

**Product: Crystalair™ Compression Packs**

<u>Name</u>	<u>Item #</u>	<u>Nominal I. D. Size</u>
4 X 3	40-50-040315	4" X 3" X 1.5"

**Description and Uses:**

Crystalair 4 X 3 Compression Packs are rigid transparent packs that contain rings with clear conformable elastomeric membranes that, when closed, gently immobilize fragile products, allow full product visibility while providing protection from abrasion, shock and vibration. Durable hinge and closure systems allow for repeated usage without compromising product protection or pack integrity.

**Composition and Structure:**

The shell of each Crystalair Compression Pack is made of an injection molded resin.

The rings are made of an injection molded resin.

The membranes are made of a 3 Mil thick proprietary film.

The closures are made of an injection molded resin.

**Serviceability:**

Crystalair Compression Packs can be utilized in environments with temps ranging from -65° to +200° F. Out gassing and deterioration of the physical integrity of the membranes, rings and cases will not occur in this normal temperature service range.

Sterilization can be accomplished by Gamma, ETO or Electron Beam processing without loss of physical product protection or package breakdown. Depending on the method selected, minor visible color shifts may occur in the rings and membranes.

The ring assemblies can be removed for cleaning or installing desiccant packages.

**Product put-ups (sizes in Inches):**

<u>Part#</u>	<u>I.D. (Usable Surface Area)</u>	<u>O. D. (outer Dimensions)</u>	<u>Qty/case</u>
40-50-040315	4" X 3" X 1.5"	4.75" X 4.25" X 1.625"	50

**Custom options:**

- Crystalair Compression Packs can be engraved, printed or labeled.
- The cases can be molded from other resins, with tints or colors and/or with other transparency or opacity levels.
- The packs can be supplied cleaned to clean room 100 level and double vacuum bagged.
- Special additives and/or treatments can be incorporated for static free packs.

Contact your ADE, Inc. representative to discuss these and other custom options.

**ISO Status:**

Crystalair Compression Packs are produced according to a documented quality system that is certified as compliant with the ISO 9001 quality standard.

*Performance Levels*

<b>Property</b>	<b>ASTM Method</b>	<b>Typical Results</b>
<b><u>Case Halves</u></b>		
Specific Gravity	D 792	1.01 gr./cc
Tensile Yield	D 638	4,400 psi
Elongation @ Yield	D 638	20 %
Hardness, Shore D	D 2240	75
Flexural Modulus	D 790	215,000 psi
Flexural Yield Strength	D 790	6,400 psi
Deflection Temperature	D 648	170° F
Vicat Softening Temp.	D 1525	200° F
Light Transmission	D 1003	90-95 %
UL Flammability Class	UL 84	94HB
Heat Deflection Temp.	D 648	170° F
Instrumented Impact Energy	D 3763	6.1 in*lb*f
<b><u>Rings</u></b>		
Specific Gravity	D 792	1.20 gr./cc
Tensile Yield	D 636	12,000 psi
Elongation @ Yield	D 636	9 %
Notched Izod @ 73° F	D 258	2.0
Notched Izod @ - 40° F	D 258	1.1
Deflection Temp.	D 648	270° F
Vicat Softening Temp.	D 1525	297° F
<b><u>3.0 Mil Film Membranes</u></b>		
Specific Gravity	D 792	1.12 gr./cc
Durometer Hardness	D 2240	85A +/- 5
Thermal Properties		
Serviceable Temperature Range		-65° to 185° F
Melting Point Range		345° to 385° F
Tensile Properties (3.0 Mil)	D 638	
Modulus @ 100 % Strain		1,800 psi
Modulus @ 300 Strain		3,500 psi
Modulus @ Break		10,000 psi
Elongation @ Break		475 %
Set @ Break		20 %
Tear Properties	D 624	
Die C		580 pli
Outgassing Information		
@ 248° F and above the heat and UV additives may volatilize.		
@ 302° F and above any residual monomers may volatilize.		
<b><u>Slide Latches</u></b>		
Specific gravity	D 792	0.90 gr./cc
Tensile Yield	D 638	4,000 psi
Ultimate Elongation	D 638	>700%
Deflection Temp.	D 648	189° F
Rockwell Hardness	D 785	80 R