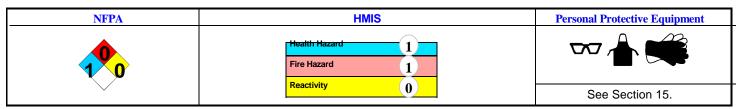




Material Safety Data Sheet



| Section 1. Chemical Product and Company Identification | | | Page Number: 1 |
|--|---|-----------------------|--|
| Common Name/ Trade Name | Dowex 1X2 Ion Exchange Resin | Catalog Number(s). | DWX05, DWX10, DWX15 |
| | | CAS# | 9085-42-1 |
| Manufacturer | SPECTRUM LABORATORY PRODUCTS INC. | RTECS | Not applicable. |
| | 14422 S. SAN PEDRO STREET GARDENA, CA 90248 | TSCA | TSCA 8(b) inventory: Water; Styrene, divinylbenzene and ethylstyrene copolymer, chloromethyl trimethylamine functionalized in the chloride form |
| | | | |
| Commercial Name(s) | Not available. | CI# | Not available. |
| Synonym | Dowex 1X2-chloride Strongly Basic Anion Exchange Resin; I 1X2 Anion Resin, chloride form | IN CASE OF | EMERGENCY |
| Chemical Name | Not applicable. | CHEMIKEC | <u>(24hr) 800-424-9300</u> |
| Chemical Family | Not available. | CALL (310) 5 | 16-8000 |
| Chemical Formula | Not applicable. | | |
| Supplier | SPECTRUM LABORATORY PRODUCTS INC. 14422 S. SAN PEDRO STREET GARDENA, CA 90248 | | |

| | | | Exposure Limits | | |
|--|-------------------------|--------------------------|---------------------------|---------------------------|----------------|
| Name | CAS # | TWA (mg/m ³) | STEL (mg/m ³) | CEIL (mg/m ³) | % by Weight |
| Water Styrene, divinylbenzene and ethylstyrene copolymer, chloromethyl trimethylamine functionalized in the chloride form | 7732-18-5 69011-19-4 | | | | 35-80 20-65 |

Toxicological Data on Ingredients

Styrene, divinylbenzene and ethylstyrene copolymer, chloromethyl trimethylamine functionalized in the chloride form LD50: Not available.

LC50: Not available.

Section 3. Hazards Identification

Potential Acute Health Effects Slightly hazardous in case of skin contact (irritant), of eye contact (irritant), of ingestion. Non-corrosive for skin. Non-permeator by skin. Non-hazardous in case of inhalation. Non-corrosive to the eyes. Non-corrosive for lungs.

