





Material Safety Data Sheet

| NFPA | HMIS | Personal Protective Equipment | | | | | | |
|---|---|-------------------------------|---|-------------|---|------------|---|---|
|  | <table><tr><td>Health Hazard</td><td>1</td></tr><tr><td>Fire Hazard</td><td>2</td></tr><tr><td>Reactivity</td><td>0</td></tr></table> | Health Hazard | 1 | Fire Hazard | 2 | Reactivity | 0 | <div></div> <div>See Section 15.</div> |
| Health Hazard | 1 | | | | | | | |
| Fire Hazard | 2 | | | | | | | |
| Reactivity | 0 | | | | | | | |

| Section 1. Chemical Product and Company Identification | | | Page Number: 1 |
|--|---|---|---|
| Common Name/ Trade Name | 1,1,3,3-Tetraethoxypropane | Catalog Number(s). | T3818 |
| | | CAS# | 122-31-6 |
| Manufacturer | SPECTRUM LABORATORY PRODUCTS INC. 14422 S. SAN PEDRO STREET GARDENA, CA 90248 | RTECS | ON8750000 |
| | | TSCA | TSCA 8(b) inventory: No products were found. Not listed in TSCA 8(b) inventory. |
| Commercial Name(s) | Not available. | CI# | Not available. |
| Synonym | Malonaldehyde diethyl acetal; Propane, 1,1,3,3,-tetraethoxy-; Tetraethoxy propane | IN CASE OF EMERGENCY CHEMTREC (24hr) 800-424-9300 CALL (310) 516-8000 | |
| Chemical Name | Malonaldehyde, bis(diethyl acetal) | | |
| Chemical Family | Not available. | | |
| Chemical Formula | C11-H24-O4 | | |
| Supplier | SPECTRUM LABORATORY PRODUCTS INC. 14422 S. SAN PEDRO STREET GARDENA, CA 90248 | | |

| Section 2. Composition and Information on Ingredients | | | | | |
|---|----------|--------------------------|---------------------------|---------------------------|-------------|
| | | Exposure Limits | | | |
| Name | CAS # | TWA (mg/m ³) | STEL (mg/m ³) | CEIL (mg/m ³) | % by Weight |
| 1) {1,1,3,3-}Tetraethoxypropane | 122-31-6 | | | | 100 |
| Toxicological Data on Ingredients 1,1,3,3-Tetraethoxypropane: ORAL (LD50): Acute: 1610 mg/kg [Rat]. | | | | | |

| Section 3. Hazards Identification | |
|-----------------------------------|---|
| Potential Acute Health Effects | Slightly hazardous in case of skin contact (irritant), of eye contact (irritant), of ingestion, of inhalation. |
| Potential Chronic Health Effects | CARCINOGENIC EFFECTS: Not available. MUTAGENIC EFFECTS: Mutagenic for bacteria and/or yeast. TERATOGENIC EFFECTS: Not available. DEVELOPMENTAL TOXICITY: Not available. Repeated or prolonged exposure is not known to aggravate medical condition. |

Section 4. First Aid Measures

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| Eye Contact | Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention if irritation occurs. |
| Skin Contact | Wash with soap and water. Cover the irritated skin with an emollient. Get medical attention if irritation develops. |
| Serious Skin Contact | Not available. |
| Inhalation | If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention. |
| Serious Inhalation | Not available. |
| Ingestion | Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If large quantities of this material are swallowed, call a physician immediately. Loosen tight clothing such as a collar, tie, belt or waistband. |
| Serious Ingestion | Not available. |

Section 5. Fire and Explosion Data

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| Flammability of the Product | Combustible. |
| Auto-Ignition Temperature | Not available. |
| Flash Points | CLOSED CUP: 88°C (190.4°F). |
| Flammable Limits | Not available. |
| Products of Combustion | These products are carbon oxides (CO, CO ₂). |
| Fire Hazards in Presence of Various Substances | Flammable in presence of open flames and sparks, of heat. |
| Explosion Hazards in Presence of Various Substances | Risks of explosion of the product in presence of mechanical impact: Not available. Risks of explosion of the product in presence of static discharge: Not available. |
| Fire Fighting Media and Instructions | SMALL FIRE: Use DRY chemical powder. LARGE FIRE: Use water spray, fog or foam. Do not use water jet. |
| Special Remarks on Fire Hazards | COMBUSTIBLE. |
| Special Remarks on Explosion Hazards | Not available. |

Section 6. Accidental Release Measures

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| Small Spill | Absorb with an inert material and put the spilled material in an appropriate waste disposal. |
| Large Spill | Combustible material. Keep away from heat. Keep away from sources of ignition. Stop leak if without risk. Finish cleaning by spreading water on the contaminated surface and allow to evacuate through the sanitary system. |

Section 7. Handling and Storage

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| Precautions | Keep away from heat. Keep away from sources of ignition. Ground all equipment containing material. Do not ingest. Do not breathe gas/fumes/ vapor/spray. Wear suitable protective clothing. If ingested, seek medical advice immediately and show the container or the label. Keep away from incompatibles such as oxidizing agents. |
| Storage | Keep container in a cool, well-ventilated area. Keep container tightly closed and sealed until ready for use. Avoid all possible sources of ignition (spark or flame). |

Section 8. Exposure Controls/Personal Protection

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| Engineering Controls | Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to the work-station location. |
| Personal Protection | Safety glasses. Synthetic apron. Gloves (impervious). |
| Personal Protection in Case of a Large Spill | Splash goggles. Full suit. Boots. Gloves. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product. |
| Exposure Limits | Not available. |

