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

1.1. Product identifier
Product name. : PSI Standard Colored EPS
Product code : PSI 100 through 1000
Other means of identification : Polymeric Beads (expandable, evolving flammable vapor), Colored Expandable Bead, EPS, Expandable Polystyrene, Color Bead, Foam Polystyrene, Styrofoam

1.2. Relevant identified uses of the substance or mixture and uses advised against
Use of the substance/preparation : Manufacturing

1.3. Details of the supplier of the safety data sheet
Polysource, Inc
555 E. Statler Road
Piqua, OH 45356
T 937-778-9500

1.4. Emergency telephone number
Emergency number : Chemtrec 1 800 424 9300

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

GHS-US classification
STOT SE 3 H336
STOT SE 3 H335

2.2. Label elements

GHS-US labelling
Hazard pictograms (GHS-US) :

Signal word (GHS-US) : Warning
Hazard statements (GHS-US) : H335 - May cause respiratory irritation
H336 - May cause drowsiness or dizziness
Precautionary statements (GHS-US) : P261 - Avoid breathing dust/fume/gas/mist/vapors/spray
P271 - Use only outdoors or in a well-ventilated area
P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing
P312 - Call a POISON CENTER/doctor/.../if you feel unwell
P403+P233 - Store in a well-ventilated place. Keep container tightly closed
P405 - Store locked up
P501 - Dispose of contents/container in accordance with local/regional/national/international regulations.
2.3. Other hazards
No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substances
Not applicable

3.2. Mixtures

<table>
<thead>
<tr>
<th>Name</th>
<th>Product identifier</th>
<th>%</th>
<th>GHS-US classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polystyrene</td>
<td>(CAS No.) 9003-53-6</td>
<td>90 - 93</td>
<td>Not classified</td>
</tr>
<tr>
<td>Pentane</td>
<td>(CAS No.) 109-66-0</td>
<td>3.5 - 7</td>
<td>Flam. Liq. 2, H225</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>STOT SE 3, H336</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Asp. Tox. 1, H304</td>
</tr>
<tr>
<td>Isopentane</td>
<td>(CAS No.) 78-78-4</td>
<td>3.5 - 7</td>
<td>Flam. Liq. 1, H224</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>STOT SE 3, H336</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Asp. Tox. 1, H304</td>
</tr>
<tr>
<td>Color Concentrate</td>
<td>Varied</td>
<td>&lt;6</td>
<td>Not classified</td>
</tr>
</tbody>
</table>

SECTION 4: First aid measures

4.1. Description of first aid measures
First-aid measures after inhalation: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.
First-aid measures after skin contact: Remove contaminated shoes or clothes. Wash skin thoroughly with soap and water. If sticky, use waterless hand cleaner first.
First-aid measures after eye contact: Immediately flush eyes with water and continue washing for at least 15 minutes. Obtain medical attention if discomfort persists.
First-aid measures after ingestion: Seek medical attention.

4.2. Most important symptoms and effects, both acute and delayed
No additional information available

4.3. Indication of any immediate medical attention and special treatment needed
No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media
Suitable extinguishing media: Water fog, carbon dioxide, or dry chemical.
Unsuitable extinguishing media: None.

5.2. Special hazards arising from the substance or mixture
Fire hazard: Spill releases flammable vapors.
Explosion hazard: None known.
Reactivity: Stable at ambient temperature and under normal conditions of use.
5.3. Advice for firefighters

Firefighting instructions

Do not enter area without proper protection. Fight fire from a safe distance/protected location. Beads can result in dangerous walking condition on smooth hard surface/interfere with firefighting unless covered over. For large fire, use substantial amount of water as straight stream to ‘dig’ into hot molten mass from outside to open and cool interior/prevent re-ignition. Intermittent fog application will provide surface cooling/protection of firefighters. Produces dense black smoke when burning, obscuring vision.

Protection during firefighting

Firefighters should wear full protective gear.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures

Avoid breathing vapors.

6.1.1. For non-emergency personnel

No additional information available

6.1.2. For emergency responders

No additional information available

6.2. Environmental precautions

None.

6.3. Methods and material for containment and cleaning up

For containment

Isolate spill area and provide ventilation.

Methods for cleaning up

Spill releases flammable vapors. Kill ignition sources/ventilate confined spaces before entering. Creates dangerous hazard on any hard surface. Spread granular cover on walkways or provide open grating flooring (or equivalent). Provide cleanup crew with proper protective equipment. Prevent flow to low areas. Flammable vapors heavier than air can accumulate. On land, vacuum/shovel into suitable disposal containers. Minimize static sparks/avoid flash fire. Recovered solids can release flammable vapors for extended time. Keep container tightly closed when not in use.

