



StructuralArmor™

High Performance Composite Building Materials for Swimming Pools



*A Swimming Pool Made With Structural Armor Components
Makes a Lasting Impression...*



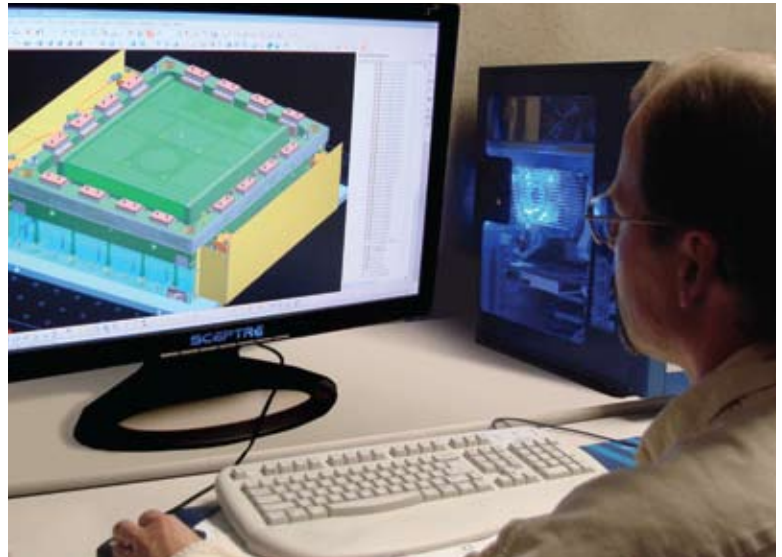


StructuralArmor™

High Performance Composite Building Materials for Swimming Pools

FEATURING

GFR
HP 2800 Series
Composite Material



Material Physical Properties

Property	Measurement	GFR 2800	Polystyrene*	Using American Standard Test Method (ASTM)
Density	g/cm ³	1.68	1.04	Tensile Strength ASTM D638
Tensile Modulus	psi	2,000,000	306,000	Flexural Modulus ASTM D790
Tensile Strength	psi	21,750	3,300	Flexural Strength ASTM D790
Flexural Modulus	psi	1,600,000	327,000	Notched IZOD ASTM D256
Flexural Strength	psi	41,350	7,000	
Notched IZOD Impact	Ft-lbs/in	20.00	1.0	

*Material used in all other non-corrosive pool wall systems

Tensile Strength Testing of Plastics

Tensile strength measures the force required to pull something such as rope, wire, or a structural beam to the point where it breaks.

Flexural Strength Testing of Plastics

The "flexural strength" of a material is defined as its ability to resist deformation under load by applying pressure.

Notched Izod Impact Testing of Plastics

An early destructive test designed to determine the resistance of a plastic to the impact of a suddenly applied force.

Highly Engineered Reinforced Composites...up to 20 Times Stronger Than Structural Foam Polystyrene Materials
(verified by ASTM test methods)

4 Major Benefits of Using GFR HP 2800 Series Highly Engineered Reinforced Composite

1 Design Versatility

Highly engineered reinforced composites can be molded to produce almost any shape desired – large or small, as well as simple or complex. Endless design possibilities with *GFR HP 2800 Series*.

2 Dimensional Stability

Highly engineered reinforced composites maintain their shapes under intense mechanical and environmental stresses. *GFR HP 2800 Series* will maintain its shape permanently.

3 Unparalleled Strengths

Highly engineered reinforced composites are designed to produce a wide range of impact, tensile, and flexural strength properties. *GFR HP 2800 Series* won't warp or deform, crack or shear regardless of soil or climate conditions. (See written warranty)

4 Corrosion Resistance

Highly engineered reinforced composites do not rust or corrode, and offer various levels of chemical and environmental resistance. *GFR HP 2800 Series* will withstand acidic or any other corrosive elements in the soil.

Scientists and lab technicians created GFR HP 2800 Series highly engineered reinforced composite by utilizing advanced material design techniques and thoroughly evaluating the product's end use to develop the perfect material for the GFR HP 2800 Series construction components.