Section 9. Physical and Chemical Properties

| | | | |
|--------------------------------------|-------------------|--------------|----------------------------|
| Physical state and appearance | Liquid. | Odor | Odorless. |
| Molecular Weight | 220.3 g/mole | Taste | Not available. |
| pH (1% soln/water) | Not available. | Color | Colorless to light yellow. |
| Boiling Point | 220°C (428°F) | | |
| Melting Point | -90°C (-130°F) | | |
| Critical Temperature | Not available. | | |
| Specific Gravity | 0.919 (Water = 1) | | |
| Vapor Pressure | Not available. | | |
| Vapor Density | 6.7 (Air = 1) | | |
| Volatility | Not available. | | |
| Odor Threshold | Not available. | | |
| Water/Oil Dist. Coeff. | Not available. | | |
| Ionicity (in Water) | Not available. | | |
| Dispersion Properties | Not available. | | |
| Solubility | Not available. | | |

Section 10. Stability and Reactivity Data

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| Stability | The product is stable. |
| Instability Temperature | Not available. |
| Conditions of Instability | Excess heat, incompatible materials |
| Incompatibility with various substances | Reactive with oxidizing agents. |
| Corrosivity | Not available. |

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|--------------------------------|-----------------|
| Special Remarks on Reactivity | Not available. |
| Special Remarks on Corrosivity | Not available. |
| Polymerization | Will not occur. |

Section 11. Toxicological Information

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| Routes of Entry | Absorbed through skin. Eye contact. |
| Toxicity to Animals | Acute oral toxicity (LD50): 1610 mg/kg [Rat]. |
| Chronic Effects on Humans | MUTAGENIC EFFECTS: Mutagenic for bacteria and/or yeast. |
| Other Toxic Effects on Humans | Slightly hazardous in case of skin contact (irritant), of ingestion, of inhalation. |
| Special Remarks on Toxicity to Animals | Not available. |
| Special Remarks on Chronic Effects on Humans | May affect genetic material (mutagenic) |
| Special Remarks on other Toxic Effects on Humans | Acute Potential Health Effects: Skin: May cause skin irritation. Eyes: Can cause eye irritation. Inhalation: May cause respiratory tract irritation. Inhalation of vapors may casue dizziness or suffocation. Ingestion: May be harmful if swallowed. May cause digestive tract irritation. May affect behavior/central nervous system (muscle contraction or spasticity), respiration (dyspnea). |

Section 12. Ecological Information

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| Ecotoxicity | Not available. |
| BOD5 and COD | Not available. |
| Products of Biodegradation | Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise. |
| Toxicity of the Products of Biodegradation | The products of degradation are less toxic than the product itself. |
| Special Remarks on the Products of Biodegradation | Not available. |

Section 13. Disposal Considerations

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| Waste Disposal | Waste must be disposed of in accordance with federal, state and local environmental control regulations. |
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Section 14. Transport Information

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| DOT Classification | Not a DOT controlled material (United States). |
| Identification | Not applicable. |
| Special Provisions for Transport | Not applicable. |

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DOT (Pictograms)



Section 15. Other Regulatory Information and Pictograms

Federal and State Regulations

No products were found.

California Proposition 65 Warnings

California prop. 65: This product contains the following ingredients for which the State of California has found to cause cancer which would require a warning under the statute: No products were found.

California prop. 65: This product contains the following ingredients for which the State of California has found to cause birth defects which would require a warning under the statute: No products were found.

Other Regulations

OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200).
 EINECS: This product is on the European Inventory of Existing Commercial Chemical Substances (EINECS No. 204-533-1).
 Canada: Listed on Canadian Domestic Substance List (DSL).
 China: Listed on National Inventory.
 Japan: Listed on National Inventory (ENCS).
 Korea: Not listed on National Inventory (KECI).
 Philippines: Listed on National Inventory (PICCS).
 Australia: Listed on AICS.

Other Classifications

WHMIS (Canada)

CLASS B-3: Combustible liquid with a flash point between 37.8°C (100°F) and 93.3°C (200°F).

DSCL (EEC)

R22- Harmful if swallowed.

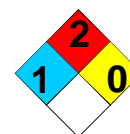
S46- If swallowed, seek medical advice immediately and show this container or label.

HMIS (U.S.A.)

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|---------------------|---|
| Health Hazard | 1 |
| Fire Hazard | 2 |
| Reactivity | 0 |
| Personal Protection | C |

National Fire Protection Association (U.S.A.)

Health



Flammability

Reactivity

Specific hazard

WHMIS (Canada) (Pictograms)



DSCL (Europe) (Pictograms)



TDG (Canada) (Pictograms)



ADR (Europe) (Pictograms)



Protective Equipment



Gloves (impervious).



Lab coat.



Wear appropriate respirator when ventilation is inadequate.

Safety glasses.

Section 16. Other Information**MSDS Code** T0379**References** Not available.**Other Special Considerations** Not available.

Validated by Sonia Owen on 2/21/2007.

Verified by Sonia Owen.

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CALL (310) 516-8000

Notice to Reader

All chemicals may pose unknown hazards and should be used with caution. This Material Safety Data Sheet (MSDS) applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this MSDS. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this MSDS is based on technical data judged to be reliable, Spectrum Quality Products, Inc. assumes no responsibility for the completeness or accuracy of the information contained herein.