6.4. Reference to other sections

No additional information available

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling

Allow 10 minutes after opening original container for excess flammable vapor to dissipate before moving to processing area where heat sources exist. Provide good ventilation in use area to prevent flammable vapor accumulation. All equipment must conform to applicable electrical code. Clean up any spills as soon as possible. Loose beads on hard surfaces can create a slip hazard.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions

Transport/Store only in sealed containers below 27C/80F in well-ventilated areas away from all ignition sources.
7.3. Specific end use(s)
No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

<table>
<thead>
<tr>
<th>Pentane (109-66-0)</th>
<th>USA ACGIH</th>
<th>ACGIH TWA (ppm)</th>
<th>600 ppm</th>
</tr>
</thead>
<tbody>
<tr>
<td>USA IDLH</td>
<td>US IDLH (ppm)</td>
<td></td>
<td>1500 ppm (10% LEL)</td>
</tr>
<tr>
<td>USA NIOSH</td>
<td>NIOSH REL (TWA) (mg/m³)</td>
<td>350 mg/m³</td>
<td></td>
</tr>
<tr>
<td>USA NIOSH</td>
<td>NIOSH REL (TWA) (ppm)</td>
<td>120 ppm</td>
<td></td>
</tr>
<tr>
<td>USA NIOSH</td>
<td>NIOSH REL (ceiling) (mg/m³)</td>
<td>1800 mg/m³</td>
<td></td>
</tr>
<tr>
<td>USA NIOSH</td>
<td>NIOSH REL (ceiling) (ppm)</td>
<td>610 ppm</td>
<td></td>
</tr>
<tr>
<td>USA OSHA</td>
<td>OSHA PEL (TWA) (mg/m³)</td>
<td>2950 mg/m³</td>
<td></td>
</tr>
<tr>
<td>USA OSHA</td>
<td>OSHA PEL (TWA) (ppm)</td>
<td>1000 ppm</td>
<td></td>
</tr>
</tbody>
</table>

| Isopentane (78-78-4) | USA ACGIH | ACGIH TWA (ppm) | 600 ppm |

8.2. Exposure controls

Appropriate engineering controls : Both local exhaust and good general room ventilation must be provided not only to control exposure but also to prevent formation of flammable mixtures.

Hand protection : Wear impervious gloves to minimize skin contact.

Eye protection : Safety glasses.

Skin and body protection : Wear suitable working clothes.

Respiratory protection : If airborne concentrations are above the applicable exposure limits, use NIOSH approved respiratory protection.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Solid

Appearance : Cylindrically or Spherically shaped.

Colour : Various.

Odour : Solvent.

Odour threshold : No data available

pH : No data available

Relative evaporation rate (butylacetate=1) : No data available

Melting point : No data available
## Freezing point
No data available

## Boiling point
No data available

## Flash point
AP -59 °F

## Self ignition temperature
AP 500 °C

## Decomposition temperature
No data available

## Flammability (solid, gas)
No data available

## Vapour pressure
600 PSIA (at 70°F)

## Relative vapour density at 20 °C
No data available

## Relative density
No data available

## Solubility
Negligible.

## Log Pow
No data available

## Log Kow
No data available

## Viscosity, kinematic
No data available

## Viscosity, dynamic
No data available

## Explosive properties
No data available

## Oxidising properties
No data available

## Explosive limits
1.4 - 8.3 vol %

### 9.2. Other information
No additional information available

### SECTION 10: Stability and reactivity

#### 10.1. Reactivity
Stable at ambient temperature and under normal conditions of use.

#### 10.2. Chemical stability
The product is stable at normal handling- and storage conditions.

#### 10.3. Possibility of hazardous reactions
Will not occur.

#### 10.4. Conditions to avoid
Heat, flames, and other ignition sources.

#### 10.5. Incompatible materials
Strong oxidizing agents.
10.6. Hazardous decomposition products

Oxides of carbon.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity: Not classified

<table>
<thead>
<tr>
<th>Pentane (109-66-0)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>LD50 oral rat</td>
<td>&gt; 2000 mg/kg</td>
</tr>
<tr>
<td>LD50 dermal rabbit</td>
<td>3000 mg/kg</td>
</tr>
<tr>
<td>LC50 inhalation rat (mg/l)</td>
<td>364 g/m³ (Exposure time: 4 h)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Isopentane (78-78-4)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>LC50 inhalation rat (mg/l)</td>
<td>280000 mg/m³ (Exposure time: 4 h)</td>
</tr>
</tbody>
</table>

