Section 1. Identification

Product identifier : Polystyrene - low molecular weight


Chemical identity : Styrene, oligomers

Material uses : Reagents and Standards for Analytical Chemistry Laboratory Use

Bottle
PL2012-0001 PS nominal Mp 370 1g
PL2012-0005 PS nominal Mp 370 5g
PL2012-0010 PS nominal Mp 370 10g
PL2012-1001 PS nominal Mp 162 1g
PL2012-1005 PS nominal Mp 162 5g
PL2012-1010 PS nominal Mp 162 10g
PL2012-2001 PS nominal Mp 580 1g
PL2012-2005 PS nominal Mp 580 5g
PL2012-2010 PS nominal Mp 580 10g
PL2012-3001 PS nominal Mp 1k 1g
PL2012-3005 PS nominal Mp 1k 5g
PL2012-3010 PS nominal Mp 1k 10g
PL2012-4001 PS nominal Mp 1.3k 1g
PL2012-4005 PS nominal Mp 1.3k 5g
PL2012-4010 PS nominal Mp 1.3k 10g

Supplier/Manufacturer : Agilent Technologies Australia Pty Ltd
679 Springvale Road
Mulgrave
Victoria 3170, Australia
1800 802 402

Emergency telephone number (with hours of operation) : CHEMTREC®: +(61)-290372994

Section 2. Hazard(s) identification

Classification of the substance or mixture
Not classified.

GHS label elements
Signal word : No signal word.

Hazard statements : No known significant effects or critical hazards.

Precautionary statements
Prevention : Not applicable.
Response : Not applicable.
Storage : Not applicable.
Disposal : Not applicable.

Supplemental label elements
Additional warning phrases : Not applicable.
Section 2. Hazard(s) identification

Other hazards which do not result in classification : None known.

Section 3. Composition and ingredient information

<table>
<thead>
<tr>
<th>Substance/mixture</th>
<th>CAS number/other identifiers</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Styrene, oligomers</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td>9003-53-6</td>
</tr>
</tbody>
</table>

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Section 4. First aid measures

**Description of necessary first aid measures**

**Eye contact** : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.

**Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.

**Skin contact** : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.

**Ingestion** : Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.

**Most important symptoms/effects, acute and delayed**

**Potential acute health effects**

- **Eye contact** : No known significant effects or critical hazards.
- **Inhalation** : No known significant effects or critical hazards.
- **Skin contact** : No known significant effects or critical hazards.
- **Ingestion** : No known significant effects or critical hazards.

**Over-exposure signs/symptoms**

- **Eye contact** : No specific data.
- **Inhalation** : No specific data.
- **Skin contact** : No specific data.
- **Ingestion** : No specific data.

**Indication of immediate medical attention and special treatment needed, if necessary**

- **Notes to physician** : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
- **Specific treatments** : No specific treatment.
- **Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training.

See toxicological information (Section 11)
Section 5. Firefighting measures

**Extinguishing media**

<table>
<thead>
<tr>
<th>Suitable extinguishing media</th>
<th>Use an extinguishing agent suitable for the surrounding fire.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unsuitable extinguishing media</td>
<td>None known.</td>
</tr>
</tbody>
</table>

**Specific hazards arising from the chemical**

<table>
<thead>
<tr>
<th>Hazardous thermal decomposition products</th>
<th>Decomposition products may include the following materials: carbon dioxide carbon monoxide</th>
</tr>
</thead>
</table>

**Special protective actions for fire-fighters**

Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

**Special protective equipment for fire-fighters**

Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

**Personal precautions, protective equipment and emergency procedures**

**For non-emergency personnel**

No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Put on appropriate personal protective equipment.

**For emergency responders**

If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

**Environmental precautions**

Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

**Methods and material for containment and cleaning up**

**Methods for cleaning up**

Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Section 7. Handling and storage

**Precautions for safe handling**

**Protective measures**

Put on appropriate personal protective equipment (see Section 8).

**Advice on general occupational hygiene**

Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

**Conditions for safe storage, including any incompatibilities**

Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.
Section 8. Exposure controls and personal protection

### Control parameters

#### Occupational exposure limits

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>Exposure limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Styrene, oligomers</td>
<td>ACGIH TLV (United States).</td>
</tr>
<tr>
<td></td>
<td>TWA: 10 mg/m³ Form: Inhalable</td>
</tr>
<tr>
<td></td>
<td>TWA: 3 mg/m³ Form: Respirable</td>
</tr>
</tbody>
</table>

### Appropriate engineering controls

- Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

### Environmental exposure controls

- Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

### Individual protection measures

#### Hygiene measures

- Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period.
- Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

#### Eye/face protection

- Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

#### Skin protection

#### Hand protection

- Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

#### Body protection

- Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

#### Other skin protection

- Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

#### Respiratory protection

- Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Section 9. Physical and chemical properties

### Appearance

<table>
<thead>
<tr>
<th>Physical state</th>
<th>Liquid. [Viscous liquid.]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Colour</td>
<td>White</td>
</tr>
<tr>
<td>Odour</td>
<td>Odourless</td>
</tr>
<tr>
<td>Odour threshold</td>
<td>Not available.</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>pH</td>
<td>Not available.</td>
</tr>
<tr>
<td>Melting point</td>
<td>240°C (464°F)</td>
</tr>
<tr>
<td>Boiling point</td>
<td>Not available.</td>
</tr>
<tr>
<td>Flash point</td>
<td>Closed cup: 345 to 360°C (653 to 680°F)</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>Not available.</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>Not applicable.</td>
</tr>
</tbody>
</table>
Section 9. Physical and chemical properties

- Lower and upper explosive (flammable) limits: Not available.
- Vapour pressure: Not available.
- Vapour density: Not available.
- Relative density: 1.05 [Water = 1]
- Density: 1.05 g/cm³ [20°C (68°F)]
- Solubility: Insoluble in the following materials: cold water and hot water.
- Partition coefficient: n-octanol/water: Not available.
- Auto-ignition temperature: 427°C (800.6°F)
- Decomposition temperature: Not available.
- Viscosity: Not available.

