – Avoid release to the environment

SECTION 3: Composition / Information on Ingredients

Component	CAS No.	Concentration (w/w)
Sulfolane (Tetramethylene Sulfone)	126-33-0	Min. 99.5%
Water (residual)	7732-18-5	< 0.1%

SECTION 4: First-Aid Measures

Eye Contact	Rinse immediately with plenty of water for at least 15 minutes, holding eyelids open. Remove contact lenses if present and easy to do. Seek medical attention if irritation persists.
Skin Contact	Wash affected area with plenty of water and soap. Remove contaminated clothing. Seek medical attention if irritation persists.
Inhalation	Move to fresh air. If coughing or respiratory discomfort persists, seek medical attention.
Ingestion	Do NOT induce vomiting. Rinse mouth with water. Seek medical attention immediately – call a poison centre.

SECTION 5: Fire-Fighting Measures

- Combustible liquid (flash point $\approx 165^{\circ}\text{C}$) – keep away from heat and strong ignition sources
- Suitable extinguishing media: water spray/fog, foam, CO₂, dry chemical
- Combustion may release oxides of sulphur and carbon – fire-fighters should wear SCBA in enclosed or heavily smoke-logged conditions

SECTION 6: Accidental Release Measures

- Contain spill and prevent entry into drains, sewers, soil or waterways – sulfolane is highly water-soluble and mobile in groundwater once released (see Section 12)
- Absorb with inert absorbent material (sand, vermiculite, earth) and collect in suitable containers for disposal
- Product solidifies below $\approx 28^{\circ}\text{C}$, which can aid containment of small spills in cold conditions
- Wear appropriate PPE (gloves, safety glasses) during clean-up

SECTION 7: Handling and Storage

- Keep away from heat, sparks, open flame and other ignition sources
- Avoid eye contact and prolonged skin contact; use with adequate ventilation
- Store in a cool, dry, covered area in tightly closed containers to preserve the anhydrous specification
- Prevent any release to soil or groundwater during storage and transfer – sulfolane is persistent and highly mobile in groundwater once released, and has been the subject of documented groundwater contamination incidents at refinery and gas-processing sites

SECTION 8: Exposure Controls / Personal Protection

Occupational Exposure Limits	No universally harmonised specific OEL established for sulfolane; handle per good industrial hygiene practice and confirm current jurisdiction-specific guidance
Engineering Controls	General ventilation is normally sufficient given the low vapour pressure; local exhaust recommended if heated
Eye/Face Protection	Chemical splash goggles recommended – this product is an eye irritant
Hand Protection	Chemical-resistant gloves (nitrile or neoprene) recommended
Respiratory Protection	Not normally required under standard handling conditions due to low volatility at ambient temperature

SECTION 9: Physical and Chemical Properties

Property	Unit	Value
Appearance	–	Colourless to pale yellow liquid (solid below $\approx 28^{\circ}\text{C}$)
Odour	–	Faint, characteristic odour
Boiling Point	$^{\circ}\text{C}$	≈ 285
Flash Point (Closed Cup)	$^{\circ}\text{C}$	≈ 165
Freezing/Melting Point	$^{\circ}\text{C}$	$\approx 27.5 - 28.5$
Density @ 20°C	g/cm^3	1.261 – 1.265
Solubility in Water	–	Fully miscible
Autoignition Temperature	$^{\circ}\text{C}$	≈ 528

SECTION 10: Stability and Reactivity

- Stable under normal conditions of storage, handling and use
- High thermal stability is a defining characteristic of this product, supporting its use in closed-loop refining/extraction systems
- Incompatible materials: strong oxidising agents
- Hazardous decomposition products: oxides of sulphur and carbon under combustion conditions

SECTION 11: Toxicological Information

- Moderate acute oral toxicity – harmful if swallowed
- Causes serious eye irritation on direct contact
- Some regulatory reviews have flagged developmental/reproductive toxicity signals for sulfolane in animal studies; buyers requiring a full toxicological risk assessment should

consult current regulatory reviews (e.g. US EPA IRIS assessment) for their specific jurisdiction

- Not classified as carcinogenic or mutagenic based on available information

SECTION 12: Ecological Information

- Sulfolane is highly water-soluble, resistant to biodegradation, and highly mobile in groundwater – this combination of properties has led to documented groundwater contamination incidents at refinery and natural-gas-processing sites where releases occurred
- Not acutely toxic to aquatic organisms at typical exposure levels based on available data, but its persistence and mobility make groundwater/environmental protection a genuine, practical priority wherever this product is stored, handled, or processed
- Avoid any release to soil, groundwater or surface water under all circumstances

SECTION 13: Disposal Considerations

- Dispose of product and packaging in accordance with local, state and national regulations
- Do not discharge to drains, soil or waterways under any circumstances given sulfolane's groundwater mobility and persistence
- Use a licensed waste handler for bulk disposal

SECTION 14: Transport Information

UN Number	Not applicable – not classified as Dangerous Goods
Proper Shipping Name	Not regulated for transport (IMDG / ADR / IATA / RID)
Transport Hazard Class	Not classified
Packing Group	Not applicable
Environmental Hazards	Avoid release to soil, groundwater or surface water – see Section 12

SECTION 15: Regulatory Information

- Widely listed on major chemical inventories (TSCA, REACH, ECL, etc.) as an existing/registered substance
- Sulfolane groundwater contamination at refinery/gas-plant sites has been the subject of regulatory attention and remediation programmes in some jurisdictions (e.g. documented cases in North America) – facilities storing or handling sulfolane in bulk should implement robust secondary containment and groundwater monitoring as a matter of good practice, independent of specific local regulatory mandates
- Buyers/importers should confirm current labelling and inventory requirements applicable to their specific jurisdiction and end-use

SECTION 16: Other Information

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This SDS has been compiled based on general industry data and knowledge for Sulfolane Anhydrous products of this type as commercially supplied. It is intended as a general handling and safety guide and does not replace a batch-specific SDS from the manufacturing mill, which should be obtained and reviewed for each shipment where regulatory submission is required – particularly regarding groundwater protection measures at storage and handling sites.

Disclaimer: This Safety Data Sheet is prepared based on our current knowledge and information believed to be reliable for the product as typically supplied, and is intended as a general guide only. It does not constitute a warranty of any specific properties. Ochnology Solution Pvt. Ltd. reserves the right to modify this document without prior notice. Buyers/users are responsible for determining the suitability of this information for their own use, handling, and disposal practices, and for compliance with applicable laws and regulations in their jurisdiction.