

# SAFETY DATA SHEET

Sustainion® T Anion Exchange Polymer Membrane

Version 2.0  
SDS DATE: 04/05/2018

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## SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

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**PRODUCT NAME:** Sustainion® T Anion Exchange Polymer Membrane

**MANUFACTURER:** Dioxide Materials  
**ADDRESS:** 3998 FAU Boulevard #300  
**City, State, Zip:** Boca Raton, FL 33431

**EMERGENCY PHONE:** (217) 239-1400  
**TECHNICAL PHONE:** (217) 239-1400  
**E-MAIL:** info@dioxidematerials.com

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## SECTION 2: HAZARDS IDENTIFICATION

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### PICTOGRAM

### EMERGENCY OVERVIEW:

Stable.

May irritate eyes and/or skin. May be harmful if swallowed and/or inhaled.

To the best of our knowledge, the chemical, physical & toxicological properties have not been thoroughly investigated.

A similar compound, Colestyramine, has been shown to cause constipation when swallowed, and in rare cases intestinal obstruction, or hyperchloremic metabolic acidosis

For additional information on toxicity, please refer to Section 11.

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## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

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<b>INGREDIENTS:</b>	<b>CAS NO.</b>	<b>PERCENT</b>	<b>SARA 313</b>
1H-Imidazole, 1,2,4,5-tetramethyl-, compd. with 1-(chloromethyl)-4-ethenylbenzene polymer with diethenylbenzene and ethenylbenzene	2067233-09-2	>83%	N/A
1,2,4,5-Tetramethylimidazole	1739-83-9	<5%	N
PTFE (polytetrafluoroethylene)	9002-84-0	12%	N

**SYNONYMS:** PSTMIM-Cl, Sustainion® T

**CHEMICAL FORMULA:** Confidential

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## SECTION 4: FIRST AID MEASURES

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### GENERAL ADVICE

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of danderous area.

### IN CASE OF EYES CONTACT:

In case of contact with eyes, flush thoroughly with plenty of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Call a physician.

### IN CASE OF SKIN CONTACT:

In case of skin contact, wash off with soap and plenty of water for at least 15 minutes. Remove contaminated clothing and shoes. Call a physician.

### IF SWALLOWED:

Never give anything by mouth to an unconscious person. If swallowed, rinse mouth with water. Call a physician immediately.

### IF INHALED:

If inhaled, remove person into fresh air. If not breathing, give artificial respiration. Consult a physician.

### INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED

No data available

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## SECTION 5: FIRE-FIGHTING MEASURES

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**AUTOIGNITION TEMPERATURE:** data not available

**NFPA HAZARD CLASSIFICATION:**  
(estimated) HEALTH: 1

FLAMMABILITY: 1

REACTIVITY: 0

**HMIS HAZARD CLASSIFICATION:**  
(estimated) HEALTH: 2

FLAMMABILITY: 1

REACTIVITY: 0

**EXTINGUISHING MEDIA:**

**SUITABLE EXTINGUISHING MEDIA**

Water spray. Carbon dioxide, dry chemical powder, or alcohol-resistant foam

**FIRE FIGHTING:**

**SPECIFIC HAZARD(S) ARISING FROM THE SUBSTANCE OR MIXTURE**

Nature of decomposition products not known.

**ADVICE FOR FIREFIGHTERS**

Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes if necessary.

**FURTHER INFORMATION**

No data available

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**SECTION 6: ACCIDENTAL RELEASE MEASURES**

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**PROCEDURE TO BE FOLLOWED IN CASE OF LEAK OR SPILL**

Evacuate area

**PROCEDURE(S) OF PERSONAL PRECAUTION(S)**

Wear self-contained breathing apparatus, rubber boots, and heavy rubber gloves. Wear disposable coveralls and discard them after use. Avoid breathing vapours, mist or gas. Ensure adequate ventilation.

**ENVIRONMENTAL PRECAUTIONS**

Do not let product enter drains.

**METHODS AND MATERIALS FOR CONTAINMENT AND CLEANING UP**

Sweep up, place in a bag and hold for waste disposal. Ventilate area and wash spill site after material pickup is complete.

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**SECTION 7: HANDLING AND STORAGE**

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**PRECAUTIONS FOR SAFE HANDLING:**

Avoid contact with skin and eyes. Do not breath dust. Provide appropriate exhaust ventilation at places where dust or mist is formed.

**CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES**

Keep container tightly closed in a dry and well-ventilated place.

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**SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

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**ENGINEERING CONTROLS:**

Hand in accordance with good industrial hygiene and safety practice. Washing hands before breaks and at the end of the workday.

**RESPIRATORY PROTECTION:**

Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

**SKIN PROTECTION:**

Handle with Compatible chemical-resistant gloves. Gloves must be inspected prior to use. Use proper glove removal techniques (without touching glove's outer surface) to avoid skin contact with this product. Disposed of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

**EYE PROTECTION:**

Chemical safety goggles with side-shields conforming to EN 166 use equipment for eye protection tested and approved under appropriate government standards such as NIOSH(US) or EN 166 (EU).

