

MATERIAL SAFETY DATA SHEET

Softlon® FR-ND

Introduction

This Safety Data Sheet contains the following information and advice.

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1. Identification of:

- 1.1 Product** Softlon® FR-ND
Softlon® IF-FR-ND
Softlon® NF-FR-ND
Softlon® OPC-FR-ND
- 1.2 Company** Thai Sekisui Foam
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2. Product Description

Softlon® FR-ND is based on physically crosslinked polyolefin foam containing flame retardant additives and is produced in a continuous web process. Softlon® FR-ND is based on PE homo and copolymers and foamed with an organic foaming agent by chemical decomposition. The two following gases are mainly produced:

- Nitrogen (N₂)
- Carbon dioxide (CO₂)

Both are known as non-depleting substances to the ozone layer.

3. Hazards Identification

The formulations used in Softlon® FR-ND will not prevent the foam from burning at high temperature, but will show improved fire retardant properties in terms of reduction of fire ignition and fire spread in well-defined burn tests such as UL94. Subject to reasonable care and cleanliness there are no obvious problems associated with the handling of polyolefin foams.

4. First Aid Measures

After contact with skin: No special measures with usage at normal temperatures.
 After contact with eyes: Flush thoroughly with flowing water.
 After inhalation: No special measures with usage at normal temperatures.
 After swallowing: If ingested, induce vomiting by drinking a large volume of water or salt water. Seek medical attention.

In case of fire:

If smoke gases are inhaled, which contain mainly carbon dioxide (CO₂) and carbon monoxide (CO), fresh air and possible artificial respiration (seek medical attention immediately) are the recommended measures.

If body skin is burned through contact with molten material, cool burned parts with water but do not remove from the skin. If skin burn degree 2 or 3 is reached, seek medical attention immediately.

5. Fire Fighting Measures

Fire extinguishing mediums are:

- Dry chemical
- Water spray
- Extinguishing foam
- CO₂ extinguisher

Use respirator/oxygen masks in enclosed areas. Avoid dense smoke and do not inhale the smoke gases from combustion.

Use safety glasses and protect skin/body with protective clothing.

6. Accidental Release Measures

Not applicable.

7. Handling and Storage

Handling:

Practice reasonable care as a normal safety precaution. The working environment should be kept clean and free of dust.

Fabrication areas should be well ventilated to carry away fumes, vapours and dust, especially in processes, e.g. lamination (heat and coating), welding, vacuum forming, hot press moulding; operators should be assured of a supply of fresh air.

Storage:

Practice reasonable care and cleanliness; provide adequate distance between stacks as a safety precaution. Store inside with adequate ventilation and keep dry, away from direct sunlight. Keep in original packing until required. Do not expose to any source of flame, ignition or heat.

8. Exposure Controls/Personal Protection

8.1 Non-Fabrication Applications

Breathing protection:

No special requirements.

Hand protection:

Use safety gloves when cutting product with a knife.

Eye protection:

No special requirements.

Body protection:

No special requirements.

8.2 Fabrication Applications

Breathing protection:

In special fabrication areas that are not well ventilated, use special personal breathing respirator/mask or filter in order to protect from fumes, vapours and dust.

Hand protection:

When working in fabrication areas utilising heat processes, wear gloves (cotton wool or leather) to prevent possible thermal injury from molten foam.

Eye protection:

When working in fabrication areas utilising heat processes, wear safety glasses or goggles to prevent possible thermal injury from molten foam.

Body protection:

When working in fabrication areas utilising heat processes, minimise skin exposure by wearing long sleeved clothing, long leggings and shoes to prevent possible thermal injury from molten foam.

9. Physical and Chemical Properties

Appearance:

Semi rigid closed cell, physically crosslinked polyolefin foam.

Odour:

Odourless

Softening range:

≥100 – 130°C

Autoflammability:

≥300°C

Thermal decomposition:

>160 – 180°C

Explosive properties:

None

Solubility in water:

Insoluble

organic solvents:

Insoluble, partly soluble, swelling;
depending on solvent type

Electrical surface resistance:

≥10¹⁸ Ω.cm

10. Stability and Reactivity

Avoid:

Any temperature (over period >10 minutes)

>160 – 180°C

Any contact with strong oxidising chemicals

11. Toxicological Information

Toxicologically harmless:

Physically crosslinked polyolefin foams are among the most inert polymer foams and constitute no hazard in terms of normal handling and skin contact. Softlon® FR-ND formulations contain FR (Flame Retardant) additives based on organic compounds, which may irritate the skin of sensitive persons.

12. Ecological Information

Environmentally harmless:

- Insoluble in water.
- Insoluble in most solvents.

- Free of heavy metals and plasticisers.
- Degradable only by prolonged UV exposure.

Ozone layer depleting substances:

Softlon® FR-ND does not contain and is not produced with any of the substances mentioned in the “Montreal Protocol” of ozone depleting substances and in the corresponding EC Regulation 2009/1005:

- Chlorofluorocarbons (CFCs)
- Hydrochlorofluorocarbons (HCFCs)
- Carbon Tetrachloride
- 1,1,1-Trichloroethane
- Methyl Bromide
- Hydrobromofluorocarbons (HBFCs)

13. Recycling & Disposal Considerations

Re-use:

Remnant material may be reused directly, e.g:

- Cushion packaging material

Recycling:

Ask our Sales Engineers about product specific recycling possibilities.

Disposal:

When disposing of any waste, observe all applicable national and local regulations.

Softlon® FR-ND may be disposed of by:

- Landfill
Physically crosslinked polyolefin foam is inert and does not degrade, it forms a permanent soil base and releases no gases or chemicals known to pollute water resources.
- Incineration
Incinerate using properly controlled municipal or industrial incineration systems. Plastic materials, such as physically crosslinked polyolefin foam, have high heat values and should only be incinerated in units designed to handle high combustion heat.

14. Transport information

No restrictions and non-hazardous material in relation to transportation regulations.

15. Regulatory information

No regulations apply in relation to classification, packaging and identification, also applicable to health and environmental care.

16. Other information

This information is based on our current level of knowledge and relates to the product in the state in which it is delivered. It is intended to describe the product from the point of view of safety requirements, and is not intended to guarantee any particular properties.



This information on Sekisui Foam International products is presented to the best of our knowledge. All product data is based on average values and is for guidance only. As these products are subject to constant research and development, we reserve the right to update the contents without notice.



Recommendations as to methods of post fabrication, application and use of Sekisui Foam International products are based on our experience and knowledge of the characteristics of our products and are given in good faith. As producer of the material we have no control over the application of Sekisui Foam International products and no legal responsibility is accepted for such recommendations. In particular, no responsibility is accepted by us for any system in which Sekisui Foam International products are utilised or for any application.



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