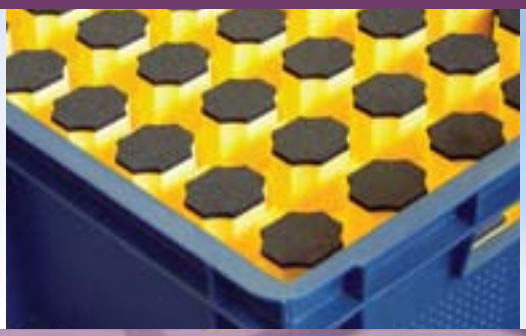
ZOTEFOAMS



ADVANCED FOAM
TECHNOLOGY FOR THE

TRANSIT PACKAGING AND STORAGE PROTECTION

INDUSTRY

AZOTE®
high performance
polyolefin foams

ZOTEK®
advanced
polymer foams

Transit packaging and storage protection

AZOTE® and ZOTEK® foams are used in a wide variety of packaging applications where optimum protection and durability are overriding considerations. They are also the materials of choice when environmental or process conditions require the performance characteristics of these high performance foams.

Much Returnable Transit Packaging depends on the properties and performance characteristics afforded by materials from Zotefoams.

ZOTEFOAMS
THE FOAM TECHNOLOGISTS

TOTE INSERTS, PADS AND FITMENTS

Returnable transit packaging plays an important role in the quest for a waste packaging-free environment. Azote foams, machined as inserts or part fitments for tote boxes, perform vital functions, holding components in place securely and providing outstanding, safe protection. Azote foams are used widely for protecting Class 'A' surfaces. Their durability makes these packs true multi-trip items.

OUTSTANDING PROPERTIES

- Lightweight yet durable
- Pure and non-staining
- Extremely low odour
- Non-toxic and safe
- Consistent with regular cell size
- Low levels of in-built stress
- Good impact absorbing properties
- Good surface protection characteristics
- Range of high performance options
- Wide range of densities and colours




CRADLES, DUNNAGE AND LINE-SIDE PACKAGING

Being closed cell, Azote foams are ideal multi-trip dunnage materials. They will not transmit moisture and offer a level of parts protection un-afforded by most other materials. Special conductive and static dissipative grades are ideal for munitions packaging requirements.

CUSHION PACKAGING

Azote foams offer outstanding protection for delicate and fragile items. They can be moulded or machined to the exact shape of the item to be protected and provide a degree of grip to keep the item in place while absorbing impact energies for optimum protection.

Soft touch grades offer outstanding surface protection and are ideal for protecting parts with painted and coated surfaces.

ELECTRONICS PACKAGING

Critical electronics devices, assemblies and equipment are known to be susceptible to “static zap”. Anti-static foams offer a degree of protection but depend on environmental conditions to achieve the required levels of conductivity. For guaranteed optimum protection the use of permanently static dissipative or conductive grades of Plastazote foam is essential.

See Electronics Packaging sheet for further details

ARCHIVAL PACKAGING

Because of their purity and stability, Plastazote and Evazote foams have a proven record when used for in the conservation of artefacts and works of art. They are non-staining, low odour, low VOC and do not support microbial growth.

Plastazote foams are also valued for artefact exhibition and display For securing entomological specimens the material has excellent pin-gripping qualities and can be repined repeatedly without problem.

AZOTE and ZOTEK foams are easily fabricated and thermoformed using well-known techniques. Their lack of in-built stress enables converters to operate with optimum efficiency.

These foams have an exceptionally wide operating temperature range and exhibit excellent chemical and water resistance. Conductive and static dissipative grades offer controlled conductivity for the packaging of sensitive electronics components and equipment.

Designers have appreciated for many years, the advantages offered by these foams over more traditional materials in the protective packaging of fragile, high-value items. However, their exceptional cushioning performance enables packaging designers and engineers to achieve their objectives by using a smaller volume of foam, giving them the opportunity to employ a smaller overall pack and save on expensive freight and transportation charges.

TOOL CONTROL INSERTS

In critical engineering applications such as aviation, aerospace, medical and automotive, tool control is of great importance.

By laminating foams of contrasting colours and machining a precise insert to accept each individual tool, any missing tools become immediately evident.

For in-flight tool control, Zotek F is inherently flame retardant and meets the latest aviation flammability requirements.

CASE INSERTS

A wide variety of case inserts for a myriad of applications is manufactured from Azote foams, largely because they are colourful, attractive, low odour, durable and easy to convert.

Plastazote also provides a degree of grip to keep case contents in place irrespective of shape or weight. The “Plastazote option” is available from the majority of case suppliers around the world.

