



ADVANCED FOAM
TECHNOLOGY FOR THE
**BUILDING AND
CONSTRUCTION**
INDUSTRY



AZOTE®
high performance
polyolefin foams



ZOTEK®
advanced
polymer foams

Foams in Building and Construction

AZOTE® foams are used in a wide variety of sealing, cushioning and insulation applications in the building and construction industries. They are prized for their consistent mechanical performance, outstanding durability, good thermal insulation and sound deadening properties. For specific applications, grades with excellent UV resistance are available.

ZOTEK® F PVDF Kynar® foams are recommended for use as seals, condensation control, insulation materials and filler blocks, where environmental conditions are particularly harsh, where long service and low outgassing are essential and in clean room situations.



EAVES FILLERS

Azote foams find many uses in building and construction for sealing and thermal insulation applications. They are used in the manufacture of eaves fillers where their lightweight, sealing properties are valued and their long life durability is paramount. Plastazote foam has been used in eaves fillers for over 30 years, eliminating draughts, keeping out wildlife and sealing both the eaves and ridge flashing.

OUTSTANDING PROPERTIES

- Lightweight yet durable
- Pure and non-staining
- Extremely low odour
- Non-toxic and safe
- Outstanding moisture resistance
- High shear strength
- Consistent, with regular cell size
- Low levels of in-built stress
- Good impact absorbing properties
- Excellent compression / tension characteristics
- Wide range of densities



EXPANSION JOINTS

Evazote closed-cell, cross-linked EVA foam is used extensively in the construction industry as an expansion jointing material. Used as an expansion joint seal in bridges, stadia and other large concrete structures, it has an elastic working range of 50% compression, 25% tension. It is relatively unaffected by road salts and repels stones and debris otherwise absorbed by strip seals. When under compression, Evazote closes upon itself, virtually eliminating the possible extrusion of the material created by contraction of the expansion joint.

FLOORING

Evazote is used as the support for sports floors, giving the floor the degree of elasticity or “give” that helps reduce the ‘jarring’ of limbs and joints during active sports. Evazote combines the required compression stress characteristics with outstanding long-term resistance to compression set, making it ideal for this and many other similar applications. In 1993 Azote foam was used in the construction of what was then the world’s largest floating sports floor, a total 2,400m², installed in Norway. The material may also be used for ‘sound deadening’ and will significantly reduce impact and airborne noise transfer.

PIPE INSULATION

Azote lightweight, closed cell foams have outstanding thermal insulation properties, making them ideal for a wide range of insulation applications including pipe insulation. Because Azote foams are cross-linked they can be thermally moulded into such items as pipe sheathing, and specialist valve insulation jackets.

T-Tubes™, based on ZOTEK F 42 HT LS, Kynar PVDF foam, is a revolutionary, advanced insulation system specifically developed for stainless steel process lines in clean environments. This is the only pipe insulation system in the World to be Specification Test Listed to FM 4910 Factory Mutual Clean Room Test Protocol.



ZOTEFOAMS
THE FOAM TECHNOLOGISTS



PANEL INSULATION

ZOTEK F PVDF foams may be used for thermal insulation in sandwich panel constructions where the low flammability performance and high UV resistance is valued. In polycarbonate roofing panels the foam offers excellent insulation, combined with good light transmission in a thin profile. Being closed cell it resists moisture ingress far better than fibrous insulation materials.

SEALS, GASKETS AND TAPES

Azote foams are ideal for a multitude of sealing applications in building and construction. Their closed cell nature makes them highly resistant to moisture ingress and when split and slit into tapes and backed with pressure sensitive adhesive they are suitable for applications ranging from panel sealing in timber frame construction through draft exclusion to sealing roofing kerb and affixing and sealing decorative glass where the foam accommodates the differential thermal expansion of dissimilar materials.

UV ageing tests highlight the benefits of ZOTEK F foam against EPDM foams currently used for low force closures and seals in many construction applications.





FLAMMABILITY

ISO 3582 (1978); BS 4735 (1974)

The flammability characteristics of Zotefoams materials have been tested to a wide range of standards. Specific data is to be found on Technical Information Sheets and Product Data Sheets.

It should be noted that burn characteristics depend not only on foam type but also on density and thickness.

DIN 4102 (B1/B2)

The flammability tests necessary to achieve B1 or B2 classification for applications in building construction. The B1 test (DIN 4102 Pt 16) places four test samples in a vertical box configuration. It assesses residual material after burning and measures temperature of the effluent gases.

A B1 performance (not easily flammable) has been achieved by Plastazote foam LD24 FR Charcoal tested at 6 mm and 20 mm thickness, and by Plastazote foam LD45 FR Charcoal tested at 6 mm thickness.

Note that tests were carried out using freestanding foams, not attached to any substrate. The B2 test is less demanding, and is a vertical burn test carried out on a single sample. Care must be exercised to satisfy the demands of the Fire Authorities, and moral obligations to the safety of persons and property.

ASTM E-84 / UL 723

ZOTEK F 40 HT LS meets the requirements of the major International test for Surface Burning Characteristics of Building Materials, UL 723.

(ASTM E-84) Surface Burning Characteristics of Building Materials, with ZOTEK F 40 HT LS having an outstanding Class A rating of 0/0 (flame/smoke) at 1/8" and 5/5 at 1".

EN ISO 11925-2 & EN 13823

A Euroclass B standard was achieved for ZOTEK F 30 during indicative testing to the EU fire tests EN ISO 11925-2, the Single Flame Source Test, and EN 13823, the Single Burning Item (SBI) test.

FM 4910 (Clean room standard)

ZOTEK F42 HT LS foam (PVDF) used in the manufacture of T-Tubes, is the only insulation in the World to be Specification Test Listed to FM 4910.

T-Tubes themselves are approved to Factory Mutual Clean Room Test Protocol - FM 4924.



FOR MORE INFORMATION PLEASE VISIT WWW.ZOTEFOAMS.COM

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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.

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