



# SAFETY DATA SHEET

## SPECIALTY ELECTRONIC MATERIALS SWITZERLAND GMBH

**Product name:** AMBERLITE™ MB9L ION EXCHANGE RESIN

**Issue Date:** 10/15/2018

**Print Date:** 08/02/2020

SPECIALTY ELECTRONIC MATERIALS SWITZERLAND GMBH encourages and expects you to read and understand the entire (M)SDS, as there is important information throughout the document. We expect you to follow the precautions identified in this document unless your use conditions would necessitate other appropriate methods or actions.

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## 1. PRODUCT AND COMPANY IDENTIFICATION

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**Product name:** AMBERLITE™ MB9L ION EXCHANGE RESIN

**Recommended use of the chemical and restrictions on use**

**Identified uses:** Ion exchange and/or Adsorption process

**COMPANY IDENTIFICATION**

SPECIALTY ELECTRONIC MATERIALS  
SWITZERLAND GMBH  
GROSSMATTE 4  
6014 LUZERN  
SWITZERLAND

**Customer Information Number:**

800-3876-6838

SDSQuestion-EU@dupont.com

**EMERGENCY TELEPHONE NUMBER**

**24-Hour Emergency Contact:** +(41)- 435082011

**Local Emergency Contact:** +(972)-37630639

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## 2. HAZARDS IDENTIFICATION

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**Classification of the substance or mixture**

Serious eye damage - Category 1 - H318

For the full text of the H-Statements mentioned in this Section, see Section 16.

**Label elements**

**Hazard pictograms**



**Signal word: DANGER**

**Hazard statements**

H318 Causes serious eye damage.

**Precautionary statements**

P280 Wear eye protection/ face protection.

P305 + P351 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor.

**Contains** Sulfonated polymer of styrene, ethylstyrene and divinylbenzene in the hydrogen form; Trimethylamine functionalised copolymer of styrene and divinylbenzene in the hydroxide form

**Other hazards**

No data available

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### 3. COMPOSITION/INFORMATION ON INGREDIENTS

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**Chemical nature:** Ion exchange and/or Adsorption process

This product is a mixture.

CASRN / EC-No. / Index-No.	Concentration	Component	Classification
CASRN 69011-20-7 EC-No. Polymer Index-No. —	>= 20.0 - < 30.0 %	Sulfonated polymer of styrene, ethylstyrene and divinylbenzene in the hydrogen form	Eye Dam. - 1 - H318
CASRN 69011-18-3 EC-No. Polymer Index-No. —	>= 10.0 - < 20.0 %	Trimethylamine functionalised copolymer of styrene and divinylbenzene in the hydroxide form	Eye Dam. - 1 - H318

For the full text of the H-Statements mentioned in this Section, see Section 16.

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## 4. FIRST AID MEASURES

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**Description of first aid measures**

**Inhalation:** Move to fresh air.

**Skin contact:** Wash off with soap and water. If skin irritation persists, call a physician.

**Eye contact:** Immediately flush the eye with plenty of water for at least 15 minutes, holding the eye open. Get prompt medical attention.

**Ingestion:** Drink two glasses of water. If vomiting occurs spontaneously, keep airway clear. If symptoms persist, call a physician.

**Most important symptoms and effects, both acute and delayed:** Aside from the information found under Description of first aid measures (above) and Indication of immediate medical attention and special treatment needed (below), any additional important symptoms and effects are described in Section 11: Toxicology Information.

**Indication of any immediate medical attention and special treatment needed**

**Notes to physician:** Treatment should be directed at preventing absorption, administering to symptoms (if they occur), and providing supportive therapy.

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## 5. FIREFIGHTING MEASURES

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**Suitable extinguishing media:** Use the following extinguishing media when fighting fires involving this material: Water spray Carbon dioxide (CO<sub>2</sub>) Foam Dry chemical

**Unsuitable extinguishing media:** None known.

**Special hazards arising from the substance or mixture**

**Hazardous combustion products:** No data available

**Unusual Fire and Explosion Hazards:** Cool closed containers exposed to fire with water spray. Exposure to decomposition products may be a hazard to health.

