Unit 2, 5 Campsie Road
Kirkintilloch
G66 1SL
United Kingdom
Telephone: +44 141 7767900
Fax: +44 141 7766699

Material Safety Data Sheet
Northfoam™ 170

Valid from: 01.06.2009

1. Identification of the substance and of the company.

Substance: Blown polyethylene foam

Company:
North Sea Plastics Ltd
Unit 2, 5 Campsie Road
Kirkintilloch
G66 1SL. United Kingdom
Phone: +44 141 776 7900
Fax: +44 141 776 6699
info@northseaplastics.com
www.northseaplasticsplastics.com

2. Hazards identification

Hazards:

Eye contact: Fine dust from grinding etc may cause irritation, fumes from material heated to more that 160°C may cause irritation.

Skin contact: Material is unlikely to cause Irritation, but if in contact with hot material thermal burn may occur.

Inhalation: If heated to more than 160°C the material may give off fumes which could cause irritation to the respiratory tract.

Ingestion: Inert material: regarded as harmless by ingestion.

3. First aid measures

In case of eye contact: Any dusty material entering the eye should be flushed out with plenty of water. If irritation by

First aid measures Cont:-

fumes - move person away from source, rinse eyes with plenty of water, get medical attention.

In case of skin contact: Any hot or molten material on skin should be Cooled down as quickly as possible by means of cold water; do not try top remove the material from the skin. Thermal burn requires immediate medical attention.

In case of inhalation: When fumes of hot material have been inhaled: move person to fresh air as quickly as possible, rest person in half upright position, loosen clothing, keep warm. In case of respiratory problem move person to first aid, get medical attention.

4. Fire – fighting measures

Suitable extinguishing substances: Water spray, CO_2 extinguisher, Extinguishing foam.

Exposure hazards: Avoid dense smoke and do not inhale the smoke gases from the combustion:

a. Carbon dioxide (CO_2)
b. Carbon monoxide (CO)
c. Water vapour (H_2O) a.+b.+ c.:95-97%
d. Ethine (C_2H_2) 2-4%
e. Ethene (C_2H_4) <1%
f. Ammonia (NH_3) <1%

Protection of fire-fighters: Do not approach fire in confined space without positive pressure self-contained breathing apparatus and full bunker gear: bunker coats, helmet with face shield, gloves, rubber boots.

5. Accidental release measures Not applicable

6. Handling and storage

Handling requirements: Practice reasonable care as normal safety precaution. Fabrication areas should be well ventilated to carry away fumes, vapours and dust, especially in processes e.g. cutting, skiving, lamination (heat coating), welding, vacuum forming and hot pressmoulding. Operators should be assured of an adequate supply of fresh air, especially when handling

Handling and storage cont: freshly produced Northfoam because of the release of traces of smell-intensive ammonia and acetophenon. The working environment should be kept clean and free of dust.

To avoid electrostatic discharges during fabrication/transformation process, install grounding or ionising devices as a precaution.

Storage: Store only in well ventilated rooms, because of slow release of cell-gas, containing of smell-intensive ammonia and acetophenon. Practice reasonable care and cleanliness; provide adequate distance between stacks of foam as a precaution. Do not expose any source of flame, ignition or heat. Recommended storage is inside due to UV light and heat sensitivity.

7. Exposure controls / personal protection

Breathing protection: Use special personal breathing respirator/mask or filter, in special fabrication areas that are not well ventilated, in order to protect from fumes, vapours and dust, especially in cutting, skiving and heat processes, where cell-gases tend to escape.

Hand protection: Wear gloves (cotton, wool or leather), when working in fabrication areas utilising heat process, to prevent possible thermal injury from hot foam.

Eye protection: Use goggles or face masks, when working in fabrication areas utilising heat processes, to prevent possible contact with hot foam and thermal injury.

Body protection: Wear clothes and shoes, to protect the full Body, especially when working in fabrication areas utilising heat process in order to prevent possible thermal injury.

8. Physical and chemical properties

Appearance

Form: Semi rigid closed cell, chemically crosslinked polyolefin foam, available as a raw bun or skived in sheets.

Colour: Wide range of colours.

Physical and chemical properties cont:

Odour:	Typically for this product odourless (after some storage time). For information on the smell of fresh material see sect 10.
Softening range:	≥ 60-100^{0}C
Autoflammability:	≥ 300^{0}C
Thermal decomposition:	>150-180^{0}C
Explosive properties:	none
Apparent density:	100-200 kg/m³
Solubility in: water	insoluble
Organic solvents	insoluble, partly soluble, swelling, depending on solvent types.
Other properties:	
Electrical surface resistance:	≥ 10^{12}Ω/square

9. Stability and reactivity

Stability:

Avoid:	Temperatures > 150-180^{0}C (over period > 10 mins) Contact with oxidizing chemicals. Electrostatic discharges.
Dangerous decomposition products:	Decomposition gases/vapours in heat fabrication processes. Combustion gases in case of fire.

10. Toxicological information

Northfoams are among the most inert polymer foams and constitute no hazard in terms of normal handling. Fresh Northfoam has a typical smell of Ammonia (MAC value 50 ppm), mixed with a small amount of Acetophenone (no MAC value); concentrations mainly depend on room volume, room temperature, storage time and ventilation system. To keep Ammonia (NH_3) concentration below the MAC value we recommend the following countermeasures: use good ventilation (especially in closed areas), increase storage time (≥ 8 weeks), remove skin from rawbum/skive to sheets as soon as possible and store with a ventilation distance between sheets, increase storage temperature (40^{0}C max).

11. Ecological information

Environmentally harmless: Insoluble in water, no contamination of environment (water, soil).
Insoluble in most solvents.
Degradable only by UV light.

Ozone layer depleting substances: Northfoam 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 EEC Council regulations 594/91, 3952/92, 93/c 232/07:
CFC's, HCFC's, halons, carbon tetrachloride, 1, 1, 1-trichloroethane, methyl bromide, hydrobromofluorcarbons.

12. Disposal instructions

Disposal operations: When disposing of any wastes, observe all applicable national and local regulations.
Northfoam may be disposed of by:
Land fill
Incineration with properly controlled municipal or industrial incineration systems. Northfoam has high heat values and should only be incinerated in units designed to handle high combustion heat.

13. Transportation data

Non dangerous goods according to the transport regulations.

14. Regulations

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

15. Other information

For additional product information, see Northfoam sales specifications.

Legal disclaimer:
The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication.
The information given is designed only as guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification.
The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process unless specified in the text.