

A-GAS® FOAM BLOWING AGENTS



Performance
Chemicals

Polyurethane products have many uses. Over three quarters of the global consumption of polyurethane products is in the form of foams, with flexible and rigid types being roughly equal in market size. In both cases, the foam is usually behind other materials: flexible foams are behind upholstery fabrics in commercial and domestic furniture; rigid foams are inside the metal and plastic walls of most refrigerators and freezers, or behind paper, metals and other surface materials in the case of thermal insulation panels in the construction sector.

DOMESTIC REFRIGERATION

Polyurethane foam is used in the production of domestic fridges.

The foaming is applied during the manufacturing process of all domestic fridges, thus providing insulation to keep warmth out and keeping the inside cooler for longer.



COMMERCIAL REFRIGERATION

Polyurethane foam is used in the production of commercial fridges, for example those seen in supermarkets.

The foaming is applied during the manufacturing process of all commercial fridges, providing insulation. Cold storage rooms used for commercial purposes would utilise polyurethane foam as well, thus providing the insulation needed in various commercial fridge designs.

ONE COMPONENT FOAM / SPRAY FOAM

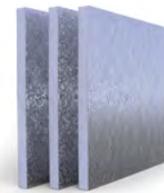
Polyurethane foam is available in pressurised cans (aerosols) to be used in construction to fill gaps and for insulation purposes.

This type of polyurethane foam is used around doors and window jambs in construction projects, as well as gaps around pipes, television cables and outdoor vents, thus providing good insulation and acting as a filler.



OTHER APPLIANCES FOAM

Polyurethane foam is used in other appliances besides refrigeration (e.g. water heaters/coolers, picnic coolers, cooler boxes, thermoware, etc), thus providing insulation in various industries.



PHENOLIC FOAM

In non-polyurethane foam (bases on phenolic substances), very little foam blowing agents are used.

Phenolic foam panels can be used as an insulating barrier in roofing, wall cavities and for floor insulation.



PIPE-IN-PIPE FOAM

Polyurethane foam insulation for pipes prevents heat loss and in cold climates helps maintain a warmer pipe temperature to avoid freezing or cracking for long-distance heating.

A very large percentage is used in the manufacturing and mining industries.



POLYOLEFIN FOAM

In non-polyurethane foam (like polyethylene and polypropylene), very little foam blowing agents are used.

Application areas cover automotive, medical, building and construction, sports, leisure and consumer goods.

POLYURETHANE BLOCK FOAM

(PU BLOCK-PIPE & PU BLOCK-SLAB)

Polyurethane blocks are among the more popular ways of manufacturing polyurethane foam. A polyurethane block can be rigid or flexible and can be cut into many designs depending on the application's requirements. It can be used in different applications, e.g. flexible buffer or the body mount of a dump-truck, cut into pipe moulds. Polyurethane blocks can be an economical way of producing prototypes and when quantity of a certain shape is required.



POLYURETHANE BOARD STOCK

(FLEXIBLE OR RIGID)

Polyurethane foam insulation board can be rigid or flexible (board stock/insulation board and block) for residential and commercial construction applications. Board stock can be faced (covered) with a wide variety of materials including paper, aluminium, fibreglass, gypsum, perlite and fibreboard. This will increase the insulation properties as well as protect the foam from damage from damp or fire.



POLYURETHANE CONTINUOUS PANELS

Polyurethane foam in panel form is produced continuously in production lines. Insulated Metal Panels (IMPs) have a rigid polyurethane foam core "sandwiched" between two metal facings. These factory-manufactured panels are used for building and other insulation applications. IMPs are used in building claddings, partitions, load-bearing walls and roofing elements. Insulated metal panels can also be used in cold storage applications.



POLYURETHANE DISCONTINUOUS PANELS

Polyurethane foam in panel form is manufactured in moulds one by one. Structural Insulated Panels (SIPs) have a rigid polyurethane foam core between two pieces of Oriented Strand Board (OSB) or similar material. These lightweight panels provide superior wall and roof strength to the construction industry, while delivering energy efficiency and insulation.



POLYURETHANE FLEXIBLE MOULDED FOAM

Polyurethane foam is also used as cushioning for a wide variety of consumer and commercial products including furniture, carpet cushion, bedding, packaging, textiles and fibres.



POLYURETHANE INTEGRAL SKIN

Polyurethane integral skin foam has the specific characteristic of a closed skin structure. It is water resistant and can be used inside as well as outside. Customers in this niche market often come from the furniture industry (manufacturers of consumer furniture as well as office furniture), theme parks/fairground attractions and the health care industry. It is mostly used in armrests and headrests in furniture, as shock protection, safety brackets, seats, backs of chairs and sport equipment, such as bicycle seats.



REEFERS (CONTAINERS) AND TRANSPORT

Polyurethane foam used to insulate containers, reefers (refrigerated containers) and cold truck bodies is one of the largest segments in polyurethane foam applications. Insulation forms a very important function in the cooling used in the food and beverage industry, especially considering the amount of logistics required to bring perishable foodstuff to our local supermarkets.