

insulation
that exceeds
expectation



expanded
polystyrene



Our Company



It is our policy to continuously strive for the highest standards in product quality and customer service.

We aim to deliver insulation that exceeds expectation.

Our History

Producing the highest
quality EPS products
for over 30 years.



S and B EPS Ltd [formerly Smith & Blakey Packaging] was formed in 1978 as a converter of expanded polystyrene [EPS] based in Newcastle upon Tyne, cutting various shapes for packaging to a wide selection of end users.

Due to continued growth, a decision was taken in 1997 to make the transition to become a manufacturer of EPS to enable the company to maintain its growth and offer its services to a wider customer base. The process of installing the necessary equipment began in January 1998 and was completed on 16 April with the first blocks being produced.

Accreditation of our EPS to satisfy the National House Building Council and other governing bodies was undertaken by the BBA who assessed the product for fitness for intended use, compliance of the building regulations, etc and details of our accreditation can be found within the brochure. A structured phased plan to establish national outlets for our construction based products was implemented resulting in our products being available throughout the UK via a dedicated network of insulation distributors and builders merchants.



Our accreditations



2002 heralded the completion of our first phase of expansion and the success achieved during this period enabled us to start the implementation of the second stage of the company's planned expansion that was completed in 2004. We continue to maintain S and B EPS as one of the UK's major EPS manufacturers offering innovative products.

In 2003 we gained accreditation to become an ISO 9001/2000 registered company whilst at the same time being able to issue a declaration of conformity to BSEN 13163 entitling us to CE mark our products. In 2004 S and B EPS gained accreditation to supply a new high thermal performance expandable polystyrene to BSEN 13163 called Lambdatherm. In 2008 we obtained certification to CE mark civil engineering products to BSEN 14933:2007 standard.

What is EPS?

Expanded polystyrene is a rigid cellular plastic which is found in a multitude of shapes and applications, in particular as a highly effective insulation material.



EPS Manufacturing Process

Stage 1: Pre-expansion

The raw material is heated in special machines called pre-expanders with steam at a temperature of between approximately 80–100°C.

The density of the material falls from some 630 kg/m³ to values of between 10 and 35 kg/m³.

During this process of pre-expansion the raw materials compact beads turn into cellular plastic beads with small closed cells that hold air in their interior.

Stage 2: Intermediate maturing and stabilisation

On cooling, the recently expanded particles form a vacuum in their interior and this must be compensated for by air diffusion.

This is how the beads achieve greater mechanical elasticity and improve expansion capacity, something very useful in the following transformation stage.

This process is carried out during the materials intermediate maturing in aerated silos. The beads are dried at the same time.

Stage 3: Expansion and final moulding

During this stage the stabilised pre-expanded beads are transported to moulds where they are again subjected to steam so that the beads bind together.

In this way large blocks are obtained [that are later cut into required shapes like boards, panels, cylinders, etc] or products in their final finished shape.

What are the Benefits of EPS?

An effective and economical means of combatting high energy costs and emissions.



Reducing climate change.

1kg of EPS saves 400 litres of oil over a 50 year building lifetime, with the energy used in manufacture being recovered within six months.

Safety in handling the product.

Lightweight, non-toxic and inert.

Unique thermal properties.

EPS is 98% air therefore it is an excellent thermal insulator.

Moisture resistance due to its closed cell structure.

Excellent price/performance ratio.

A black and white photograph of a woman in a white lab coat operating a Lloyd's L1000 universal testing machine. She is looking at the machine's control panel, which features a keypad and a small display screen. The machine is mounted on a stand and has a large vertical column. The background shows a laboratory environment with a brick wall.

Quality Assurance

We ensure that our products are consistently of the highest standard.

2002 heralded many changes within the EPS industry, mainly relating to the construction sector as a result of Part L of the Building Regulations effective from 1 April and the changing from the old BS 3837 standard to the new European BSEN 13163 standard.

In keeping with the new standards, the identification of grades of polystyrene changed from SD/N to EPS 70, HD/N to EPS 100 and EHD/N to EPS 150. Further information relating to these changes can be found throughout the brochure.

