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## SAFETY DATA SHEET

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### 1. Identification of the substance or preparation and of the company/undertaking

- 1.1.** Identification of substance or preparation: **Purolite® MB400**  
Chemical Name: Polystyrene sulphonic acid and polyvinyl benzyl trimethyl ammonium hydroxide
- 1.2.** Use of the substance/preparation: Ion Exchange, Adsorbent, and/or Catalyst
- 1.3.** Company/undertaking Identification: Purolite International Limited  
Llantrisant Business Park,  
Llantrisant, Wales, UK CF72 8LF  
Tel:+44 1443 229334  
Fax:+44 1443 227073
- Name of Manufacturer: Purolite S.R.L.  
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505700 Victoria, Judetol Brasov, Romania  
Tel:+40 26 824 3004  
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- Purolite Company Limited  
Qianlong Economic Development Zone,  
Qianyuan Town, Deqing County,  
Huzhou City, Zhejiang, China 313216  
Tel:+86 572 842 2908  
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- The Purolite Company  
150 Monument Road  
Bala Cynwyd, PA, USA, 19004  
Tel:+1 610 668 9090  
Fax:+1 610 668 8139
- Responsible Person: Ken Shaner  
Email: [kshaner@puroliteusa.com](mailto:kshaner@puroliteusa.com)
- 1.4.** Emergency Telephone: USA Toll Free: + 1 866 387 7344  
USA Direct: + 1 760 602 8703

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### 2. Hazards identification

- Contact with eyes: Warning! Causes eye irritation
- Contact with skin: Warning! Causes mild skin irritation
- This substance is not classified as dangerous according to Directive 1999/45/EC.

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### 3. Composition/information on ingredients

3.1 Ingredient	Concentration	CAS Number	R Phrases	Symbol Letters
Polystyrene sulphonic acid	33-66%	69011-18-3	-	-
Polyvinyl benzyl trimethyl ammonium hydroxide	33-66%	69011-20-7		
Water	35-60%	7732-18-5	-	-

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### 4. First aid measures

#### Inhalation

- Remove patient to fresh air
- Seek medical advice

#### Contact with skin

- Remove contaminated clothing
- Wash affected area with plenty of water

#### Contact with eyes

- Immediately wash out with plenty of water for at least 15 minutes
- Seek medical attention if irritation persists

#### Ingestion

- Give 200-300 ml of water to drink
  - Never give anything by mouth to an unconscious person
  - Seek immediate medical attention
  - Do not induce vomiting
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### 5. Fire-fighting measures

- In case of fire use water fog, foam, carbon dioxide or dry agent
  - Substance evolves toxic fumes, wear self-contained breathing apparatus
  - Wear full protective clothing including chemical protection suit
  - Prevent run off water from entering drains if possible
  - If polluted water reaches drainage systems or water courses, immediately inform appropriate authorities
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### 6. Accidental release measures

#### Personal precautions

- Keep people and animals away
- Spillage causes slippery surface

#### Environmental precautions

- Do not allow to enter public sewers and watercourses

#### Methods for cleaning up

- Sweep up as much as possible and transfer to plastic containers for recovery or disposal
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## 7. Handling and storage

### 7.1 Handling

- No special precautions are required for this product
- Risk of static discharge from dry beads

### 7.2 Storage

- Store above 0 °C
- Do not store above 40 °C
- Avoid dehydration (when rewetted the resin volume may increase and cause a rupture of the packaging)
- Keep only in the original container

### 7.3 Specific use(s)

- Ion exchange, adsorbent or catalyst

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## 8. Exposure controls/personal protection

### 8.1 Exposure limit values

- No exposure limits noted for ingredients

### 8.2 Exposure controls

- No special precautions are required for this substance

#### 8.2.1 Occupational exposure controls

- No respiratory protection is required
- Wear rubber or PVC gloves
- Wear eye/face protection
- Eyewash facilities should be available
- Wear suitable protective clothing

