



SAFETY DATA SHEET

| Preparation Date: No data available Product identifier | Revision Date: 05/26/2015 | Revision Number: G1 |
|---|--|---------------------|
| Product code: Product Name: | A2243 O-(2-AMINOPROPYL)-O-(2-METHOXYETHYL)PROPYLEN | E GLYCOL 500 |
| Other means of identification Synonyms: CAS #: RTECS # CI#: | Propylene glycol 500 mono-2-aminoethyl mono-2-methoxyet 77110-54-4 Not available Not available | nyl ether |
| Recommended use of the chemi | cal and restrictions on use | |
| Recommended use: Uses advised against | No information available. No information available | |
| Supplier: | Spectrum Chemicals and Laboratory Products, Inc. 14422 South San Pedro St. Gardena, CA 90248 (310) 516-8000 | |
| Order Online At: | https://www.spectrumchemical.com | |
| Emergency telephone number Contact Person: Contact Person: | Chemtrec 1-800-424-9300 Martin LaBenz (West Coast) Ibad Tirmiz (East Coast) | |

2. HAZARDS IDENTIFICATION

Classification

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

| Acute toxicity - Oral | Category 4 |
|-----------------------------------|-------------|
| Acute toxicity - Dermal | Category 4 |
| Serious eye damage/eye irritation | Category 2A |

Label elements

Warning

Hazard statements Harmful if swallowed Harmful in contact with skin Causes serious eye irritation



Hazards not otherwise classified (HNOC) Not Applicable

Other hazards

Not available

Precautionary Statements - Prevention

Wash face, hands and any exposed skin thoroughly after handling Do not eat, drink or smoke when using this product Wear protective gloves/protective clothing/eye protection/face protection

Precautionary Statements - Response

Specific measures (see .? on this label) IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. IF ON SKIN: Wash with plenty of soap and water Call a POISON CENTER or doctor/physician if you feel unwell Wash contaminated clothing before reuse IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell Rinse mouth

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

3. COMPOSITION/INFORMATION ON INGREDIENTS

| Components | CAS-No. | Weight % | Trade Secret |
|---|------------|----------|--------------|
| O-(2-Aminopropyl)-O'-(2- methoxyethyl)propylene Glycol 500 77110-54-4 | 77110-54-4 | 100 | * |

4. FIRST AID MEASURES

| First aid measures General Advice: | Poison information centers in each State capital city can provid assistance for scheduled poisons (13 1126) | de additional |
|---------------------------------------|--|---------------|
| Skin Contact: | Wash off immediately with soap and plenty of water removing all cont shoes. Get medical attention. If skin irritation persists, call a physician | |
| Product code: A2243 | Product name: O-(2-AMINOPROPYL)- O-(2-METHOXYETHYL)PROPYLENE GLYCOL 500 | 2 / 12 |

| Eye Contact: | Flush eye with water for 15 minutes. Immediate medical attention is required. Call a physician immediately. |
|---|--|
| Inhalation: | Move to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention. |
| Ingestion: | Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Obtain medical attention. |
| Most important symptoms and effect Symptoms | t s, both acute and delayed Causes serious eye irritation. Harmful if swallowed. Harmful in contact with skin. |

Indication of any immediate medical attention and special treatment neededNotes to Physician:Treat symptomatically

Protection of first-aiders

First-Aid Providers: Avoid exposure to blood or body fluids. Wear gloves and other necessary protective clothing. Dispose of contaminated clothing and equipment as bio-hazardous waste

5. FIRE-FIGHTING MEASURES

| Extinguishing Media Suitable Extinguishing Media: | Carbon dioxide (CO2). Dry chemical. Water spray mist or foam. |
|--|---|
| Unsuitable Extinguishing Media: | No information available. |
| Specific hazards arising from the chemical | |
| Hazardous Combustion Products: | Carbon oxides, Nitrogen oxides |
| Specific hazards: | May be combustible at high temperatures |
| Special Protective Actions for Firefighters | |
| Specific Methods: | No information available. |
| Special Protective Equipment for Firefighters: | As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear |

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

| Personal Precautions: | Ensure adequate ventilation. Use personal protective equipment. Avoid contact with skin, eyes and clothing. Keep people away from and upwind of spill/leak. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Remove all sources of ignition. Do not get water inside containers. |
|----------------------------------|---|
| Environmental precautions | Prevent further leakage or spillage if safe to do so. Prevent product from entering drains. Prevent entry into waterways, sewers, basements or confined areas. |
| Methods and material for contain | nment and cleaning up |
| Methods for containment | Stop leak if you can do it without risk. In case of large spill, dike if needed. Dike far ahead of liquid spill for later disposal. |
| Methods for cleaning up | Absorb spill with inert material (e.g. vermiculite, dry sand or earth). Use appropriate tools to put the spilled material in a suitable chemical waste disposal container. |

7. HANDLING AND STORAGE

Precautions for safe handling

Technical Measures/Precautions:

Provide sufficient air exchange and/or exhaust in work rooms. Keep away from incompatible materials.