One result of the above is the need for ever more stringent quality assurance testing in order to maintain the highest standards in the production process, involving the quality assurance department of S and B EPS undertaking daily testing that enables us to monitor the thermal performance, compressive strength and cross breaking properties of the polystyrene produced.



Our quality standards



These tests are carried out in a dedicated laboratory with all the machinery calibrated and tested by the relevant accreditation bodies

Each polystyrene block manufactured has its own quality assurance reference that follows it through the entire production process, finishing, with its identification being marked on the pack label prior to dispatch.

All S and B EPS construction products have been assessed by the BBA [agrément number 02/3943] for fitness for intended use and copies of our accreditation can be obtained from S and B EPS or downloaded from our website www.sandbeps.com



Distribution

Like our insulation,
our delivery will
exceed expectation.

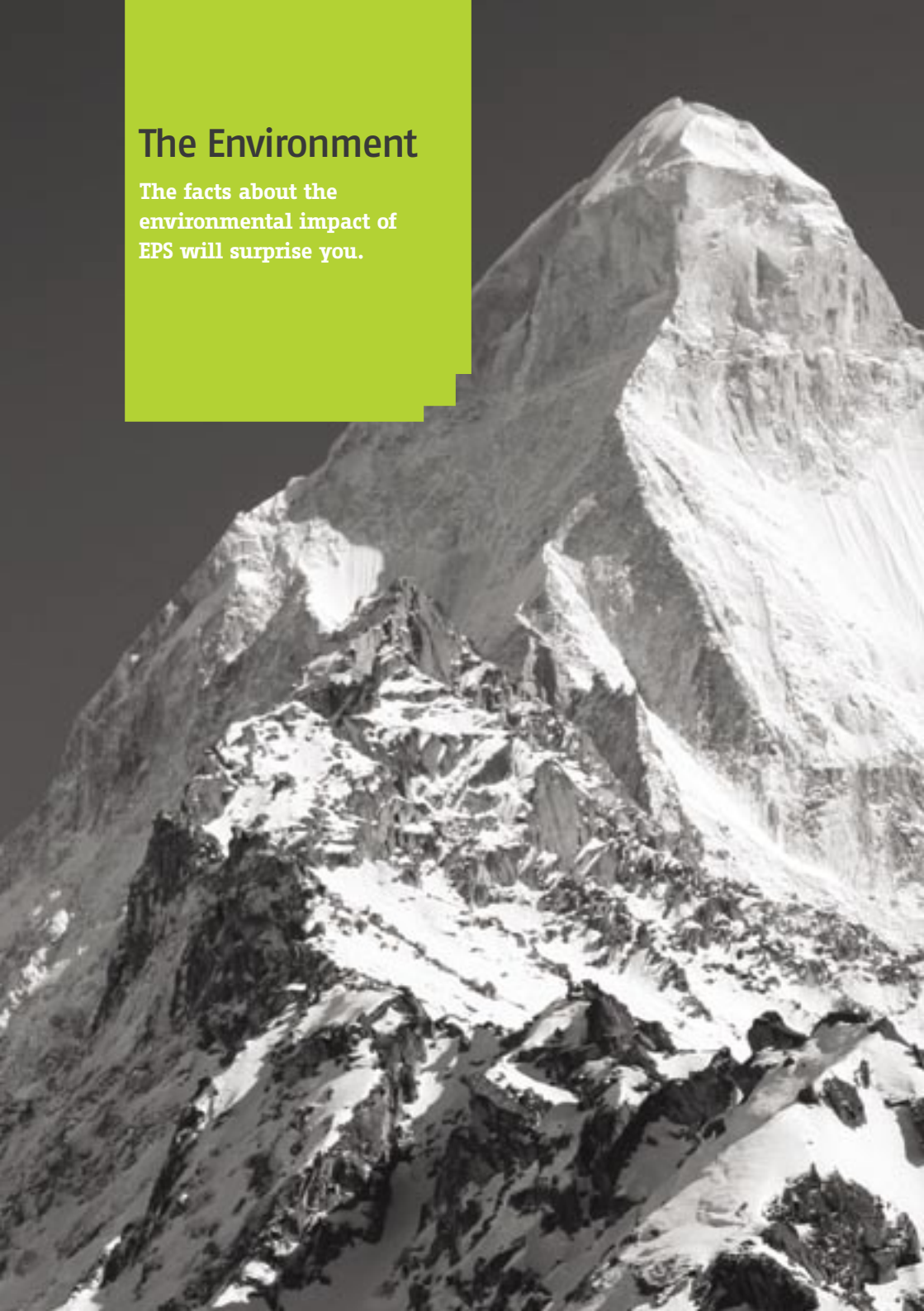


S and B EPS believes that service to its customers is one of the main fundamentals in ensuring a good working relationship with our stockists and customers. To this end S and B EPS operates a dedicated transport fleet of vehicles offering flexibility of load sizes from small local deliveries to 90m³ loads nationally.

We pride ourselves on offering a next day delivery service for full trailer loads to any part of the UK mainland, either to our stockists or direct to site, with a two day delivery for part loads.

The Environment

The facts about the environmental impact of EPS will surprise you.



The environmental impact of the materials that we use in every human activity is of growing concern and importance.

EPS is a light and rigid foam that is widely used in the worldwide building and construction industry, mainly as a thermal insulation.

EPS does not and has never contained either CFCs [chlorofluorocarbons] or HCFCs [hydrochlorofluorocarbons] gases, which diminish the ozone layer and in addition is fully recyclable and no waste is created in its manufacture.



The waste EPS produced during manufacture is reground and recycled back into the manufacturing process. Any additional waste can be easily recycled or used in a variety of products.

EPS is an excellent example of an efficient use of natural resource, the transformation process uses very little energy.

The use of EPS for thermal insulation in the construction industry means significant energy savings on heating and cooling buildings and a dramatic reduction in the emission of polluting gases. It therefore contributes to alleviating the greenhouse effect and acid rain.

