



## Material Safety Data Sheet

Date Printed: 10/18/2007  
Date Updated: 01/31/2006  
Version 1.80

### Section 1 - Product and Company Information

**Product Name** DOWEX MONOSPHERE M-31, 1000GM-  
**Product Number** 13697  
**Brand** Supelco Chemical  
**Company** Sigma-Aldrich  
**Street Address** 3050 Spruce Street  
**City, State, Zip, Country** SAINT LOUIS, MO 63103 US  
**Technical Phone:** 800-325-5832  
**Fax:** 800-325-5052  
**Emergency Phone:** 314-776-6555

### Section 2 - Composition/Information on Ingredient

Substance Name	CAS #	SARA 313	EC no	Annex I Index Number
DOWEX CATION EXCHANGE RESIN	69011-20-7	No		

**Formula**  
**Synonyms**

### Section 3 - Hazards Identification

**Emergency Overview**  
Irritant,  
Irritating to eyes.

**HMIS Rating**  
Health: 2 Flammability: 0 Reactivity: 0

**NFPA Rating**  
Health: 2 Flammability: 0 Reactivity: 0

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

### Section 4 - First Aid Measures

**Oral Exposure**  
If swallowed, wash out mouth with water provided person is conscious. Call a physician.

**Inhalation Exposure**  
If inhaled, remove to fresh air. If not breathing give artificial respiration. If breathing is difficult, give oxygen.

**Dermal Exposure**  
In case of contact, immediately wash skin with soap and copious amounts of water.

**Eye Exposure**  
In case of contact, immediately flush eyes with copious amounts of water for at least 15 minutes.

### Section 5 - Fire Fighting Measures

**Explosion Hazards**  
Nitric acid and other strong oxidizing agents can cause explosive type reactions when mixed with ion exchange resins.

**Conditions of Flammability**  
Product is not combustible until moisture is removed then resin starts to burn in flame at 230°C. Autoignition occurs above 500°C.

**Autoignition Temp:** N/A

**Extinguishing Media**  
**Suitable**  
Water spray, Carbon dioxide, dry chemical powder, or appropriate foam.

**Firefighting**  
**Protective Equipment**  
Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.  
**Specific Hazard(s)**  
Emits toxic fumes under fire conditions.

### Section 6 - Accidental Release Measures

**Procedure(s) of Personal Precaution(s)**  
Wear respirator, chemical safety goggles, rubber boots, and heavy rubber gloves.

**Methods for Cleaning Up**  
Sweep up, place in a bag and hold for waste disposal. Avoid raising dust. Ventilate area and wash spill site after material pickup is complete.

### Section 7 - Handling and Storage

**Handling**  
**User Exposure**  
Do not breathe dust. Avoid contact with eyes, skin, and clothing. Avoid prolonged or repeated exposure. Dry ion exchange resins expand when wetted, which may cause column to shatter.

**Storage**  
**Suitable**  
Keep tightly closed.

### Section 8 - Exposure Controls / PPE

**Engineering Controls**  
Safety shower and eye bath. Mechanical exhaust required.

**Personal Protective Equipment**  
**Respiratory**  
Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). Where risk assessment shows airpurifying respirators are appropriate use a dust mask type N95 (US) or type P1 (EN 143) respirator.  
**Hand**  
Compatible chemical-resistant gloves.  
**Eye**  
Chemical safety goggles.

RECEIVED

OCT 29 2007

Safety & Environmental  
Health

General Hygiene Measures  
Wash thoroughly after handling.

## Section 9 - Physical/Chemical Properties

Appearance  
Physical State  
Solid

Molecular Weight N/A

pH N/A  
BP/BP Range N/A  
MP/MP Range N/A  
Freezing Point N/A  
Vapor Pressure N/A  
Vapor Density N/A  
Saturated Vapor Conc. N/A  
SG/Density 0.69 g/cm<sup>3</sup>  
Bulk Density N/A  
Odor Threshold N/A  
Volatile% N/A  
VOC Content N/A  
Water Content N/A  
Solvent Content N/A  
Evaporation Rate N/A  
Viscosity N/A  
Partition Coefficient N/A  
Decomposition Temp. N/A  
Flash Point °F N/A  
Flash Point °C N/A

Explosion Limits N/A

Flammability N/A  
Autoignition Temp N/A  
Solubility  
Solubility in Water: Insoluble.

N/A = not available

## Section 10 - Stability and Reactivity

Stability  
Stable  
Stable.  
Materials to Avoid  
Strong oxidizing agents

### Hazardous Decomposition Products

#### Hazardous Decomposition Products

Carbon monoxide, Carbon dioxide, Sulfur oxides, Alkylbenzenes, vinylbenzenes, naphthalene, benzaldehydes, phenol, and organic sulfonates.

Hazardous Polymerization  
Hazardous Polymerization  
Will not occur.

## Section 11 - Toxicological Information

### Route of Exposure

#### Skin Contact

May cause skin irritation.

#### Skin Absorption

May be harmful if absorbed through the skin.

#### Eye Contact

Causes eye irritation.

#### Inhalation

May be harmful if inhaled. Material may be irritating to mucous membranes and upper respiratory tract.

#### Ingestion

May be harmful if swallowed.

### Signs and Symptoms of Exposure

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

RTECS Number: N/A

## Section 12 - Ecological Information

No data available.

## Section 13 - Disposal Considerations

### Appropriate Method of Disposal of Substance or Preparation

Contact a licensed professional waste disposal service to dispose of this material.  
Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.  
Observe all federal, state, and local environmental regulations.

## Section 14 - Transport Information

### DOT

Proper Shipping Name: None

Non-Hazardous for Transport This substance is considered to be nonhazardous for transport.

### IATA

Non-Hazardous for Air Transport Non-hazardous for air transport.

## Section 15 - Regulatory Information

### EU Additional Classification

Symbol of Danger: Xi

Indication of Danger

Irritant.

Risk Statements R: 36

Irritating to eyes.

Safety Statements S: 26 36

In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear suitable protective clothing.

### US Classification and Label Text

Indication of Danger

Irritant.

Risk Statements

Irritating to eyes.

**Safety Statements**

In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear suitable protective clothing.

**United States Regulatory Information**

SARA Listed: No

**Canada Regulatory Information****WHMIS Classification**

This product has been classified in accordance with the hazard criteria of the CPR, and the MSDS contains all the information required by the CPR.

DSL: Yes

NDSL: No

---

**Section 16 - Other Information**

---

**Disclaimer**

For R&D use only. Not for drug, household or other uses.

**Warranty**

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. SigmaAldrich Inc., shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice packing slip for additional terms and conditions of sale. Copyright 2007 Sigma-Aldrich Co. License granted to make unlimited paper copies for internal use only.

**RECEIVED**  
**OCT 29 2007**  
**Safety & Environmental**  
**Health**