Safe Handling Advice:

Wear personal protective equipment. Avoid contact with skin, eyes and clothing. Keep away from heat and sources of ignition. Do not ingest. Do not breathe vapors or spray mist. Handle in accordance with good industrial hygiene and safety practice.

Conditions for safe storage, including any incompatibilities

Technical Measures/Storage Conditions:

Keep container tightly closed in a dry and well-ventilated place. Store at room temperature in the original container. Store away from incompatible materials.

Incompatible Materials:

Acids. Oxidizing agents.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

National occupational exposure limits

United States

| Components | OSHA | NIOSH | ACGIH | AIHA WHEEL |
|-------------------------------------|------|-------|-------|------------|
| | None | None | None | None |
| O-(2-Aminopropyl)-O'-(2- | | | | |
| methoxyethyl)propylene Glycol 500 - | | | | |
| 77110-54-4 | | | | |

Canada

| Components | Alberta | British Columbia | Ontario | Quebec |
|---|---------|------------------|---------|--------|
| | None | None | None | None |
| O-(2-Aminopropyl)-O'-(2- methoxyethyl)propylene Glycol 500 - 77110-54-4 | | | | |

Australia and Mexico

| Components | Australia | Mexico |
|---|-----------|--------|
| O-(2-Aminopropyl)-O'-(2- methoxyethyl)propylene Glycol 500 77110-54-4 | None | None |

Appropriate engineering controls

Engineering measures to reduce exposure:

Ensure adequate ventilation. Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors and mist below their respective threshold limit value.

Individual protection measures, such as personal protective equipment

Personal Protective Equipment

| Eye protection: | Goggles. Safety glasses with side-shields. |
|---------------------------|--|
| Skin and body protection: | Chemical resistant apron. Gloves. Long sleeved clothing. |
| Respiratory protection: | Vapor respirator. Be sure to use an approved/certified respirator or equivalent. |
| Hygiene measures: | Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product. When using, do not eat, drink or smoke. |

9. PHYSICAL AND CHEMICAL PROPERTIES

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state: Liquid

Odor: No information available

Formula: CH3OCH2CH2O(C3H6O)nCH2CH(NH No data available 2)

Flash Point Tested according to: Closed cup

Autoignition Temperature (°C/°F): No information available

Boiling point/range(°C/°F): No information available

Specific gravity: 0.983

Evaporation rate: No information available

Odor threshold (ppm): No information available

Miscibility: No information available Appearance: Viscous.

Taste No information available

Flash point (°C):

Lower Explosion Limit (%): No information available

pH: No information available

Decomposition temperature(°C/°F): No information available

Density (g/cm3): No information available

Vapor density: No information available

Partition coefficient (n-octanol/water): No information available

Solubility: No information available Color: Colorless to pale yellow.

Molecular/Formula weight: 600

Flashpoint (°C/°F): 129°C/264.2°F

Upper Explosion Limit (%): No information available

Melting point/range(°C/°F): No information available

Bulk density: No information available

Vapor pressure @ 20°C (kPa): No information available

VOC content (g/L): No information available

Viscosity: No information available

10. STABILITY AND REACTIVITY

| Reactivity | |
|--------------------------------|--|
| Reactive with acids | |
| Reactive with oxidizing agents | |

| Chemical stability Stability: | Stable under recommended storage conditions |
|-------------------------------------|---|
| Possibility of Hazardous Reactions: | Hazardous polymerization does not occur |
| Conditions to avoid: | Heat. Ignition sources. Incompatible materials. |
| Incompatible Materials: | Acids. Oxidizing agents. |
| Hazardous decomposition products: | Carbon oxides. Nitrogen oxides (NOx). |
| | |
| Other Information | |
| Corrosivity: | No information available |

Special Remarks on Corrosivity: No information available

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product code: A2243

Principal Routes of Exposure: Eyes. Ingestion. Skin.

