

**SPECTRUM VP-17-3680****Section 1: Identification of the substance/mixture and of the company undertaking**

- 1.1 Product Identifier: VP-17-3680**
- 1.2 Relevant identified uses of the substance or mixture:**  
Removal of Oxygen from water.
- 1.3 Details of the supplier of the safety data sheet:**  
Brand name: Spectrum (Company no. 01595206)  
20/20 Business Park  
Maidstone  
Kent  
ME16 0LS  
United Kingdom
- T: +44 (0)1622 691886  
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- 1.4 Emergency Contact Details**  
Suzanne Warren T: + 44 (0)7970 633392

**Section 2: Hazard identification**

- 2.1 Classification of the substance or mixture:**  
Not hazardous or dangerous.

Product Hazard Rating	Scale
Health = 1	0 = negligible
Fire = 1	1 = slight
Reactivity = 0	2 = Moderate
Special = n/a	3 = High
	4 = Extreme

- 2.2 Product Description:**  
White, yellow, or orange coloured solid beads with little or no odour.
- 2.3 Precautions for use:**  
Safety glasses and gloves recommended. Slipping hazard if spilled.
- 2.4 Potential health effects:**  
Will cause eye irritation.  
May cause mild skin irritation.  
Ingestion is not likely to pose a health risk.
- 2.5 Environmental effects:**  
This product may alter the pH of any water that contacts it. Can release sulfur trioxide gas when in contact with acids.

## Section 2a: Hazard Classification UN OSHA globally harmonized system



### **WARNING**

**(contains sulfite form anion exchange resin)**

**H319: Causes serious eye irritation (Category 2A)**

**H335: May cause respiratory irritation**

**EUH031: Contact with acids liberates toxic gas**

#### **Precautionary Statements**

P233: Keep container tightly closed.

P261: Avoid breathing dust/fume/ gas/mist/vapours/spray

P264: Wash hands thoroughly after handling.

P280: Wear protective gloves/protective clothing/eye protection/face protection

P305+351+338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do – continue rinsing.

P333+313: If skin irritation or a rash occurs: Get medical advice/attention.

P337+313: If eye irritation persists get medical advice/attention.

P403+233: Store in a well-ventilated place. Keep container tightly closed.

P411: Store at temperatures not exceeding 50 °C/ 122 °F.

Please refer to the safety data sheet for additional information regarding this product

## Section 3: Composition/information on ingredients

### **3.1 Chemical name:**

Dimethyl ethanolamine functionalized chloromethylated copolymer of polystyrene in the sulfite form.

## 3.2 Ingredients:

Dimethyl ethanolamine functionalized chloromethylated copolymer of styrene and divinylbenzene in the sulphite form.  
Water.

## Section 4: First aid measures

### 4.1 Inhalation:

No adverse effects expected – normal use of product does not produce odors or vapours.

#### **Skin:**

Wash with soap and water – seek medical attention if a rash develops.

#### **Eye contact:**

Wash immediately with water – seek attention if discomfort continues.

#### **Ingestion:**

No adverse effects expected for small amounts, larger amounts can cause stomach irritation.  
Seek medical attention if discomfort occurs.

## Section 5: Firefighting measures

### 5.1 Flammability:

NFPA Fire rating = 1

### 5.2 Extinguishing media:

Water, CO<sub>2</sub>, foam, dry powder.

### 5.3 Fire fighting procedures:

Follow general fire fighting procedures indicated in the work place. Seek medical attention if discomfort continues.

### 5.4 Protective equipment:

MSHA/NIOSH approved self-contained breathing gear, full protective clothing.

### 5.5 Combustion products:

Carbon oxides and other toxic gasses and vapors.

### 5.6 Unusual hazards:

Product is not combustible until moisture is removed.

Resin begins to burn at approximately 230° C. Auto ignition can occur above 500° C.

## Section 6: Accidental release measures

### 6.1 Personal precautions:

Keep people away, spilled resin can be a slipping hazard, wear gloves and safety glasses to minimize skin or eye contact.

### 6.2 Incompatible chemicals:

Strong oxidants can create risk of combustion products similar to burning.

- 6.3 Environmental precautions:**  
Keep out of public sewers and waterways.
- 6.4 Containment materials:**  
Use plastic or paper containers.
- 6.5 Methods of clean-up:**  
Sweep up material and transfer to containers.