MILITARY PACKAGING

Zotefoams manufactures foam grades to meet Defence Standard requirements for packaging foams including conductive grades and grades approved for explosives compatibility.

See Military Packaging sheet for specific details.

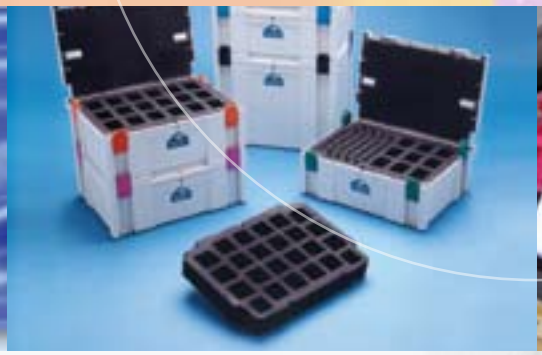
Batch compliance certification is available on request for all military grades.

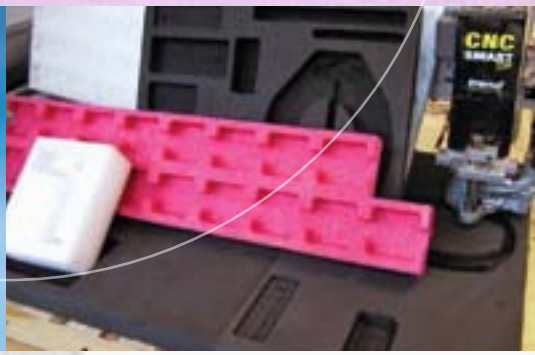
MEDICAL PACKAGING

Azote foams are used for the protection of implantables as they tolerate irradiation sterilisation. They are also used extensively for surgical instrument transportation, protection and control.

Zotek N high-temperature foam also tolerates heat sterilisation. Static dissipative Plastazote is also used extensively for the protection of mobile medical electronics equipment such as paramedics’ diagnostic units.

Packaging calculator





CUSHIONING PERFORMANCE

The CD contains a simple cushion packaging programme that will calculate the specific foam dimensions required to protect individual items. Entering basic details of 'drop height', 'fragility', and 'weight' will simultaneously produce foam thickness and area requirements of the Plastazote foam grades for evaluation.

EFFECTS OF CREEP

Creep is simply the change in deformation of the foam under long term applied load during storage. With Plastazote, the longer it is left under load the slower the deflection, and generally after one year the rate at which it loses thickness becomes negligible. A good rule of thumb for any package designed for long term storage (five years or more) is that the creep should not exceed 10%. The facts available regarding creep of Plastazote are given on the attached CD.

EFFECTS OF TEMPERATURE ON DYNAMIC PERFORMANCE

All polymeric materials are affected by extremes of temperature; higher temperatures soften the materials while lower temperatures stiffen the material. Both changes have the effect of making the cushion less effective but this can be allowed for by amending the static load requirement on the cushion. This effect need only be taken into consideration when long storage periods are envisaged at temperatures differing by more than 20°C from the normal room temperature of 20°C. Graphs illustrating the effects of peak "G" at various temperatures are to be found on the CD.

EFFECTS OF VIBRATION

Protection against the effects of vibration can be important for some delicate items but is not normally a problem with Plastazote cushioning systems because of their excellent damping properties at most frequencies. Certain actions may be taken to avoid resonance damage to susceptible items and the packaging itself. Details and graphs may be viewed on the CD.

ZOTEFOAMS

Applications	Grades																								
	PLASAZOTE																				EVAZOTE		SUPAZOTE	ZOTEK N	ZOTEK F
	LD15	LD18	LD24	LD29	LD33	LD45	LD45FR	LD60	LD70	LD30SD	LD40SD	LD32CN	LD50CN	MP24	MP33	MP45	HD30	HD60	HD80	HD115	EV45CN	EV70CN	EM26		
Cushion packaging	•	R	R	R	R	R	•	•	•	•		•	•				•	•	•	•					
Corner pads		R		R		R																			
Case inserts	R	R	R	R	R	R	•	•	•	R		•	•								•	•			
Dunnage			•	R	R	R		•	•	•		•	•		R	R					•	•			
Medical packaging					R	R											•							•	•
Archival packaging		•	•	•	R	R																			
Military packaging						S					S		S												
Electronics packaging										R		R	R								R	R			•
Consumer packaging		•		R	R	R								•	•								•		

Key: • = Occasionally R = Regulary S = Specification

The above guide shows some of the applications of Azote foams and the most commonly specified grade used. The list is for general guidance only and is not intended to be exhaustive.

FOR MORE INFORMATION PLEASE VISIT WWW.ZOTEFOAMS.COM

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