**Advice for firefighters**

**Fire Fighting Procedures:** Remain upwind. Avoid breathing smoke.

**Special protective equipment for firefighters:** In the event of fire, wear self-contained breathing apparatus.

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## 6. ACCIDENTAL RELEASE MEASURES

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**Personal precautions, protective equipment and emergency procedures:** Appropriate protective equipment must be worn when handling a spill of this material. See SECTION 8, Exposure Controls/Personal Protection, for recommendations. If exposed to material during clean-up operations, see SECTION 4, First Aid Measures, for actions to follow.

**Environmental precautions:** Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information.

**Methods and materials for containment and cleaning up:** Keep spectators away. Floor may be slippery; use care to avoid falling. Transfer spilled material to suitable containers for recovery or disposal.

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## 7. HANDLING AND STORAGE

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**Precautions for safe handling:** Avoid repeated freeze-thaw cycles; beads may fracture. If frozen, thaw at room temperature. Avoid contact with skin, eyes and clothing. Corrosive to eyes See SECTION 8, Exposure Controls/Personal Protection, prior to handling. Properly designed equipment is vital if these resins are to be used in conjunction with strong oxidizing agents such as nitric acid to prevent a rapid build-up of pressure and possible explosion. Consult a source knowledgeable in the handling of these materials before proceeding.

**Conditions for safe storage:** Keep in a dry, cool place. Keep container tightly closed.

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## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

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### Control parameters

If exposure limits exist, they are listed below. If no exposure limits are displayed, then no values are applicable.

### Exposure controls

**Engineering controls:** None required under normal operating conditions.

### Individual protection measures

**Eye/face protection:** Safety glasses

**Skin protection**

**Hand protection:** Wear suitable gloves.

**Respiratory protection:** No personal respiratory protective equipment normally required.

See SECTION 7: Handling and storage and SECTION 13: Disposal considerations for measures to prevent excessive environmental exposure during use and waste disposal.

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## 9. PHYSICAL AND CHEMICAL PROPERTIES

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### Appearance

<b>Physical state</b>	Beads
<b>Color</b>	gold
<b>Odor</b>	No data available
<b>Odor Threshold</b>	No data available
<b>pH</b>	No data available

<b>Melting point/range</b>	0 °C Water
<b>Freezing point</b>	No data available
<b>Boiling point (760 mmHg)</b>	100.00 °C Water
<b>Flash point</b>	Not applicable
<b>Evaporation Rate (Butyl Acetate = 1)</b>	No data available
<b>Flammability (solid, gas)</b>	No data available
<b>Lower explosion limit</b>	Not applicable
<b>Upper explosion limit</b>	Not applicable
<b>Vapor Pressure</b>	No data available
<b>Relative Vapor Density (air = 1)</b>	No data available
<b>Relative Density (water = 1)</b>	0.7500
<b>Water solubility</b>	practically insoluble
<b>Partition coefficient: n-octanol/water</b>	No data available
<b>Auto-ignition temperature</b>	500.00 °C
<b>Decomposition temperature</b>	No data available
<b>Kinematic Viscosity</b>	No data available
<b>Explosive properties</b>	No data available
<b>Oxidizing properties</b>	No data available
<b>Molecular weight</b>	No data available
<b>Percent volatility</b>	48.00 - 68.00 %

NOTE: The physical data presented above are typical values and should not be construed as a specification.

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## 10. STABILITY AND REACTIVITY

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**Reactivity:** No dangerous reaction known under conditions of normal use.

**Chemical stability:** Stable.

**Possibility of hazardous reactions:** Product will not undergo polymerization.

**Conditions to avoid:** No data available

**Incompatible materials:** Avoid contact with the following: Strong Oxidizers Nitric acid

**Hazardous decomposition products:** Thermal decomposition may yield the following: monomer vapors

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## 11. TOXICOLOGICAL INFORMATION

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*Toxicological information appears in this section when such data is available.*

**Acute toxicity**

**Acute oral toxicity**

Product test data not available. Refer to component data.

**Acute dermal toxicity**

Product test data not available. Refer to component data.

**Acute inhalation toxicity**

Product test data not available. Refer to component data.

**Skin corrosion/irritation**

Product test data not available. Refer to component data.

**Serious eye damage/eye irritation**

Risk of serious damage to eyes.

**Sensitization**

Product test data not available. Refer to component data.