## Section 7: Handling and storage

- 7.1 Handling:**  
Avoid prolonged skin contact. Keep resin moist and avoid allowing resin to completely dry.
- 7.2 Storage:**  
Store in a cool dry place (0° to 45° C) in the original shipping container. This product is thermally sensitive and will have reduced shelf life if subjected to extended periods of time at temperatures exceeding 50° C. Although freezing does not usually damage ion exchange resins, avoid repeated freeze thaw cycles.
- 7.3 TSCA considerations:**  
Ion exchange resins should be listed on the TSCA Inventory in compliance with State and Federal Regulations.

## Section 8: Exposure controls/personal protection

- 8.1 OSHA exposure limits:**  
None noted.
- 8.2 Engineering controls:**  
Provide adequate ventilation.
- 8.3 Personal protection measures:**  
Eye protection: Safety glasses or goggles  
Respiratory protection: Not required for normal use  
Protective gloves: Recommended for extended contact

## Section 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties:

Appearance	White, yellow or orange beads approx. 0.6mm diameter
Flammability or explosive limits	Flammable above 500° C
Odor	Little or no odor
Physical state	Solid

Vapor pressure	Not available
Odor threshold	Not available
Vapor density	Not available
pH	Near neutral
Relative density	Approx 710 grams/litre
Melting point/freezing point	Does not melt, freezes at approx. 0 C
Solubility	Insoluble in water and most solvents
Boiling point	Does not boil
Flash point	Approx 500° C
Evaporation rate	Does not evaporate
Partition Coefficient (n-octanol/water)	Not applicable
Auto-ignition temperature	Approx 500° C
Decomposition temperature	Above 230° C
Viscosity	Not applicable

## Section 10: Stability and reactivity

### 10.1 Stability:

Stable under normal conditions.

### 10.2 Conditions to avoid:

Heat, exposure to strong oxidants, exposure to acids.

### 10.3 Hazardous by-products:

Dimethyl ethanolamine, sulfur oxides, charred polystyrene, aromatic acids and hydrocarbons, organic amines, nitrogen oxides, carbon oxides, chlorinated hydrocarbons.

### 10.4 Incompatible materials:

Strong oxidizing agents (such as HNO<sup>3</sup>), mineral acids such as HCl, H<sub>2</sub>SO<sub>4</sub> etc.

### 10.5 Hazardous polymerization:

Does not occur.

## Section 11: Toxicological information

### 11.1 Likely routes of exposure:

Oral, skin or eye contact.

### 11.2 Effects of exposure:

None known.

### 11.3 Toxicity measures:

Skin Adsorption: Unlikely

Ingestion: Oral toxicity believed to be low but no LD<sub>50</sub> has been established

Inhalation: Unknown, vapors are very likely due to physical properties (insoluble solid)

### 11.4 Toxicity symptoms:

Skin Adsorption: Mild rash

Ingestion: Indigestion or general malaise

Inhalation: Unknown

- 11.5 Carcinogenicity:**  
None known.

## Section 12: Ecological information

- 12.1 Eco toxicity:**  
Not acutely harmful to plant or animal life.
- 12.2 Mobility:**  
Insoluble, acidity may escape if wet.
- 12.3 Biodegradability:**  
Non biodegradable.
- 12.4 Bioaccumulation:**  
Insignificant.
- 12.5 Other adverse effects:**  
Not harmful to the environment.

## Section 13: Disposal Considerations

- 13.1 General considerations:**  
Material is non-hazardous.
- 13.2 Disposal containers:**  
Most plastic and paper containers are suitable.
- 13.3 Disposal methods:**  
No specific method necessary.
- 13.4 Sewage disposal:**  
Not recommended.
- 13.5 Precautions for incineration:**  
May release dimethyl ethanolamine and toxic vapors when burned.
- 13.6 Precautions for landfills:**  
Resins used to remove hazardous materials may then become hazardous mixtures.

## Section 14: Transport Information

- 14.1 Transportation class:**  
Not classified as a dangerous good for transport by land, sea or air.
- 14.2 TDG:**  
Not regulated.
- 14.3 IATA:**  
Not regulated.
- 14.4 DOT (49 CFR 172.101):**  
Not regulated.

## Section 15: Regulatory Information

- 15.1 CERCLA:**  
Not regulated.
- 15.2 SARA Title III**  
Not regulated.
- 15.3 Clean Air Act:**  
Not regulated.
- 15.4 Clean Water Act:**  
Not regulated.
- 15.5 TSCA:**  
Not regulated.
- 15.6 Canadian Regulations:**  
WHMIS: Not a controlled product.  
TDG: Not regulated.
- 15.7 Mexican Regulations:**  
Not dangerous.

## Section 16: Other Information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features. Regulatory requirements are subject to change and may differ from one location to another. It is the buyer's responsibility to ensure that their activities comply with federal, state, and local laws.

Owner	Business Services
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