SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Trade name or designation of the mixture: Purolite® A860

Registration number: -

Synonyms Issue: None.

date Version: 20-December-2011

number Revision: 02

date Supersedes: 12-October-2016

date: 20-December-2011

1.2. Relevant identified uses of the substance or mixture and uses advised against

Identified uses: Ion Exchange, Absorbent and/or Catalyst

Uses advised against: None known.

1.3. Details of the supplier of the safety data sheet

Supplier: Purolite Ltd.
Llantrisant Business Park
Llantrisant, Wales, UK CF72 8LF

Telephone: +44 1443 229334
Fax: +44 1443 227073

Manufacturer: Purolite
150 Monument Road
Bala Cynwyd, PA 19004 USA

Telephone: +1 610 668 9090
Fax: +1 610 668 8139

Purolite S.R.L.
Str. Aleea Uzinei nr.11,
505700 Victoria
Judetul Brasov
Romania 505 700

Telephone: +40 26 824 3001
Fax: +40 26 824 3002

Purolite (China) Co. Limited,
Qianlong Economic Development Zone,
Qianyuan Town, Deqing County,
Huzhou City, Zhejiang, China 313216

Telephone: +86 572 842 2908
Fax: +86 572 842 5345

Contact person: SDS Coordinator
e-mail: msds@purolite.com

1.4. Emergency telephone number

+1 866 387 7344
+1 760 602 8703

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 as amended
Hazard summary

Exposure to powder or dusts may be irritating to eyes, nose and throat.

2.2. Label elements

Label according to Regulation (EC) No. 1272/2008 as amended

Hazard pictograms
None.

Signal word
None.

Hazard statements
The mixture does not meet the criteria for classification.

Precautionary statements

Prevention
P281 Use personal protective equipment as required.

Response
P314 Get medical advice/attention if you feel unwell.

Storage

Disposal
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

Supplemental label information
None.

2.3. Other hazards

Not a PBT or vPvB substance or mixture.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

General information

Chemical name % CAS-No. / EC No. REACH Registration No. INDEX No. Notes

Quaternary ammonium polyacrylate 28 - 43 65997-24-2 - -

Classification: -

Water 57 - 72 7732-18-5 231-791-2 -

Classification: -

List of abbreviations and symbols that may be used above

DSD: Directive 67/548/EEC.

Composition comments
The full text for all R- and H-phrases is displayed in section 16. All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

SECTION 4: First aid measures

General information
If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

4.1. Description of first aid measures

Inhalation
Move into fresh air and keep at rest. Get medical attention if any discomfort continues.

Skin contact
Wash off immediately with soap and plenty of water. If irritation persists get medical attention.

Eye contact
Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses. If eye irritation persists, get medical advice/attention.

Ingestion
Rinse mouth thoroughly. Never give liquid to an unconscious person. Do not induce vomiting. If vomiting occurs, the head should be kept low so that stomach vomit doesn't enter the lungs. Get medical attention if any discomfort continues.

4.2. Most important symptoms and effects, both acute and delayed

Eye contact: Contact may cause irritation with redness, tearing, pain, and/or blurred vision.

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures

General fire hazards
The product is not flammable. Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapours.

5.1. Extinguishing media

Suitable extinguishing media
Extinguish with foam, carbon dioxide, dry powder or water fog.
Unsuitable extinguishing media

By heating and fire, harmful vapours/gases may be formed.

5.2. Special hazards arising from the substance or mixture

5.3. Advice for firefighters

Wear self-contained breathing apparatus and protective clothing.

Special protective equipment for firefighters

In the event of fire and/or explosion do not breathe fumes. Move containers from fire area if you can do so without risk. Prevent runoff from fire control or dilution from entering streams, sewers or drinking water supply.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Wear appropriate protective equipment and clothing during clean-up. Keep unnecessary personnel away. Avoid contact with skin and eyes.

For emergency responders

Keep unnecessary personnel away. Wear protective clothing as described in Section 8 of this safety data sheet.

6.2. Environmental precautions

Prevent further leakage or spillage if safe to do so. Cover with plastic sheet to prevent spreading. Do not allow to enter drains, sewers or watercourses.

6.3. Methods and material for containment and cleaning up

Avoid the generation of dusts during clean-up.

Large Spills: Dike the spilled material, where this is possible. Sweep or shovel up material and place in a clearly labeled container for waste. For waste disposal, see section 13 of the SDS.