Other Applications of Highly Engineered Reinforced Composite



Highly Engineered Reinforced Composites

have revolutionized entire industries such as the Aerospace, Automotive, Military, Agriculture, Construction and Energy because of its infinite applications and unprecedented performance.

Common Reinforced Composite Applications:

- Structural Truck Bed components used commonly in the Auto Industry
- Wings and Nose Cones for Fighter Jets and Airplanes
- Exterior Components for Military Tanks and Humvees
- Composite I-Beams and Rebar for Bridge Construction
- Composite Siding, Decking, Shingles, for Home Building Industry

Hurricane Proof

Composites are strong enough to hold an ocean from a continent.

Resistant to Salt

Salt generators can be used with composite pools without fear of decomposing material.



Composite Seawall, Tampa, FL

The Evolution of Materials Used In Swimming Pools

1950's - Inground pool wall material started with wood. Low strength and low longevity.

1960's - Inground pool wall material transitioned to steel. This added strength but little in additional longevity.

1970's - Inground pool wall material transitioned to plastic structural foam. Plastic pool walls added greatly to longevity but reduced strength dramatically from steel or wood.

2000's - Inground pool wall material using NEW Highly Reinforced Composite Material Technologies allows superior strength to meet or exceed steel with unsurpassed longevity. **The Material of the 21st Century!**



StructuralArmor™

EX™ BRACING SYSTEMS

The Strength Is In The Design

Structural Armor + ExBracing is an unbeatable combination of years of worry-free fun and enjoyment! Simply put, **THE ExBracing System** is the strongest brace for vinyl lined pools where ground conditions are a challenge. When extra support is needed, ExBracing answers the call.

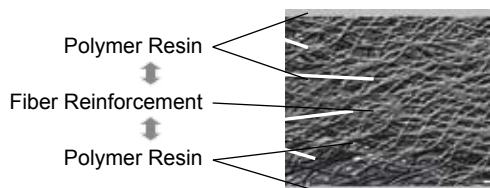
LIFETIME
TRANSFERABLE
WARRANTY!



Compare the Strength...Composite vs Structural Foam

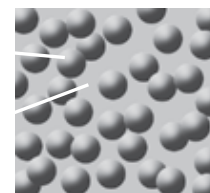
GFR HP 2800 Highly Engineered Composite

- Thermoset composite material (polymer, resins, fibers)
- Structurally reinforced (fused fiber matrix)
- Extremely high strength-to-weight ratio
- High impact resistance, flexural & tensile strength
- Non-corrosive (won't oxidize, rot, or rust)
- Impossible to melt or re-shape after molding
- Non-reversible process
- Long lifespan



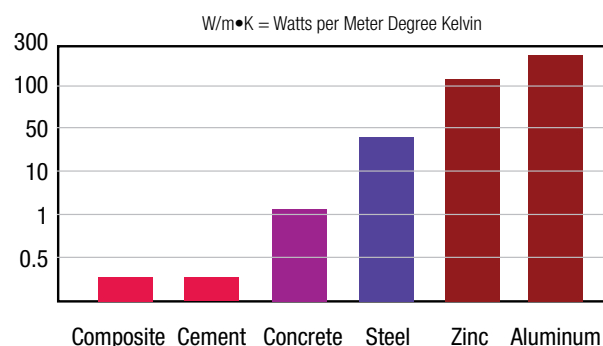
Structural Foam Polystyrene Plastic

- Low impact resistance, low flexural & low tensile strength
- Structurally reinforced using air pocket corrugation
- Thermoplastic material
- Good strength to weight ratio
- Non-corrosive
- Warps, bends, bows or deforms after molding with mild heat / cold
- Melts with extreme heat +300 degree



Composites are Energy Efficient

Based upon Thermoconductivity ($W/m \cdot K$) or the transfer of heat and cold, composite materials and other plastics rank as the best insulators at a $0.3 W/m \cdot K$. Portland cement, which is often used on the bottom of many vinyl pools is also $0.3 W/m \cdot K$. Compare this with other materials used for pools: Concrete at $1.7 W/m \cdot K$, Steel at $43 W/m \cdot K$, Zinc at $116 W/m \cdot K$, and Aluminum at $250 W/m \cdot K$.