Manufacture and use of EPS does not generate any risk to health or the environment and life cycle analyses have shown that expanded polystyrene has far less of an impact on the environment than other competitive materials for the same use.

GWP [Global Warming Potential] and ODP [Ozone Depletion Potential]

EPS always scores well in relation to the protection of the Earth's ozone layer, as neither chlorofluorocarbons [CFCs] nor hydrochlorofluorocarbons [HCFCs] are used in its manufacture nor are these ozone depleting components emitted whilst EPS is in situ.

Therefore EPS passes an obvious first test of its suitability of a role in environmental protection and obtains a zero depletion rating and thus achieves a BREEAM credit

The GWP figure is required under the Ecohome Assessment procedure for one area only and that is pollution that is part of the multi-step procedure. The others being energy, transport, materials, water, ecology, land use and health and well being.

GWP is weighed by the insulant gases and EPS scores zero overall [over 100 years], therefore is not a high risk material and can be specified with confidence.

The Green Guide to Specification awards EPS an A+ rating that takes into account all the above criteria.

EPS and Recycling

EPS is one of the few materials that can truly claim to be 100% recyclable, it can be reused in the manufacture of new EPS products, soil improvements, auxiliary compost material, added to other building materials and by fusion and granulation turned into simple products such as coat hangers and pens.

Life cycle analyses have shown that expanded polystyrene has far less of an impact on the environment than other competitive materials for the same use.

EPS Fused Products Data

Product Shape

The information contained in this data sheet is relevant to product supplied by S and B EPS Ltd in the form of block [ex-mould and trimmed) cut sheet or specific cut shapes / pieces derived from S and B EPS manufactured block.

Product Description

Products are self coloured, tending generally to a white appearance. S and B EPS products are CFC, HCFC and HFA free and these agents are not used at any stage in product manufacture.

Applications

S and B EPS supply product which is most commonly used in building, civil engineering or packaging applications.

The closed cell structure of the material offers excellent insulation properties in addition to mechanical strength. It is a first class cushioning material.

Product Specification

S and B EPS manufacture generally in accordance with BS EN 13163 and any product utilising an identifiable reference from that standard will meet or exceed the requirement of the standard.