| Dowex 1X2 Ion Exchange Resin Page Number: 2 | | | |
|--|---|--|--|
| Potential Chronic Health Effects | Non-corrosive for skin. Non-irritant for skin. Non-sensitizer for skin. Non-permeator by skin. Non-irritating the eyes. Non-hazardous in case of ingestion. Non-hazardous in case of inhalation. Non-irritant for lung Non-sensitizer for lungs. CARCINOGENIC EFFECTS: Not available. MUTAGENIC EFFECTS: Not available. TERATOGENIC EFFECTS: Not available. DEVELOPMENTAL TOXICITY: Not available. | | |
| Section 4. First Aid M | <i>Neasures</i> | | |
| 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 oxyge 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 a unconscious person. If large quantities of this material are swallowed, call a physician immediately. Loose tight clothing such as a collar, tie, belt or waistband. | | |
| Serious Ingestion | Not available. | | |
| Section 5. Fire and Ex | xplosion Data | | |
| Flammability of the Product | May be combustible at high temperature. | | |
| Auto-Ignition Temperature | Not available. | | |
| Flash Points | Not available. | | |
| Flammable Limits | Not available. | | |
| | Not available. | | |
| Products of Combustion | | | |
| Products of Combustion Fire Hazards in Presence of Various Substances | Slightly flammable to flammable in presence of heat. Non-flammable in presence of open flames and sparks, of shocks, of oxidizing materials, of reducin materials, of combustible materials, of organic materials, of metals, of acids, of alkalis. | | |
| Fire Hazards in Presence of Various Substances | Slightly flammable to flammable in presence of heat. Non-flammable in presence of open flames and sparks, of shocks, of oxidizing materials, of reducin | | |
| Fire Hazards in Presence of Various Substances Explosion Hazards in Presence | Slightly flammable to flammable in presence of heat. Non-flammable in presence of open flames and sparks, of shocks, of oxidizing materials, of reducin materials, of combustible materials, of organic materials, of metals, of acids, of alkalis. | | |
| Fire Hazards in Presence of Various Substances Explosion Hazards in Presence of Various Substances Fire Fighting Media | Slightly flammable to flammable in presence of heat. Non-flammable in presence of open flames and sparks, of shocks, of oxidizing materials, of reducin materials, of combustible materials, of organic materials, of metals, of acids, of alkalis. Non-explosive in presence of open flames and sparks, of shocks. SMALL FIRE: Use DRY chemical powder. | | |
| Fire Hazards in Presence of Various Substances Explosion Hazards in Presence of Various Substances Fire Fighting Media and Instructions Special Remarks on | Slightly flammable to flammable in presence of heat. Non-flammable in presence of open flames and sparks, of shocks, of oxidizing materials, of reducin materials, of combustible materials, of organic materials, of metals, of acids, of alkalis. Non-explosive in presence of open flames and sparks, of shocks. SMALL FIRE: Use DRY chemical powder. LARGE FIRE: Use water spray, fog or foam. Do not use water jet. Not available. | | |

Dowex 1X2 Ion Exchange Resin

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Section 7. Handling and Storage

| Precautions | Keep away from heat. Keep away from sources of ignition. Empty containers pose a fire risk, evaporate the residue under a fume hood. Ground all equipment containing material. Do not breathe dust. Keep away from incompatibles such as oxidizing agents. |
|-------------|--|
| Storage | Keep container tightly closed. Keep container in a cool, well-ventilated area. |

Section 8. Exposure Controls/Personal Protection

| Engineering Controls | Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit. | | |
|---|---|--|--|
| Personal Protection | Safety glasses. Synthetic apron. Gloves (impervious). No respiratory protection should be needed. Good general ventilation should be sufficient for most conditions. | | |
| 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 | Solid. (Beads solid.) | Odor | Odorless to Amine like. | |
| Molecular Weight | Not applicable. | Taste | Not available. | |
| pH (1% soln/water) | Neutral. | Color | White to yellowish (amber) | |
| Boiling Point | Not available. | | | |
| Melting Point | Not available. | | | |
| Critical Temperature | Not available. | | | |
| Specific Gravity | The only known value is 1 (Water = 1) (Water). | | | |
| Vapor Pressure | Not applicable. | | | |
| Vapor Density | Not available. | | | |
| Volatility | Not available. | | | |
| Odor Threshold | Not available. | | | |
| Water/Oil Dist. Coeff. | Not available. | | | |
| Ionicity (in Water) | Not available. | | | |
| Dispersion Properties | Not available. | | | |
| Solubility | Insoluble in cold water, hot water. | | | |
| | | | | |