Small Spills: Sweep up or vacuum up spillage and collect in suitable container for disposal.

Never return spills to original containers for re-use.

6.4. Reference to other sections

For personal protection, see section 8 of the SDS. For waste disposal, see section 13 of the SDS.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Wear protective clothing as described in Section 8 of this safety data sheet. Observe good industrial hygiene practices. Use with adequate ventilation. Avoid release to the environment.

7.2. Conditions for safe storage, including any incompatibilities

Keep containers tightly closed in a dry, cool and well-ventilated place. Store away from incompatible materials (see section 10 of the SDS).

7.3. Specific end use(s)

Ion Exchange, Absorbent and/or Catalyst

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits

No exposure limits noted for ingredient(s).

Biological limit values

No biological exposure limits noted for the ingredient(s).

Recommended monitoring procedures

Follow standard monitoring procedures.

Derived no effect levels (DNELs)

Not available.

Predicted no effect concentrations (PNECs)

Not available.

Exposure guidelines

This material does not have established exposure limits.

8.2. Exposure controls

Appropriate engineering controls

Provide adequate ventilation. Provide eyewash station.

Individual protection measures, such as personal protective equipment

General information

Personal protective equipment should be chosen according to the CEN standards and in discussion with the supplier of the personal protective equipment.

Eye/face protection

If contact is likely, safety glasses with side shields are recommended.

Skin protection

- Hand protection

Protective gloves should be worn to prevent skin contact.

SPECIFIC RECOMMENDATIONS.

Breakthrough time: > 10 min (EN 374-3 Class 1).

Suitable gloves can be recommended by the glove supplier.
- **Respiratory protection**: No personal respiratory protective equipment normally required.

- **Thermal hazards**: None known.

- **Hygiene measures**: Avoid contact with eyes. Handle in accordance with good industrial hygiene and safety practices. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

- **Environmental exposure controls**: Environmental manager must be informed of all major spillages.

### SECTION 9: Physical and chemical properties

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

<table>
<thead>
<tr>
<th>Property</th>
<th>Information</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Appearance</strong></td>
<td>Beads.</td>
</tr>
<tr>
<td>Physical state</td>
<td>Solid.</td>
</tr>
<tr>
<td>Form</td>
<td>Beads.</td>
</tr>
<tr>
<td>Colour</td>
<td>White.</td>
</tr>
<tr>
<td>Odour</td>
<td>Slight amine.</td>
</tr>
<tr>
<td>Odour threshold</td>
<td>Not available.</td>
</tr>
<tr>
<td><strong>pH</strong></td>
<td>Neutral.</td>
</tr>
<tr>
<td>Melting point/freezing point</td>
<td>Not available.</td>
</tr>
<tr>
<td>Initial boiling point and boiling range</td>
<td>Not available.</td>
</tr>
<tr>
<td>Flash point</td>
<td>Not available.</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>Not available.</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>Not available.</td>
</tr>
<tr>
<td>Upper/lower flammability or explosive limits</td>
<td>Not available.</td>
</tr>
<tr>
<td>Flammability limit - lower (%)</td>
<td>Not available.</td>
</tr>
<tr>
<td>Flammability limit - upper (%)</td>
<td>Not available.</td>
</tr>
<tr>
<td><strong>Vapour pressure</strong></td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Vapour density</td>
<td>Not available.</td>
</tr>
<tr>
<td>Relative density</td>
<td>1.04 - 1.09</td>
</tr>
<tr>
<td>Solubility(ies)</td>
<td>None.</td>
</tr>
<tr>
<td>Partition coefficient (n-octanol/water)</td>
<td>No data available.</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>Not available.</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>Not available.</td>
</tr>
<tr>
<td>Viscosity</td>
<td>Not available.</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>Not available.</td>
</tr>
<tr>
<td>Oxidising properties</td>
<td>Not available.</td>
</tr>
</tbody>
</table>

#### 9.2. Other information

- No relevant additional information available.

### SECTION 10: Stability and reactivity

#### 10.1. Reactivity

- The product is stable and non reactive under normal conditions of use, storage and transport.

#### 10.2. Chemical stability

- Material is stable under normal conditions.

#### 10.3. Possibility of hazardous reactions

- No dangerous reaction known under conditions of normal use.

#### 10.4. Conditions to avoid

- Contact with incompatible materials. Heat, sparks, flames, elevated temperatures.

