



THE ZOTEFOAMS DIFFERENCE

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AZOTE® is the group brand for a variety of foams manufactured from differing base polymers but using the same unique process route. ZOTEK® is the group brand for foams manufactured from high performance polymers.

PLASTAZOTE®, EVAZOTE®, SUPAZOTE® and PROPOZOTE® are worldwide registered trademarks for the current product range which is available through a global distributor and converter network.



THE ZOTEFOAMS DIFFERENCE

SEE THE DIFFERENCE, FEEL THE DIFFERENCE, SMELL THE DIFFERENCE.

Zotefoams manufactures a wide range of closed cell, cross-linked, block foams using a unique, three-stage, nitrogen expansion, manufacturing process. This process gives the foam an exclusive combination of properties, beneficial properties that differentiate Zotefoams materials from all other foams.

Zotefoams is able to foam a variety of polymers, some of which cannot be foamed by any other production method, and is able to vary the level of cross-linking in order to control durability and thermoformability.

HOW ZOTEFOAMS MANUFACTURES FOAM.

The process comprises three main stages:

1. Extruded into solid sheet form and cross-linking



2. Nitrogen saturation at high temperature and pressure



3. Physical expansion in a free environment



FOAMS FROM ZOTEFOAMS ARE DIFFERENT

This is a unique manufacturing process that produces foams with a unique combination of beneficial features:

CONSISTENT CONTROLLED CELL SIZE

HIGH PURITY

LOW IN-BUILT STRESS

CONSISTENT DENSITY PROFILE

NO CHEMICAL BLOWING AGENTS

NO LIQUID SOLVENT BLOWING AGENTS



CONSISTENT CONTROLLED CELL SIZE

BENEFITS:

- Enhanced physical performance with higher strength to weight ratios
- Greater aesthetic appeal
- Cells maintain integrity for less surface marking
- More isotropic mechanical performance
- Able to supply fine cell and large cell grades

Large cell Plastazote LD24 was created to give cushioning protection and enhanced aesthetic appeal to a new range of fragrances.



Consistent cell size is critical for laminated, thermoformed components for the automotive industry, to maintain regular colour, appearance and performance.



Weight saving potential is valued in many applications. Formers used in FRP boat building benefit from the combination of lightweight and excellent physical performance.



HIGH PURITY

BENEFITS:

- No corrosive foaming agent residues to impair mechanical properties
- Good skin compatibility
- Low odour
- Food safe grades possible
- MRI/X-Ray/CT Lucent
- No VOCs introduced in processing low emissions, low fogging

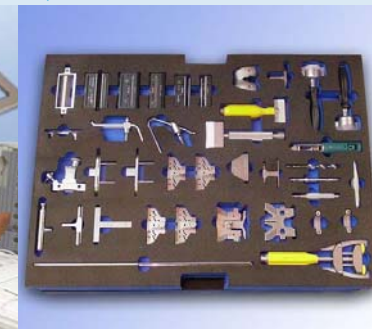
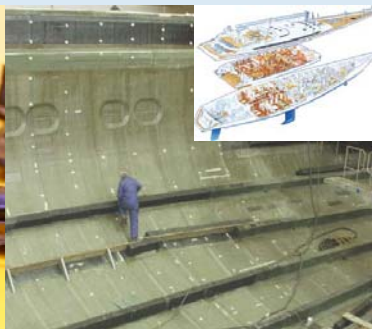
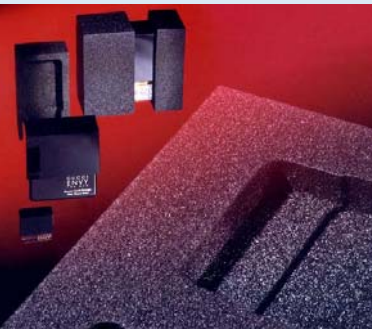
Plastazote is used for orthopaedic supports thanks to its excellent skin compatibility, low odour, outstanding mouldability and high consistency.



As supports and ancillaries for medical scanning it is MRI, CT and X-ray lucent... more so than chemically blown materials, PU or Polyester.