Section 10. Stability and Reactivity Data

| 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. |

| Dowex 1X2 Ion Excl | hange Resin Page Number: 4 | | | | |
|--|---|--|--|--|--|
| Special Remarks on Reactivity | Avoid contact with oxidizing materials. Oxidizing agents such as Nitric acid attack organic exchange resins under certain conditions. Before using strong oxidizing agents, consult sources knowledgeable in handling such materials. The severity of the reaction with oxidizing agents can vary from slight degradation to an explosive reaction. | | | | |
| Special Remarks on Corrosivity | Not available. | | | | |
| Polymerization | Will not occur. | | | | |
| Section 11. Toxicological Information | | | | | |
| Routes of Entry | Inhalation. Ingestion. | | | | |
| Toxicity to Animals | LD50: Not available. LC50: Not available. | | | | |
| Chronic Effects on Humans | Not available. | | | | |
| Other Toxic Effects on Humans | Slightly hazardous in case of skin contact (irritant), of ingestion. Non-permeator by skin. Non-hazardous in case of inhalation. | | | | |
| Special Remarks on Toxicity to Animals | Not available. | | | | |
| Special Remarks on Chronic Effects on Humans | Not available. | | | | |
| Special Remarks on other Toxic Effects on Humans | Acute Potential Health Effects: Skin: It is essentially nonirritating to skin. Not likely to cause significant skin irritation. May cause slight skin irritation. Eyes: May cause slight transient (temporary) irritation. Solid or dust may cause irritation or corneal injury due to mechanical action. Inhalation: Dust may cause respiratory tract irritation due to mechanical action. No adverse effects are anticipated from inhalation. Ingestion: Very low toxicity if swallowed. Harmful effects not anticipated from swallowing small amounts during normal industrial handling. | | | | |
| Section 12. Ecologic | cal Information | | | | |
| 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 | Not available. | | | | |
| Special Remarks on the Products of Biodegradation | Not available. | | | | |
| Section 13. Disposa | Considerations | | | | |
| Waste Disposal | Waste must be disposed of in accordance with federal, state and local environmental control regulations. | | | | |
| Section 14. Transpo | Section 14. Transport Information | | | | |
| DOT Classification | Not a DOT controlled material (United States). | | | | |
| Identification | Not applicable. | | | | |
| Special Provisions for Transport | Not applicable. | | | | |
| Continued on Next | Page | | | | |
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DOT (Pictograms)



| Section 15. Other Regulatory Information and Pictograms | | | | |
|---|--|--|--|--|
| Federal and State Regulations | TSCA 8(b) inventory: Water; Styrene, divinylbenzene and ethylstyrene copolymer, chloromethyl trimethylamine functionalized in the chloride form | | | |
| 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 | For CAS no. 69011-19-4: EINECS: This product is not on the European Inventory of Existing Commercial Chemical Substances. Canada: Listed on Canadian Domestic Substance List (DSL). China: Listed on National Inventory. Japan: Not listed on National Inventory (ENCS). Korea: Not listed on National Inventory (KECI). Philippines: Listed on National Inventory (PICCS). Australia: Listed on AICS. CAS no. 9085-42-1 is not listed on EINECS, Canada DSL or NDSL, China, Japan (ENCS), Phillippines (PICCS) or Australia (AICS) inventories | | | |
| Other Classifications | WHMIS (Canada) Not controlled under WHMIS (Canada). DSCL (EEC) This product is not classified according to the EU regulations. Not applicable. | | | |
| HMIS (U.S.A.) | Health Hazard 1 National Fire Protection Flammability Fire Hazard 1 Association (U.S.A.) Health Image: Constraint of the sectivity Personal Protection C Flammability Specific hazard | | | |
| WHMIS (Canada) (Pictograms) | | | | |
| DSCL (Europe) (Pictograms) | | | | |
| TDG (Canada) (Pictograms) | \bigotimes | | | |
| ADR (Europe) (Pictograms) | | | | |
| Protective Equipment | Gloves (impervious). | | | |

Continued on Next Page

| Dowex 1X2 le | on Exchange Resin | 1 | | Page Number: 6 |
|--------------------------------------|------------------------------|------------------------------|--|---|
| | | Synthetic apron. | | |
| | | Not applicable. | | |
| | | Safety glasses. | | |
| | | | | |
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| | | | | |
| | | | | |
| | | | | |
| Section 16. O | ther Information | | | |
| MSDS Code | D3630 | | | |
| References | Not available. | | | |
| Other Special Considerations | Not available. | | | |
| Validated by Sonia Owen on 6/6/2012. | | | Verified by Sonia Owen. | |
| | | | Printed 7/2/2012. | |
| CALL (310) 516-800 | 0 | | | |
| Notice to Reader | | | | |
| | a unknown hazards and should | he used with equation This M | aterial Safety Data Sheet (MSDS) applies only to the n | atorial as packaged. If this product is |

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.