Acute Toxicity

Component Information

O-(2-Aminopropyl)-O'-(2-methoxyethyl)propylene Glycol 500 - 77110-54-4 LD50/oral/rat = No information available LD50/oral/mouse = No information available LD50/dermal/rat = No information available LD50/dermal/rabbit = No information available LC50/inhalation/rat = No information available LC50/inhalation/mouse = No information available Other LD50 or LC50information = No information available

Product Information

LD50/oral/rat = VALUE- Acute Tox Oral = No information available

LD50/oral/mouse = Value - Acute Tox Oral = No information available

LD50/dermal/rabbit VALUE-Acute Tox Dermal = No information available

LD50/dermal/rat VALUE -Acute Tox Dermal = No information available

LC50/inhalation/rat VALUE-Vapor = No information available VALUE-Gas = No information available VALUE-Dust/Mist = No information available

LC50/Inhalation/mouse VALUE-Vapor = No information available VALUE - Gas = No information available VALUE - Dust/Mist = No information available

Symptoms

| Skin Contact: | Harmful in contact with skin. |
|--|--|
| Eye Contact: | Causes serious eye irritation. |
| Inhalation Ingestion | May cause respiratory tract irritation. Harmful if swallowed. |
| Aspiration hazard | No information available |
| Delayed and immediate effects as well as chronic effects from short and long-term exposure | |
| Chronic Toxicity | No information available |

Sensitization:

No information available

Mutagenic Effects:

No information available

Carcinogenic effects:

Not considered carcinogenic

| Components | ACGIH - Carcinogens | IARC | NTP | OSHA HCS - Carcinogens | Australia - Prohibited Carcinogenic Substances | Australia - Notifiable Carcinogenic Substances |
|--|------------------------|------------|------------|---------------------------|--|--|
| O-(2-Aminopropyl)-O'-(2- methoxyethyl)propylene Glycol 500 | Not listed | Not listed | Not listed | Not listed | Not listed | Not listed |

| Reproductive toxicity | No data is available |
|---|--|
| Reproductive Effects: Developmental Effects: Teratogenic Effects: | No information available No information available No information available |
| Specific Target Organ Toxicity | |

| STOT - single exposure | No information available |
|--------------------------|--------------------------|
| STOT - repeated exposure | No information available |
| Target Organs: | No information available |

12. ECOLOGICAL INFORMATION

Ecotoxicity

| Ecotoxicity effects: | No data available. |
|--------------------------------|--------------------------|
| Persistence and degradability: | No information available |
| Bioaccumulative potential: | No information available |
| Mobility: | No information available |

13. DISPOSAL CONSIDERATIONS

Disposal Methods

Waste from residues / unused products:

Waste must be disposed of in accordance with Federal, State and Local regulation.

Contaminated packaging:

Empty containers should be taken for local recycling, recovery or waste disposal

| Components | RCRA - F Series Wastes | RCRA - K Series Wastes | RCRA - P Series Wastes | RCRA - U Series Wastes |
|--|---------------------------|---------------------------|------------------------------|------------------------|
| O-(2-Aminopropyl)-O'-(2-methoxyethyl)propylene Glycol 500 | None | None | None | None |

Product code: A2243

DOT

| UN-No: | UN2810 |
|-----------------------|---|
| Proper Shipping Name: | Toxic liquids, organic, n.o.s. [O-(2-Aminopropyl)-O'-(2-methoxyethyl)propylene glycol |
| | 500] |
| Hazard Class: | 6.1 |

Hazard Class: Subsidiary Risk: Packing Group: ERG No: Marine Pollutant DOT RQ (lbs): Symbol(s):

III 153 No data available No information available G

TDG (Canada)

| UN2810 |
|-------------------------------|
| Toxic liquid, organic, n.o.s. |
| 6.1 |
| No information available |
| III |
| No information available |
| |

ADR

| UN-No: | UN2810 |
|-----------------------|-------------------------------|
| Proper Shipping Name: | Toxic liquid, organic, n.o.s. |
| Hazard Class: | 6.1 |
| Packing Group: | III |
| Subsidiary Risk: | No information available |
| Classification Code: | No information available |
| Description: | No information available |
| CEFIC Tremcard No: | No information available |

IMO / IMDG

| UN-No: | UN2810 |
|-----------------------|-------------------------------|
| Proper Shipping Name: | Toxic liquid, organic, n.o.s. |
| Hazard Class: | 6.1 |
| Subsidiary Risk: | No information available |
| Packing Group: | III |
| Description: | No information available |
| IMDG Page: | No information available |
| Marine Pollutant | No information available |
| EMS: | F-A |
| MFAG: | No information available |
| Maximum Quantity: | No information available |

RID

| UN-No: | UN2810 |
|-----------------------|------------------------------|
| Proper Shipping Name: | Toxic liquid, organic, n.o.s |
| Hazard Class: | 6.1 |
| Subsidiary Risk: | No information available |
| Packing Group: | III |
| Classification Code: | No information available |
| Description: | No information available |
| Description: | No information available |