**WORK HYGIENIC PRACTICES:**

Wash contaminated clothing before reuse. Wash thoroughly after handling.

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**SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**

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<b>PHYSICAL STATE:</b>	Solid Polymer
<b>COLOR:</b>	translucent white
<b>FORM:</b>	solid particulate
<b>ODOR:</b>	no data available
<b>ODOR THRESHOLD</b>	no data available
<b>pH:</b>	no data available
<b>BOILING POINT:</b>	no data available
<b>MELTING POINT:</b>	no data available
<b>FREEZING POINT:</b>	no data available
<b>VAPOR PRESSURE (mmHg):</b>	no data available
<b>VAPOR DENSITY (AIR = 1):</b>	no data available
<b>SPECIFIC GRAVITY (H<sub>2</sub>O = 1):</b>	no data available
<b>EVAPORATION RATE:</b>	no data available
<b>SOLUBILITY IN WATER:</b>	Not soluble in water, polymer portion soluble in ethanol, isopropanol
<b>DECOMPOSITION TEMP:</b>	no data available
<b>PARTITION COEFFICIENT:</b>	no data available
<b>FLASH POINT °F:</b>	no data available
<b>FLASH POINT °C:</b>	no data available
<b>EXPLOSION PEROPERTIES:</b>	no data available
<b>OXIDIZING PROPERTIES:</b>	no data available
<b>FLAMMABILITY:</b>	no data available
<b>AUTOIGNITION TEMP:</b>	no data available
<b>VISCOSITY:</b>	no data available

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## SECTION 10: STABILITY AND REACTIVITY

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**REACTIVITY:** no data available

**CHEMICAL STABILITY:** no data available

**INCOMPATIBILITY (MATERIAL TO AVOID):** strong oxidizing agents.

**HAZARDOUS DECOMPOSITION OR BY-PRODUCTS:** no data available

**HAZARDOUS POLYMERIZATION:** will not occur

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## SECTION 11: TOXICOLOGICAL INFORMATION

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**TOXICOLOGICAL INFORMATION:**

**ACUTE TOXICITY:** no data available

**SKIN CIRROSION/IRRITATION:** no data available

**SERIOUS EYE IRRITATION/EYE DAMAGE:** no data available

**INHALATION:** no data available

**REPRODUCTIVE TOXICITY:** no data available

**TARGET ORGAN(S) or SYSTEM(S):** no data available

**RTECS:** not available

**CARCINOGENITY:** no data available. Note 2-methyl-imidazole and 4-methyl imidazole have been shown to lead to increased incidence of lung and liver cancer in rats at doses of 230 mg/kg

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## SECTION 12: ECOLOGICAL INFORMATION

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**TOXICITY:** no data available

**PERSISTENCE AND DEGRADABILITY:** no data available

**BIOACCUMULATIVE POTENTIAL:** no data available

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**MOBILITY IN SOIL:** no data available

**OTHER ADVERSE EFFECTS:** no data available

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## SECTION 13: DISPOSAL CONSIDERATIONS

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### WASTE DISPOSAL METHOD:

Contact a licensed professional waste disposal service to dispose of this material.  
Observe all federal, state and local environmental regulations.

**CONTAMINATED PACKAGING:** dispose of as unused product.

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## SECTION 14: TRANSPORT INFORMATION

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### U.S. DEPARTMENT OF TRANSPORTATION

**PROPER SHIPPING NAME:** None

**NON-HAZARDOUS FOR TRANSPORT:** This substance is considered to be nonhazardous for transport.

### WATER TRANSPORTATION

**PROPER SHIPPING NAME:** None

**NON-HAZARDOUS FOR WATER TRANSPORT:** This substance is considered to be nonhazardous for water transport.

### AIR TRANSPORTATION

**PROPER SHIPPING NAME:** None

**NON-HAZARDOUS FOR AIR TRANSPORT:** This substance is considered to be nonhazardous for air transport.

### Quantities less than 100 lbs: Quantities 100 lbs or more in a single package:

**DOT SHIPPING DESCRIPTION:** Not Regulated

**DOT HAZARD CLASSIFICATION:** Not Regulated

**DOT LABELS REQUIRED:** None

**DOT MARKING REQUIRED:** None

**UN NUMBER:** Not Applicable

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## SECTION 15: REGULATORY INFORMATION

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### SARA 302 COMPONENTS

SARA 302: no chemicals in this materials are subject to the reporting requirement of SARA Title III, Section 302.

### SARA 313 COMPONENTS

SARA 313: no chemicals in this materials are subject to the reporting requirement of SARA Title III, Section 302

**STATE REGULATIONS:** no data available

**INTERNATIONAL REGULATIONS:** no data available

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## SECTION 16: OTHER INFORMATION

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**DISCLAIMER:** For R&D use only.

**SDS CREATION DATE:** May 5, 2015

**REVISION DATE:** July 10, 2019

**REVISION WERE MADE IN SECTIONS:** 2,3