**Specific Target Organ Systemic Toxicity (Single Exposure)**

Product test data not available. Refer to component data.

**Specific Target Organ Systemic Toxicity (Repeated Exposure)**

Product test data not available. Refer to component data.

**Carcinogenicity**

Product test data not available. Refer to component data.

**Teratogenicity**

Product test data not available. Refer to component data.

**Reproductive toxicity**

Product test data not available. Refer to component data.

**Mutagenicity**

Product test data not available. Refer to component data.

**Aspiration Hazard**

Product test data not available. Refer to component data.

**Additional information**

No data are available for this material. The information shown is based on profiles of compositionally similar materials.

Laboratory tests showed an increase in pH within one minute of exposing strong acid cation in hydrogen form (SAC H) and strong base anion in hydroxyl form (SBA OH) mixed bed resins to a 1%

NaCl solution. This pH effect is likely to result in severe irritation to the eye for exposure to the product as supplied.

**COMPONENTS INFLUENCING TOXICOLOGY:**

**Sulfonated polymer of styrene, ethylstyrene and divinylbenzene in the hydrogen form**

**Acute oral toxicity**

Typical for this family of materials. LD50. Rat. > 5,000 mg/kg

**Acute dermal toxicity**

The dermal LD50 has not been determined.

**Skin corrosion/irritation**

Brief contact is essentially nonirritating to skin.

**Sensitization**

For skin sensitization:

No relevant data found.

For respiratory sensitization:

No relevant data found.

**Specific Target Organ Systemic Toxicity (Single Exposure)**

Evaluation of available data suggests that this material is not an STOT-SE toxicant.

**Specific Target Organ Systemic Toxicity (Repeated Exposure)**

No relevant data found.

**Carcinogenicity**

No relevant data found.

**Teratogenicity**

No relevant data found.

**Reproductive toxicity**

No relevant data found.

**Mutagenicity**

Reverse mutation test using bacteria: Non-mutagenic with and without metabolic activation

**Aspiration Hazard**

Based on physical properties, not likely to be an aspiration hazard.

**Trimethylamine functionalised copolymer of styrene and divinylbenzene in the hydroxide form**

**Acute oral toxicity**

For similar material(s): LD50. Rat. female. > 2,000 mg/kg No deaths occurred at this concentration.

**Acute dermal toxicity**

The dermal LD50 has not been determined.

**Acute inhalation toxicity**

The LC50 has not been determined.

**Skin corrosion/irritation**

Brief contact is essentially nonirritating to skin.

**Sensitization**

For skin sensitization:  
No relevant data found.

For respiratory sensitization:  
No relevant data found.

**Specific Target Organ Systemic Toxicity (Single Exposure)**

Available data are inadequate to determine single exposure specific target organ toxicity.

**Specific Target Organ Systemic Toxicity (Repeated Exposure)**

No relevant data found.

**Carcinogenicity**

No relevant data found.

**Teratogenicity**

No relevant data found.

**Reproductive toxicity**

No relevant data found.

**Mutagenicity**

This material was not mutagenic in an Ames bacterial assay.

**Aspiration Hazard**

Based on physical properties, not likely to be an aspiration hazard.

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## 12. ECOLOGICAL INFORMATION

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*Ecotoxicological information appears in this section when such data is available.*

**General Information**

No data are available for this material. The information shown is based on profiles of compositionally similar materials. Limited effects are expected from exposure of the environmental compartments by insoluble plastic beads of large diameter (300 to 1200 microns).

**Toxicity**

**Sulfonated polymer of styrene, ethylstyrene and divinylbenzene in the hydrogen form**

**Acute toxicity to fish**



Not expected to be acutely toxic, but material in pellet or bead form may mechanically cause adverse effects if ingested by waterfowl or aquatic life.

**Trimethylamine functionalised copolymer of styrene and divinylbenzene in the hydroxide form**

**Acute toxicity to fish**

No relevant data found.

**Persistence and degradability**

**Sulfonated polymer of styrene, ethylstyrene and divinylbenzene in the hydrogen form**

**Biodegradability:** No appreciable biodegradation is expected.

**Trimethylamine functionalised copolymer of styrene and divinylbenzene in the hydroxide form**

**Biodegradability:** No relevant data found.

**Bioaccumulative potential**

**Sulfonated polymer of styrene, ethylstyrene and divinylbenzene in the hydrogen form**

**Bioaccumulation:** No bioconcentration is expected because of the relatively high molecular weight (MW greater than 1000).

