

Expanded Polystyrene - COSHH

(Issued under the Health & Safety at Work Act 1974 and the Consumer Protection Act 1987)

PRODUCT

Expanded Polystyrene (EPS) products from BWS Export Packaging Services Ltd. T/A PACS, including floor and wall insulation.

APPLICATIONS

Expanded Polystyrene (EPS) is produced and distributed in a variety of forms for use as an insulating or packaging material. EPS is also used in display and decorative products.

PRECAUTIONS IN USE

Under normal conditions expanded polystyrene (EPS) is chemically stable and biologically inert and whilst the material is non-toxic, it is inflammable and precautions must be taken in storing, working and applying the polystyrene material to ensure protection against ignition, contact with solvent based products and with PVC - e.g. Electrical cable insulation-due to the migration properties plasticisers in PVC.

STORAGE

1. Under manufacturer supplier storage conditions stockpiles must be sited well away and protected from any likely cause of ignition or fire hazard. Care should be taken during storage that expanded polystyrene (EPS) boards are not brought into contact with highly flammable materials such as paints, solvents or petroleum products.
2. Expanded polystyrene boards should be stored under cover to protect them from high winds and rain. Also protect from direct sunlight if exposure is likely to exceed one week.
3. Polystyrene boards must be stored flat and should be raised above ground level if they are likely to come into contact with ground moisture.

HANDLING

Expanded polystyrene (EPS) is a CFC and HCFC free material and is physically and chemically inert. It contains no known biological or physiological irritant.

Expanded polystyrene (EPS) insulation boards tend to be relatively light and can easily be handled on site. Although the boards can be lifted by a single person, it is

recommended that the polystyrene boards are carried by two people (especially in windy conditions) to avoid injury to the carrier or damage to the boards.

CUTTING & SHAPING

Expanded polystyrene (EPS) contains residual amounts of Pentane (<1%wt), Styrene Monomer and Hydrogen Bromide (FRA Grades only).

When forming, cutting or shaping expanded polystyrene (EPS) care must be taken to avoid ignition by burning or hot-wire cutting methods.

During hot-wire cutting, adequate ventilation must be provided to prevent respiratory tract and eye irritation which may be caused by any fumes which may be generated.

Where considerable dust is generated by band sawing or grinding, suitable dust extraction must be provided to ensure exposure does not exceed 10mg/m³/8 hours TWA (occupational exposure limit for total inhalation of dust).

FIRE EXTINGUISHERS SHOULD BE IMMEDIATELY AND READILY ACCESSIBLE
(See fire precautions).

Forming and shaping of expanded polystyrene (EPS) must be undertaken away, and at a safe distance from, the main stockpile to minimise any risk of fire or flame spread.

When cutting Expanded polystyrene (EPS) with automatic saws or knives, static electricity may be generated which could create sparks. Such equipment, therefore, must be correctly earthed.

FIRE PRECAUTIONS

When subjected to a constant heat of 230 °C and above, Expanded polystyrene (EPS) emits inflammable vapours which will easily and quickly ignite Melting point 200 °C and ignition temperature in air 350 °C.

Extreme caution must be exercised when storing, shaping and applying expanded polystyrene (EPS) to ensure total protection from flame and/or fire.

DO NOT SMOKE OR ALLOW NAKED FLAMES WHERE EPS IS STORED.

Expanded polystyrene (EPS) must not be stored near and must be protected from, other inflammable materials such as paints or petroleum products.

CO₂ or Dry Powder fire extinguishers, hose reels, sand and other types of flame and/or fire extinguishing equipment must be readily available and easily retrievable where EPS is stored and/or shaped.

IF IT IS NECESSARY TO SUMMON ASSISTANCE, ADVISE THE FIRE SERVICE THAT EXPANDED POLYSTYRENE IS INVOLVED.

Evacuate the area of all personnel except those fighting the fire.

FUMES

When subjected to fire, Expanded polystyrene (EPS) produces carbon monoxide which is potentially toxic, though the amount is far less than that given off by wood. Hydrogen Bromide will also be released from grades which contain Fire Retardant Additives (FRA).

DISPOSAL

Expanded polystyrene (EPS) products are non-toxic but are not biodegradable and small particles may have physical effects on aquatic and terrestrial organisms.

Scrap polystyrene may be disposed of at suitable landfill sites or by incineration under approved conditions. The Local Authority Waste Disposal Officer should be contacted for advice on the correct method to be used.

Unofficial dumping or incineration of polystyrene waste is not allowed.

RECOMMENDED FIRST AID TREATMENT

Eye contact: Rinse eye with plenty of clean water if dust particles come into contact. If any irritation persists, seek medical advice.

Dust Inhalation: Clear respiratory tract. If recovery does not take place seek medical advice.

Smoke inhalation: In the unlikely event that someone is overcome by fumes, remove the person to an area of clean air. In extreme cases medical attention and oxygen should be administered.

Skin contact: Molten material - immediately flood the affected area and adhering molten polymer with plenty of cold water.

Do not attempt to remove molten or solidified material from the skin. Seek immediate medical attention.

ADVICE & ASSISTANCE

The recommendations made here are for guidance only. Responsibility for correct health & safety precautions in storing, shaping and applying Expanded polystyrene (EPS) rests entirely with the purchaser who must be aware of relevant statutory regulations.