MATERIA L SAFETY DATA SHEET

Product name FR-122P
Product id 1101P
Revision date 18/12/2012
Supersedes 04/11/2012

1. Identification of the substance & the company

Chemical name Brominated styrene-butadiene copolymer
Chemical formula Not applicable, this product is a polymer
Type of product and use Flame retardant
Supplier ICL-IP America Inc
622 Emerson Road - Suite 500
St Louis, Missouri 63141, USA
Tel:(314)983-7884   Fax:(314)983-7607

Emergency Telephone Chemtrec (800)424-9300
Medical: PROSAR 1-888-875-1685 (24HRS)

2. Hazards identification

Emergency Overview White to off-white granules which are not hazardous

3. Composition / information on ingredients

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS No.</th>
<th>Weight %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Benzene, ethenyl-, polymer with 1,3-butadiene, brominated</td>
<td>1195978-93-8</td>
<td>100</td>
</tr>
</tbody>
</table>

4. First-aid measures

Eye contact Holding the eyelids apart, flush eyes promptly with copious flowing water for at least 20 minutes. Get medical attention immediately.

Skin contact Remove contaminated clothing. Wash skin thoroughly with mild soap and plenty of water for at least 15 minutes. Wash clothing before re-use. Get medical attention if irritation occurs.

Inhalation In case of dust inhalation or breathing fumes released from heated material, remove person to fresh air. Keep him quiet and warm. Apply artificial respiration if necessary and get medical attention immediately.
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**Ingestion**
If swallowed, wash mouth thoroughly with plenty of water. Get medical attention immediately.

**NOTE**: Never give an unconscious person anything to drink.

**Notes to the physician**
Treat symptomatically and supportively  
No specific antidote.

**5. Fire - fighting measures**

**Suitable extinguishing media**
Material is not combustible. Use extinguishing media appropriate to surrounding fire conditions.

**Fire fighting procedure**
Cool containers with water spray. In closed areas, provide fire-fighters with self-contained breathing apparatus in positive pressure mode.

**Unusual fire and explosion hazards**
FR-122P is capable of producing an explosive atmosphere when dispersed in the form of a dust cloud at elevated temperatures only (>110°C). At ambient temperature the material was found to be non-flammable. Only very high energy ignition sources may be capable of igniting the powder. When heated to decomposition, may release poisonous fumes of CO and CO2.

**6. Accidental release measures**

**Personal precautions**
Wear appropriate safety clothing and eye/face protection (see Section 8).

**Methods for cleaning up**
Shovel into intact packaging and hold for waste disposal or possible re-use. Avoid raising dust. Ventilate area and wash spill site after material pickup is complete.

**Environmental precautions**
Prevent product from entering drains, ditches and rivers.

**7. Handling and storage**

**Handling**
Avoid bodily contact. Keep containers tightly closed.

**Storage**
Store away from incompatible materials (see "materials to avoid").

**8. Exposure controls / personal protection**

**Exposure Limits**

<table>
<thead>
<tr>
<th>Components</th>
<th>ACGIH-TLV Data</th>
<th>OSHA (PEL) Data</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
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Ventilation requirements
Ventilation must be sufficient to maintain TLV-TWA below 10 mg/m³  (ACGIH recommendation for Particulates (Insoluble) Not Otherwise Specified (PNOS)).

Personal protective equipment:
- Respiratory protection: Approved respirator
- Hand protection: Protective gloves
- Eye protection: Chemical safety goggles
- Skin and body protection: Body covering clothes and boots

Hygiene measures
Wash hands thoroughly after handling and before eating or smoking. Do not eat, smoke or drink where material is handled, processed or stored. Safety shower and eye bath should be provided.

9. Physical and chemical properties

Appearance: White to off-white free flowing granulate
Boiling point/range: Not available
Melting point/range: Not available
Flash point: None
Flammable/Explosion limits: Product is not explosive. However, formation of explosive air/vapour mixtures are possible above 110°C
Vapour pressure: Not available
Evaporation rate (ether=1): Not available
Vapor density: Not available
Solubility:
- Solubility in water: Insoluble
Specific gravity: Not available
Decomposition temperature: >250°C

10. Stability and reactivity

Stability: Stable under normal conditions
Materials to avoid: Strong oxidants.
Conditions to avoid: High temperatures
Hazardous decomposition products: Carbon dioxide and carbon monoxide
Hazardous polymerization: Will not occur
11. Toxicological information

Acute toxicity:
- Rat oral LD50 >2000 mg/kg
- Eye irritation (rabbit) Not irritant
- Dermal irritation (rabbit) Not irritant

Dermal sensitization Not a sensitizer.

Sub-acute toxicity:
- NOEL >1000 ppm (4 weeks oral rat)

Mutagenicity Not mutagenic in the Salmonella typhimurium reverse mutation assay and in the Escherichia coli reverse mutation assay.

Genotoxicity Not clastogenic in chromosome aberration test with rat lymphocytes.

Carcinogenicity Not included in NTP 12th Report on Carcinogens
Not classified by IARC

12. Ecological information

Aquatic toxicity :
- LC50, Daphnia magna >1000 mg/L

Biodegradation Not biodegradable

13. Disposal considerations

Waste disposal Observe all federal, state and local environmental regulations when disposing of this material

14. Transportation information

DOT Not regulated
IMDG Not regulated
ICAO/IATA Not regulated
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15. Regulatory information

USA        Reported in the EPA TSCA Inventory.
Canada     Listed in DSL
EU         The monomers of the polymer are reported in EINECS.
Japan      Listed in ENCS
Australia  Not listed in AICS
New Zealand Inventory  Not listed

CHINA
- China inventory  Not listed
Korea       Not listed
Philippines Not listed

16. Other information

This data sheet contains changes from the previous version in section(s) 15

Health, Safety & Environment Policy
We will strive to ensure that our operations and products meet the needs of the present global community without compromising the ability of future generations to meet their needs. We accept that the success of our business is dependent on the supply of products and services that will benefit society whilst ensuring human safety and protection of the environment and natural resources. Within the framework of our commitment to the Responsible Care program, we will provide a healthy and safe work environment for employees and will responsibly manage our products at all stages of their life cycle in order to protect human health and the environment whilst maintaining high production standards of operation.

TO MEET THIS COMMITMENT WE WILL: Comply with or exceed applicable national and international regulatory requirements and other requirements to which we subscribe. Communicate openly and actively encourage dialogue with employees, customers and community concerning our products and operations. Implement documented management systems consistent with and for promotion of the Responsible Care ethics. Develop and supply products that can be manufactured, transported, used and disposed of safely whilst best meeting the needs of our customers. Regularly assess, continually improve and responsibly manage health, safety and environmental risks associated with products and processes throughout their life-cycles. Share knowledge and expertise with others and seek to learn from and incorporate improved practices into our own operations.
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End of safety data sheet