In packaging for medical implants and surgical instruments, purity is essential. Cell integrity ensures no particulate contamination and fine cells offer optimum surface protection.





LOW IN-BUILT STRESS

BENEFITS:

- Flatter blocks for easier, quicker conversion
- Less waste during conversion
- More economical conversion
- Less distortion of finished part

Material can be processed faster and generates less waste and fewer rejects, which can make it competitive with cheaper foams in overall cost terms.



Complex precise forms can be machined more accurately, cuts are crisper, and parts are more consistent.



Finished components, produced from Azote foams, maintain their shape better. They have little tendency to warp or deform during manufacture, storage and use.



CONSISTENT DENSITY PROFILE

BENEFITS:

- More consistent mechanical properties through the bun
- More consistent processing
- Less waste during conversion
- More economical conversion

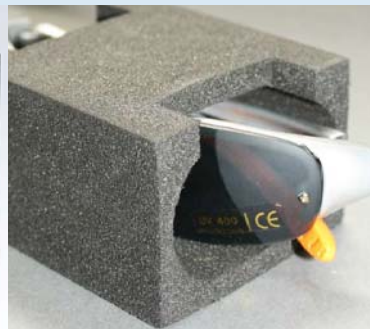
Used in sports equipment where its consistent density profile enhances the predictability of physical performance: impact absorption, compression set, tensile strength etc.



EV50 is the material of choice for power tumbling mats due to the consistent nature of the material and it's high wear resistance.



Material is preferred for industrial kneepads due to the excellent consistent compression recovery and wear resistance.





NO CHEMICAL BLOWING AGENTS

BENEFITS:

- Enables functional additives to be incorporated at optimum levels
- Greater colour intensity
- No staining or corrosion potential
- Better long term size and shape stability
- Low odour

Used by leading Swiss watch manufacturer for parts packaging, to avoid risk of staining associated with chemically blown foams.



Utilised for in-transit protection, archival storage and display of valuable artifacts. Used by major museums and galleries, due to its inert, acid-free, stain free properties.



Flame retardant, conductive and static dissipative variants are produced for special applications such as aviation and electronics.



NO SOLVENT BLOWING AGENTS

BENEFITS:

- No VOCs introduced in production process
- Reduced flammability potential
- Low odour
- Low toxicity

Meets VDA specifications for in-car use, (soft touch applications in dashboards and door panels) without concerns about “fogging” of windcreens.



Low odour properties are highly prized, or even essential, in a wide range of applications, especially luxury retail and display packaging.



Many sports mats are made from Zotefoams products as they are free from the toxicological and dermatological concerns associated with chemical and solvent blown foams.





WE DARE TO COMPARE

FOAMS PRODUCED BY THE ZOTEFOAMS METHOD OUT PERFORM OTHER FOAMS MANUFACTURED FROM THE SAME POLYMERS AND EXPANDED USING CHEMICAL OR LIQUID SOLVENT BLOWING AGENTS

- Chemical Residues**
 the remnants of blowing agents that can cause corrosion and unpleasant odours while impairing a foam's physical performance.
- Tensile Strength**
 the stress at which a material breaks.
- Compression Stress**
 the applied stress which results in compaction deformation (strain).

- Compression Set**
 the amount of recovery after a compressive force is removed from the foam.
- Tear Strength**
 the force required to tear a standard test piece.
- Density Profile**
 a demonstration of the density variance across the thickness of a foam block or sheet.

Chemical Residues compared to competitor 30kg/m³ products ▼

▼ Chemical residue (%wt)

Tensile Strength compared to competitor 30kg/m³ products ▼

▼ Tensile strength (kPa)
Higher values = Stronger

Compression Stress compared to competitor 30kg/m³ products ▼

▼ 25% Strain (mechanical deformation)
Higher values = Stronger and stiffer material

Compression Set/Recovery compared to competitor 30kg/m³ products ▼

▼ 22hrs at 50% compression
Higher values = More recovery

Tear Strength compared to competitor 30kg/m³ products ▼

▼ Tear strength (N/m)
Higher values = Stronger

Density Profile compared to a competitor 30kg/m³ product ▼

▼ Density at intervals through a single sheet (2mm "skins" removed from each side)