Skin corrosion/irritation: Not classified
Serious eye damage/irritation: Not classified
Respiratory or skin sensitisation: Not classified
Germ cell mutagenicity: Not classified
Carcinogenicity: Not classified

<table>
<thead>
<tr>
<th>Polystyrene (9003-53-6)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>IARC group</td>
<td>3</td>
</tr>
</tbody>
</table>

Reproductive toxicity: Not classified
Specific target organ toxicity (single exposure): May cause drowsiness or dizziness. May cause respiratory irritation.
Specific target organ toxicity (repeated exposure): Not classified
Aspiration hazard: Not classified

SECTION 12: Ecological information

12.1. Toxicity

<table>
<thead>
<tr>
<th>Pentane (109-66-0)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>LC50 fish 1</td>
<td>9.87 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss)</td>
</tr>
<tr>
<td>EC50 Daphnia 1</td>
<td>9.74 mg/l (Exposure time: 48 h - Species: Daphnia magna)</td>
</tr>
<tr>
<td>LC50 fish 2</td>
<td>11.59 mg/l (Exposure time: 96 h - Species: Pimephales promelas)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Isopentane (78-78-4)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>EC50 Daphnia 1</td>
<td>2.3 mg/l (Exposure time: 48 h - Species: Daphnia magna)</td>
</tr>
</tbody>
</table>

12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

<table>
<thead>
<tr>
<th>Pentane (109-66-0)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Log Pow</td>
<td>3.39</td>
</tr>
</tbody>
</table>
12.4. Mobility in soil
No additional information available

12.5. Other adverse effects
No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods
Waste disposal recommendations: Dispose of contents/container in accordance with local/regional/national/international regulations.

SECTION 14: Transport information

In accordance with DOT / ADR / RID / ADNR / IMDG / ICAO / IATA

14.1. UN number
UN 2211

14.2. UN proper shipping name
DOT Proper Shipping Name: Polymeric beads, expandable evolving flammable vapor

Department of Transportation (DOT): 9 - Class 9 - Miscellaneous hazardous material 49 CFR 173.140

Hazard Classes

Hazard labels (DOT): 9 - Miscellaneous dangerous compounds

Packing group (DOT): III - Minor Danger
DOT Special Provisions (49 CFR 172.102): 32 - Polymeric beads and molding compounds may be made from polystyrene, poly(methyl methacrylate) or other polymeric material.  
IB8 - Authorized IBCs: Metal (11A, 11B, 11N, 21A, 21B, 21N, 31A, 31B and 31N); Rigid plastics (11H1, 11H2, 21H1, 21H2, 31H1 and 31H2); Composite (11HZ1, 11HZ2, 21HZ1, 21HZ2, 31HZ1 and 31HZ2); Fiberboard (11G); Wooden (11C, 11D and 11F); Flexible (13H1, 13H2, 13H3, 13H4, 13H5, 13L1, 13L2, 13L3, 13L4, 13M1 or 13M2).  
IP3 - Flexible IBCs must be silt-proof and water-resistant or must be fitted with a silt-proof and water-resistant liner.  
IP7 - For UN identification numbers 1327, 1363, 1364, 1365, 1386, 1841, 2211, 2217, 2793 and 3314, IBCs are not required to meet the IBC performance tests specified in part 178, subpart N of this subchapter.  
T1 - 1.5 178.274(d)(2) Normal............. 178.275(d)(2)  
TP33 - The portable tank instruction assigned for this substance applies for granular and powdered solids and for solids which are filled and discharged at temperatures above their melting point which are cooled and transported as a solid mass. Solid substances transported or offered for transport above their melting point are authorized for transportation in portable tanks conforming to the provisions of portable tank instruction T4 for solid substances of packing group III or T7 for solid substances of packing group II, unless a tank with more stringent requirements for minimum shell thickness, maximum allowable working pressure, pressure-relief devices or bottom outlets are assigned in which case the more stringent tank instruction and special provisions shall apply. Filling limits must be in accordance with portable tank special provision TP3. Solids meeting the definition of an elevated temperature material must be transported in accordance with the applicable requirements of this subchapter.