#### 10.5. Incompatible materials

- Strong oxidising agents. Nitric acid.

#### 10.6. Hazardous decomposition products

- Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapours.

### SECTION 11: Toxicological information

#### General information

- Occupational exposure to the substance or mixture may cause adverse effects.

#### Information on likely routes of exposure

- **Inhalation**: Under normal conditions of intended use, this material is not expected to be an inhalation hazard. Inhalation of dusts may cause respiratory irritation.
Skin contact May cause mild skin irritation.
Eye contact May cause eye irritation on direct contact.
Ingestion May cause discomfort if swallowed.
Symptoms Dusts may irritate the respiratory tract, skin and eyes.

11.1. Information on toxicological effects

Acute toxicity May cause discomfort if swallowed.
Skin corrosion/irritation Prolonged skin contact may cause temporary irritation.
Serious eye damage/eye irritation May cause eye irritation on direct contact.
Respiratory sensitisation Not classified.
Skin sensitisation Not classified.
Germ cell mutagenicity Not classified.
Carcinogenicity Not classified.
Reproductive toxicity Not classified.
Specific target organ toxicity - single exposure Not classified.
Specific target organ toxicity - repeated exposure Not classified.
Aspiration hazard Not classified.
Mixture versus substance information Not available.
Other information Not available.

SECTION 12: Ecological information

12.1. Toxicity The product components are not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

12.2. Persistence and degradability No data available.

12.3. Bioaccumulative potential No data available.

12.4. Mobility in soil No data available.

12.5. Results of PBT and vPvB assessment Not a PBT or vPvB substance or mixture.

12.6. Other adverse effects No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Residual waste Dispose of in accordance with local regulations.
Contaminated packaging Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.
EU waste code Waste codes should be assigned by the user based on the application for which the product was used.
Disposal methods/information Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Dispose of contents/container in accordance with local/regional/national/international regulations.

SECTION 14: Transport information

ADR 14.1. - 14.6.: Not regulated as dangerous goods.
RID 14.1. - 14.6.: Not regulated as dangerous goods.
ADN
14.1. - 14.6.: Not regulated as dangerous goods.

IATA
14.1. - 14.6.: Not regulated as dangerous goods.

IMDG
14.1. - 14.6.: Not regulated as dangerous goods.

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code
Not available.

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

EU regulations
Regulation (EC) No. 1005/2009 on substances that deplete the ozone layer, Annex I and II, as amended
Not listed.
Not listed.
Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 1 as amended
Not listed.
Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 2 as amended
Not listed.
Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 3 as amended
Not listed.
Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex V as amended
Not listed.
Not listed.
Regulation (EC) No. 1907/2006, REACH Article 59(10) Candidate List as currently published by ECHA
Not listed.

Authorisations
Regulation (EC) No. 1907/2006, REACH Annex XIV Substances subject to authorisation, as amended
Not listed.

Restrictions on use
Regulation (EC) No. 1907/2006, REACH Annex XVII Substances subject to restriction on marketing and use as amended
Not listed.
Directive 2004/37/EC: on the protection of workers from the risks related to exposure to carcinogens and mutagens at work, as amended.
Not listed.

Other EU regulations
Directive 2012/18/EU on major accident hazards involving dangerous substances, as amended
Not listed.

Other regulations
This Safety Data Sheet complies with the requirements of Regulation (EC) No 1907/2006. The product is classified and labelled in accordance with Regulation (EC) 1272/2008 (CLP Regulation) as amended and respective national laws implementing EC directives.

National regulations
Follow national regulation for work with chemical agents.

15.2. Chemical safety assessment
No Chemical Safety Assessment has been carried out.

SECTION 16: Other information

List of abbreviations
DNEL: Derived No-Effect Level.
PNEC: Predicted No-Effect Concentration. PBT: Persistent, bioaccumulative and toxic. vPvB: Very Persistent and very Bioaccumulative.

References
Not available.

Information on evaluation method leading to the classification of mixture
The classification for health and environmental hazards is derived by a combination of calculation methods and test data, if available. The classification for health and environmental hazards is derived by a combination of calculation methods and test data, if available.
Full text of any H-statements not written out in full under Sections 2 to 15

None.

Training information
Follow training instructions when handling this material.

Further information
This mixture is exempted from Registration according to the provisions of Title II and VI and Article 2(9) of REACH.

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.