Section 10. Stability and reactivity

- Reactivity: No specific test data related to reactivity available for this product or its ingredients.
- Chemical stability: The product is stable.
- Possibility of hazardous reactions: Under normal conditions of storage and use, hazardous reactions will not occur.
- Conditions to avoid: No specific data.
- Incompatible materials: May react or be incompatible with oxidising materials.
- Hazardous decomposition products: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

- Acute toxicity: Not available.
- Irritation/Corrosion: Not available.
- Sensitisation: Not available.
- Mutagenicity: Conclusion/Summary: Not available.
- Carcinogenicity: Conclusion/Summary: Not available.
- Reproductive toxicity: Conclusion/Summary: Impurity: May cause damage to organs.
- Teratogenicity: Conclusion/Summary: Not available.
- Specific target organ toxicity (single exposure): Not available.
- Specific target organ toxicity (repeated exposure): Not available.
Section 11. Toxicological information

Aspiration hazard
Not available.

Information on likely routes of exposure

Potential acute health effects

- Eye contact: No known significant effects or critical hazards.
- Inhalation: No known significant effects or critical hazards.
- Skin contact: No known significant effects or critical hazards.
- Ingestion: No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

- Eye contact: No specific data.
- Inhalation: No specific data.
- Skin contact: No specific data.
- Ingestion: No specific data.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Short term exposure

- Potential immediate effects: Not available.
- Potential delayed effects: Not available.

Long term exposure

- Potential immediate effects: Not available.
- Potential delayed effects: Not available.

Potential chronic health effects

- General: No known significant effects or critical hazards.
- Carcinogenicity: No known significant effects or critical hazards.
- Mutagenicity: No known significant effects or critical hazards.
- Teratogenicity: No known significant effects or critical hazards.
- Developmental effects: No known significant effects or critical hazards.
- Fertility effects: No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates
N/A

Section 12. Ecological information

Toxicity
Not available.

Persistence and degradability

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Aquatic half-life</th>
<th>Photolysis</th>
<th>Biodegradability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Styrene, oligomers</td>
<td>-</td>
<td>-</td>
<td>Not readily</td>
</tr>
</tbody>
</table>

Date of issue/Date of revision: 19/03/2019
Date of previous issue: 22/03/2017
Version: 2
Section 12. Ecological information

Bioaccumulative potential

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>LogP&lt;sub&gt;ow&lt;/sub&gt;</th>
<th>BCF</th>
<th>Potential</th>
</tr>
</thead>
<tbody>
<tr>
<td>Styrene, oligomers</td>
<td>-</td>
<td>13.5</td>
<td>low</td>
</tr>
</tbody>
</table>

Mobility in soil

| Soil/water partition coefficient (K<sub>OC</sub>) | Not available. |

Other adverse effects

The products of degradation are more toxic than the product itself.

Section 13. Disposal considerations

Disposal methods

The generation of waste should be avoided or minimised wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Avoid dispersal of spill material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

ADG / IMDG / IATA

Not regulated as Dangerous Goods according to the ADG Code.

Special precautions for user

Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Transport in bulk according to Annex II of Marpol and the IBC Code

Not available.

Section 15. Regulatory information

Standard Uniform Schedule of Medicine and Poisons

Not regulated.

Model Work Health and Safety Regulations - Scheduled Substances

No listed substance

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol (Annexes A, B, C, E)

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.
Section 15. Regulatory information

Inventory list

Australia: This material is listed or exempted.
Canada: This material is listed or exempted.
China: This material is listed or exempted.
Europe: This material is listed or exempted.
Japan: Japan inventory (ENCS): This material is listed or exempted.
Japan inventory (ISHL): This material is listed or exempted.
New Zealand: This material is listed or exempted.
Philippines: This material is listed or exempted.
Republic of Korea: This material is listed or exempted.
Taiwan: This material is listed or exempted.
Thailand: Not determined.
Turkey: This material is listed or exempted.
United States: This material is listed or exempted.
Viet Nam: Not determined.

Section 16. Any other relevant information

History

Date of issue/Date of revision: 19/03/2019
Date of previous issue: 22/03/2017
Version: 2

Key to abbreviations:
ADG = Australian Dangerous Goods
ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient
N/A = Not available
SUSMP = Standard Uniform Schedule of Medicine and Poisons
UN = United Nations

Procedure used to derive the classification

<table>
<thead>
<tr>
<th>Classification</th>
<th>Justification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not classified.</td>
<td></td>
</tr>
</tbody>
</table>

References: Not available.

Indicates information that has changed from previously issued version.

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