**Trimethylamine functionalised copolymer of styrene and divinylbenzene in the hydroxide form**

**Bioaccumulation:** No relevant data found.

**Mobility in soil**

**Sulfonated polymer of styrene, ethylstyrene and divinylbenzene in the hydrogen form**

In the terrestrial environment, material is expected to remain in the soil.  
In the aquatic environment, material will sink and remain in the sediment.

**Trimethylamine functionalised copolymer of styrene and divinylbenzene in the hydroxide form**

No relevant data found.

**Results of PBT and vPvB assessment**

**Sulfonated polymer of styrene, ethylstyrene and divinylbenzene in the hydrogen form**

This substance has not been assessed for persistence, bioaccumulation and toxicity (PBT).

**Trimethylamine functionalised copolymer of styrene and divinylbenzene in the hydroxide form**

This substance has not been assessed for persistence, bioaccumulation and toxicity (PBT).

**Other adverse effects**

**Sulfonated polymer of styrene, ethylstyrene and divinylbenzene in the hydrogen form**

This substance is not on the Montreal Protocol list of substances that deplete the ozone layer.

**Trimethylamine functionalised copolymer of styrene and divinylbenzene in the hydroxide form**

This substance is not on the Montreal Protocol list of substances that deplete the ozone layer.

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### 13. DISPOSAL CONSIDERATIONS

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**Disposal methods:**

Can be landfilled or incinerated, when in compliance with local regulations.

**Contaminated packaging:**

Empty containers retain product residues. Follow label warnings even after container is emptied. Improper disposal or reuse of this container may be dangerous and illegal. Refer to applicable federal, state and local regulations.

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### 14. TRANSPORT INFORMATION

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**Classification for ROAD and Rail transport:**

Not regulated for transport

**Classification for SEA transport (IMO-IMDG):**

Not regulated for transport

**Transport in bulk  
according to Annex I or II  
of MARPOL 73/78 and the  
IBC or IGC Code**

Consult IMO regulations before transporting ocean bulk

**Classification for AIR transport (IATA/ICAO):**

Not regulated for transport

This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. Transportation classifications may vary by container volume and may be influenced by regional or country variations in regulations. Additional transportation system information can be obtained through an authorized sales or customer service representative. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.

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### 15. REGULATORY INFORMATION

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**Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances.**

Listed in Regulation: Not applicable

Classification and labeling have been performed according to Regulation (EC) No 1272/2008.

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## 16. OTHER INFORMATION

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### Full text of H-Statements referred to under sections 2 and 3.

H318 Causes serious eye damage.

### Revision

Identification Number: 10040256 / A715 / Issue Date: 10/15/2018 / Version: 2.0

Most recent revision(s) are noted by the bold, double bars in left-hand margin throughout this document.

### Legend

Eye Dam.	Serious eye damage
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### Full text of other abbreviations

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road; AICS - Australian Inventory of Chemical Substances; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; SVHC - Substance of very high concern; TCSI - Taiwan Chemical Substance Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

### Information Source and References

This SDS is prepared by Product Regulatory Services and Hazard Communications Groups from information supplied by internal references within our company.

SPECIALTY ELECTRONIC MATERIALS SWITZERLAND GMBH urges each customer or recipient of this (M)SDS to study it carefully and consult appropriate expertise, as necessary or appropriate, to become aware of and understand the data contained in this (M)SDS and any hazards associated with the product. The information herein is provided in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied, is given. Regulatory requirements are subject to change and may differ between various locations. It is the buyer's/user's responsibility to ensure that his activities comply with all federal, state, provincial or local laws. The information presented here pertains only to the product as shipped. Since conditions for use of the product are not under the control of the manufacturer, it is the buyer's/user's duty to determine the conditions necessary for the safe use of this product. Due to the proliferation of sources for information such as manufacturer-specific (M)SDSs, we are not and cannot be responsible for (M)SDSs obtained from any source other than ourselves. If you have obtained an (M)SDS from another source or if you are not sure that the (M)SDS you have is current, please contact us for the most current version.

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