#### 8.2.2 Environmental exposure controls

- Environmental manager must be informed of all major spillages

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## 9. Physical and chemical properties

### 9.1 General information

- Appearance: yellow, amber, brown, black beads
- Odour: odourless

### 9.2 Important health, safety, and environmental information

- pH - not applicable
- Boiling point - not applicable
- Flash point - not applicable
- Flammability - not applicable
- Explosive properties - not applicable
- Oxidising properties - not applicable
- Vapour pressure - like water
- Relative density - 1.15 - 1.30
- Solubility - insoluble in water and organic solvents
- Water solubility - none
- Partition coefficient : n-octanol/water - not applicable
- Viscosity - not applicable
- Vapour density - not applicable
- Evaporation rate - not applicable

### 9.3 Other information

- None

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## 10. Stability and reactivity

### 10.1 Conditions to avoid

- Considered stable under normal conditions

### 10.2 Materials to avoid

- Incompatible with strong oxidising substances. Contact with strong oxidisers, especially nitric acid, may produce low molecular weight organics that may form explosive mixtures

### 10.3 Hazardous decomposition products

- Combustion products may include monomers, residual organics, carbon and sulphur oxides

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## 11. Toxicological information

### Toxicological information

- LD50 (oral, rat) >5000 mg/kg
- LD50 (dermal, rabbit): not available
- LC50 (inhalation, rat): not applicable
- Irritation to eyes: Irritant by mechanical action
- Irritation to skin (rabbit) : Minor

### Acute lethality/toxicity

- No evidence of acute lethality/toxicity

### Carcinogenicity

- No evidence of carcinogenic effects

### Teratogenicity

- No evidence of reproductive effects

### Mutagenicity

- No evidence of mutagenic effects

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## 12. Ecological information

### 12.1 Ecotoxicity

- On available data, substance is not harmful to aquatic life

### 12.2 Mobility

- Insoluble in water

### 12.3 Persistence and degradability

- Not biodegradable

### 12.4 Bioaccumulative potential

- Bioaccumulation is insignificant

### 12.5 Results of PBT assessment

- Assessment not required

### 12.6

#### Other adverse effects

- On available data, substance is not harmful to the environment

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### 13. Disposal considerations

- The substance as delivered is a non-hazardous waste.
- The used substance may be subject to different classifications, in any case the substance shall be disposed of according to local, regional and national regulations.
- EU number for exhausted or saturated ion exchange resins used in chemical surface treatment and coating of metals is 11 01 16.
- EU number for exhausted or saturated ion exchange resins used for the preparation of drinking water or water for industrial use is 19 09 05.
- EU number for exhausted or saturated ion exchange resins used in waste water treatment plants not otherwise specified is 19 08 06.
- In UK, surplus product should be declared a 'Special Waste'. Refer to the 'Control of Pollution (Special Waste) Regulations 1980 - SI 1709'

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### 14. Transport information

- Substance as supplied is not classified as a dangerous good for transport by sea, road, rail and air
- Spent substance may be subject to classification as a dangerous good for transport by sea, road, rail and air

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### 15 Regulatory information

#### Classification and labeling

- Substance not classified as hazardous as supplied

#### Applicable laws and regulations

- This substance meets the OECD polymer definition and is therefore exempt from REACH registration

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### 16. Other information

- Relevant R phrases: none
- Restrictions: industrial grade ion exchange resins, adsorbents and catalysts are not intended for analytical, medical, food and pharmaceutical applications without preliminary extensive purification
- This safety data sheet complies with directives 67/548/EEC, 88/379/EEC, 91/155/EEC, and any revisions and amendments

Disclaimer: the information provided in this safety data sheet is based on current knowledge about the product and current legal requirements and standards. It relates specifically to health, safety and environmental requirements and standards, may not identify all hazards associated with the product or its uses or misuses, does not signify any warranty with regard to the properties of the product, and only applies when the product is used for the purposes indicated in section 1. This product is not sold as suitable for other purposes and such other usage may cause risks not mentioned in this safety data sheet.