There are numerous specific, additional grades which S and B EPS utilise to meet given customer / application requirements where a specific BS EN 13163 grade is inadequate. Any such product has unique references and (where appropriate) colour marking to ensure proper identification.

Product Marking

Block supplied ex-mould will bear unique identification details to permit specific traceability.

Cut sheet will bear coded edge striping to identify product grades and where such grades are specific to BS EN 13163 will comply with the requirement of that standard.

Cut shapes / pieces will not usually bear any codes or marking unless specifically requested at the time of order placement / acceptance.

Packaging

Ex-mould and trimmed block are usually supplied without packaging.

Cut sheet is generally made into suitable packs wrapped in transparent plastic sheeting. For certain applications and by agreement with the customer, cut sheet may be supplied unwrapped.

Cut shapes / pieces are supplied boxed or bagged depending upon quality and / or specific customer requirements.

Health & Safety Issues

Industrial Health / Toxicity

EPS is non-toxic and non-irritant therefore no specific precautions are necessary with respect to the handling of supplied products. Obviously ingestion should be avoided.

EPS is completely free of the presence of any heavy metals.

EPS does not suffer from mould or fungus attack. It offers no utility to vermin and is therefore no attraction to insects or rodents.

EPS is easily transported and handled due to the light nature of the material.

EPS products from S and B EPS LTD are available in a standard form or with an integral flame retardant (non fire retardant material is reaction to fire class 'F', and fire retardant material is reaction to fire class 'E').

EPS is a combustible material and appropriate precautions must be taken at all stages to avoid ignition and to store product in a safe manner.

Further guidance relating to storage and fire hazards follows.

Environmental Issues

EPS fused products are chemically neutral. They may be disposed of without any problems. EPS does not react with ground water nor produce any gases when dumped.

Due to its lightweight cellular structure it assists the aeration of sanitary landfills and burns completely in refuse incinerators.

The above information is given in good faith by S and B EPS Ltd and no liability is accepted. The responsibility for safe working and compliance with legislation or any local requirements rests with the purchaser and user.

Fire Hazard Information

Storage / Processing

EPS is combustible and all areas where the product is used or stored must be designated very strictly “no smoking” and free of other potential ignition hazards.

Users are recommended to seek guidance from their local fire authorities and / or health and safety inspectorate to ensure safe practice in relation to given site / factory circumstances.

As a generality, storage areas should ideally be; separate, rubbish free and accessible only to authorised persons. Stock piles should be sited such that, in the event of fire, flowing or dripping molten material will not cause the spread of fire to other combustible material or to other areas of a building, in particular staircases and corridors. Ensure clear aisles and do not impair the performance of sprinkler system.

Store the product well away from highly inflammable materials such as paint or similar materials.

Flame Retardancy

Fire retardant material contains a uniformly distributed flame retardant. Such flame retardant inhibits combustion from minor fire sources. However such material must not be considered non-flammable and proper precautions must be heeded.

Fire Fighting

Ensure adequate fire fighting equipment is to hand and that there are sufficient fire exits, which are kept clear at all times.

In the event of fire call the Fire Brigade, immediately advising them that EPS [expanded polystyrene] is involved. A small fire can be easily extinguished in the early stages if tackled quickly with a water, CO₂, dry powder or BCF extinguisher provided that the person tackling a fire in its early stages takes no undue risk.

Smoke & Fumes

The gases emitted in the event of a fire do not differ essentially from the fumes given off when other organic materials burn. They consist predominantly of carbon dioxide and water. Other constituents, the concentrations of which depend on the conditions under which the fire occurs, are carbon monoxide and soot. Traces of hydrogen bromide are also given off during the combustion of flame retardant grade material.

In the event of a fire in which EPS is involved, there is generally no environmental hazard in the form of toxic fumes or water pollution. The fumes given off when EPS burns are those similar to those emitted by burning wood. Any traces of hydrogen bromide that may be dissolved in the water used for fire fighting and thus enter the drains can be regarded as negligibly small.

For further information on these products and others within the S and B EPS range please get in touch.

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