DOT Packaging Exceptions (49 CFR 173.xxx): 155  
DOT Packaging Non Bulk (49 CFR 173.xxx): 221  
DOT Packaging Bulk (49 CFR 173.xxx): 221  

14.3 Additional information
Other information: No supplementary information available.

Overland transport
No additional information available

Transport by sea
DOT Vessel Stowage Location: E - The material may be stowed “on deck” or “under deck” on a cargo vessel and on a passenger vessel carrying a number of passengers limited to not more than the larger of 25 passengers, or one passenger per each 3 m of overall vessel length, but is prohibited from carriage on passenger vessels in which the limiting number of passengers is exceeded.

DOT Vessel Stowage Other: 19 - Protect from sparks and open flames, 21 - Segregation same as for flammable liquids, 25 - Shade from radiant heat, 85 - Under deck stowage must be in mechanically ventilated space, 87 - Stow “separated from” Class 1 (explosives) except Division 14
**PSI Standard Colored EPS**

**Safety Data Sheet**

**Air transport**

DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27) : 100 kg

DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75) : 200 kg

**SECTION 15: Regulatory information**

15.1. US Federal regulations

<table>
<thead>
<tr>
<th>Polystyrene (9003-53-6)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Listed on the United States TSCA (Toxic Substances Control Act) inventory</td>
</tr>
<tr>
<td>Not subject to reporting under CERCLA/SARA Sections 301, 302, 303, 304, 311, 312</td>
</tr>
<tr>
<td>Mixture contains components that are in excess of the de minimis concentration that make it subject to reporting requirements of CERCLA/SARA Section 313 (under chemical category: N982)</td>
</tr>
<tr>
<td>Not regulated by the Clean Air Act 112</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Pentane (109-66-0)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Listed on the United States TSCA (Toxic Substances Control Act) inventory</td>
</tr>
<tr>
<td>Not subject to reporting under CERCLA/SARA Sections 301, 302, 303, 304, 313</td>
</tr>
<tr>
<td>CERCLA/SARA Section 311, 312 hazard categories: Fire</td>
</tr>
<tr>
<td>Regulated by the Clean Air Act 112(r)</td>
</tr>
</tbody>
</table>

EPA TSCA Regulatory Flag: T - T - indicates a substance that is the subject of a Section 4 test rule under TSCA.

<table>
<thead>
<tr>
<th>Isopentane (78-78-4)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Listed on the United States TSCA (Toxic Substances Control Act) inventory</td>
</tr>
<tr>
<td>Not subject to reporting under CERCLA/SARA Sections 301, 302, 303, 304, 313</td>
</tr>
<tr>
<td>CERCLA/SARA Section 311, 312 hazard categories: Fire</td>
</tr>
<tr>
<td>Regulated by the Clean Air Act 112(r)</td>
</tr>
</tbody>
</table>

15.2. US State regulations

<table>
<thead>
<tr>
<th>Pentane (109-66-0)</th>
</tr>
</thead>
<tbody>
<tr>
<td>U.S. - Massachusetts - Right To Know List</td>
</tr>
<tr>
<td>U.S. - New Jersey - Right to Know Hazardous Substance List</td>
</tr>
<tr>
<td>U.S. - Pennsylvania - RTK (Right to Know) List</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Isopentane (78-78-4)</th>
</tr>
</thead>
<tbody>
<tr>
<td>U.S. - Massachusetts - Right To Know List</td>
</tr>
<tr>
<td>U.S. - New Jersey - Right to Know Hazardous Substance List</td>
</tr>
<tr>
<td>U.S. - Pennsylvania - RTK (Right to Know) List</td>
</tr>
</tbody>
</table>

**SECTION 16: Other information**

Full text of R-, H- and EUH-phrases:

<table>
<thead>
<tr>
<th>Asp. Tox. 1</th>
<th>Aspiration hazard Category 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flam. Liqu. 1</td>
<td>Flammable liquids Category 1</td>
</tr>
<tr>
<td>Flam. Liqu. 2</td>
<td>Flammable liquids Category 2</td>
</tr>
</tbody>
</table>
**PSI Standard Colored EPS**  
**Safety Data Sheet**

| STOT SE 3 | Specific target organ toxicity (single exposure)  
Category 3 |
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>H224</td>
<td>Extremely flammable liquid and vapour</td>
</tr>
<tr>
<td>H225</td>
<td>Highly flammable liquid and vapour</td>
</tr>
<tr>
<td>H304</td>
<td>May be fatal if swallowed and enters airways</td>
</tr>
<tr>
<td>H336</td>
<td>May cause drowsiness or dizziness</td>
</tr>
</tbody>
</table>

*This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.*