Product name: O-(2-AMINOPROPYL)-O-(2-METHOXYETHYL)PROPYLENE GLYCOL 500

| UN-No: | UN2810 |
|-----------------------|-------------------------------|
| Proper Shipping Name: | Toxic liquid, organic, n.o.s. |
| Hazard Class: | 6.1 |
| Subsidiary Risk: | No information available |
| Packing Group: | III |
| Description: | No information available |

ΙΑΤΑ

| UN-No: | UN2810 |
|-----------------------|-------------------------------|
| Proper Shipping Name: | Toxic liquid, organic, n.o.s. |
| Hazard Class: | 6.1 |
| Subsidiary Risk: | No information available |
| Packing Group: | III |
| ERG Code: | 6L |
| Description: | No information available |

15. REGULATORY INFORMATION

International Inventories

| Components | U.S. TSCA | KOREA KECL | Philippines (PICCS) | Japan ENCS | CHINA | Australia (AICS) | EINECS-No. |
|---|------------|-------------|------------------------|-------------|-------------|---------------------|-------------|
| O-(2-Aminopropyl)-O'-(2- methoxyethyl)propylene Glycol 500 | Not Listed | Not present | Not present | Not present | Not present | Not present | Not present |

U.S. Regulations

California Prop. 65: Safe Drinking Water and Toxic Enforcement Act of 1986.

Chemicals Known to the State of California to Cause Cancer: This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

Chemicals Known to the State of California to Cause Reproductive Toxicity: This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

| Components | Carcinogen | Developmental Toxicity | | Female Reproductive Toxicity: |
|---|------------|------------------------|------------|----------------------------------|
| O-(2-Aminopropyl)-O'-(2- methoxyethyl)propylene Glycol 500 | Not Listed | Not Listed | Not Listed | Not Listed |

CERCLA/SARA

| | Substances and their | Section 302 Extremely Hazardous Substances and TPQs | Hazardous | Chemical Category | Section 313 - Reporting de minimis |
|--|----------------------|---|-----------|-------------------|---------------------------------------|
| O-(2-Aminopropyl)-O'-(2- methoxyethyl)propylene Glycol 500 | None | None | None | None | None |

U.S. TSCA

| • | TSCA Section 5(a)2 - Chemicals With Significant New Use Rules (SNURS) | TSCA 8(d) -Health and Safety Reporting |
|-----------------------------------|--|--|
| O-(2-Aminopropyl)-O'-(2- | Not Applicable | Not Applicable |
| methoxyethyl)propylene Glycol 500 | | |

Canada

WHMIS hazard class:

D1B Toxic materials D2B Toxic materials

Canada Controlled Products Regulation:

This product has been classified according to the hazard criteria of the CPR (Controlled Products Regulation) and the MSDS contains all of the information required by the CPR.

Inventory

| Components | Canada (DSL) | Canada (NDSL) |
|-----------------------------------|--------------|---------------|
| O-(2-Aminopropyl)-O'-(2- | Not Listed | Not Listed |
| methoxyethyl)propylene Glycol 500 | | |

| Components | CEPA Schedule I - Toxic Substances | CEPA - 2010 Greenhouse Gases Subject to Manditory Reporting |
|---|------------------------------------|--|
| O-(2-Aminopropyl)-O'-(2- methoxyethyl)propylene Glycol 500 | Not listed | Not listed |

EU Classification

R-phrase(s)

not determined (not applicable) R21/22 - Harmful in contact with skin and if swallowed. R36/38 - Irritating to eyes and skin.

S -phrase(s)

S26 - In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

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

S36/37 - Wear suitable protective clothing and gloves.

| Components | Classification | Concentration Limits: | Safety Phrases |
|---|----------------|-----------------------|----------------|
| O-(2-Aminopropyl)-O'-(2- methoxyethyl)propylene Glycol 500 | | No information | |

The product is classified in accordance with Annex VI to Directive 67/548/EEC

Indication of danger:

None.

16. OTHER INFORMATION

Revision Date: Prepared by:

Disclaimer:

All chemicals may pose unknown hazards and should be used with caution. This Safety Data Sheet (SDS) 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 SDS. The physical properties reported in this SDS are obtained from the literature and do not constitute product specifications. Information contained herein does not constitute a warranty, whether expressed or implied, as to the safety, merchantability or fitness of the goods for a particular purpose. Spectrum Chemicals & Laboratory Products, Inc. assumes no responsibility for results obtained or for incidental or consequential damages, including lost profits, arising from the use of these data. No warranty against infringement of any patent, copyright or trademark is made or implied. 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 SDS is based on technical data judged to be reliable, Spectrum assumes no responsibility for the completeness or accuracy of the information contained herein.

End of Safety Data Sheet

05/26/2015

Sonia Owen