Installation begins by planning the location of your pool. Then an excavation crew strategically digs the area where your new pool will be, and the retaining walls and bracing systems will be set in place. Next, the retaining walls are secured with a concrete footer, the pool's bottom is formed with concrete or vermiculite so it will be ready for the pool liner. Once the liner is in place and all of the final finishing processes are completed, all that remains is a lifetime of fun and relaxation.



**Installation...
A little Inconvenience
A Lot of Rewards!**

Style & Beauty



Only Alpha Pool Products/Trivector Manufacturing Inc. does not manufacture or endorse diving boards or slides. Any use or installation of diving boards or slides must be in strict compliance with each such equipment manufacturers specifications and recommendations, the Association of Pool and Spa Professionals Standards, as well as all local building codes and regulations; and recommendations from the American Red Cross and the Consumer Product Safety Commission.



Retreat to the solitude of your personal oasis and forget about the worries of your busy day. From family get-togethers to everyday life, owning a pool is sure to make your home the center of attraction.



STRUCTURAL ARMOR
TM

Let The Fun Begin!



The safety rope and floats have been removed in some pictures for photographic purposes only. The safety rope should be attached at all times. All other safety components should be used in accordance to manufacturers or APSP standards.

When it comes to fun and enjoyment for the whole family, you'll have to search long and hard to find anything that offers more pleasure than a swimming pool. One of the most important benefits of a pool is that it keeps your family together. Even after the kids start moving on to college and into their adult life, a swimming pool is always a good excuse to come back home for a visit.

STRUCTURAL ARMOR
TM



A Big Splash!



Your dealer/builder/contractor is an independent business person and not an agent or employee of "Only Alpha Pool Products" / Trivector Manufacturing Inc. We cannot and do not accept any responsibility for any representations, statements or contracts made by any dealer/builder contractor.

The fun and games in a swimming pool are never-ending. From wave crashing cannonballs to a quick game of Marco Polo, your pool will be the epicenter of your family's activities. Family fun the whole summer long!

STRUCTURAL ARMOR
™



Your Personal Oasis!



Notice: Although in some photos of the pools in this brochure the No Diving signage may not be visible, such warning signage must be installed around the perimeter of each pool.

Learning to use the proper chemicals along with modern technologies will make your pool maintenance quick and easy. Advanced pool filters and automatic pool systems can greatly reduce the time and effort required to maintain your pool. A minimal time investment, for years of enjoyment.



STRUCTURAL ARMOR
TM



 **Safety 1st**
Safety 2nd
Safety Always!

Water is everywhere - community pools, lakes, and rivers. What better way to “waterproof” your loved ones than by teaching them to swim! The lifelong benefits are immeasurable. Children who learn to swim are far less likely to become a tragic statistic from a water accident away from home.

With owning a pool also comes responsibility. There are many rules that must be followed around a pool. Protect yourself and your loved ones. Read and educate yourself with all literature that is available in the pool industry. Insist that your independent pool professional supply the industry publications that deal with pool safety, maintenance and the do’s and don’ts around the pool. There are also many resources for information about pool safety on the Internet. We recommend contacting The Association of Pool & Spa Professionals. This national organization is the best resource for most swimming pool safety publications.

Safety publications can be ordered from the APSP by calling or writing them at the Association of Pool & Spa Professionals, 2111 Eisenhower Avenue, Alexandria, VA 22314, (703) 838-0083; or by visiting the APSP consumer web site at www.theapsp.org.

Educate and supervise all bathers.

These are examples of safety information and signage. Be sure to ask your independent pool contractor for this information.



StructuralArmor™

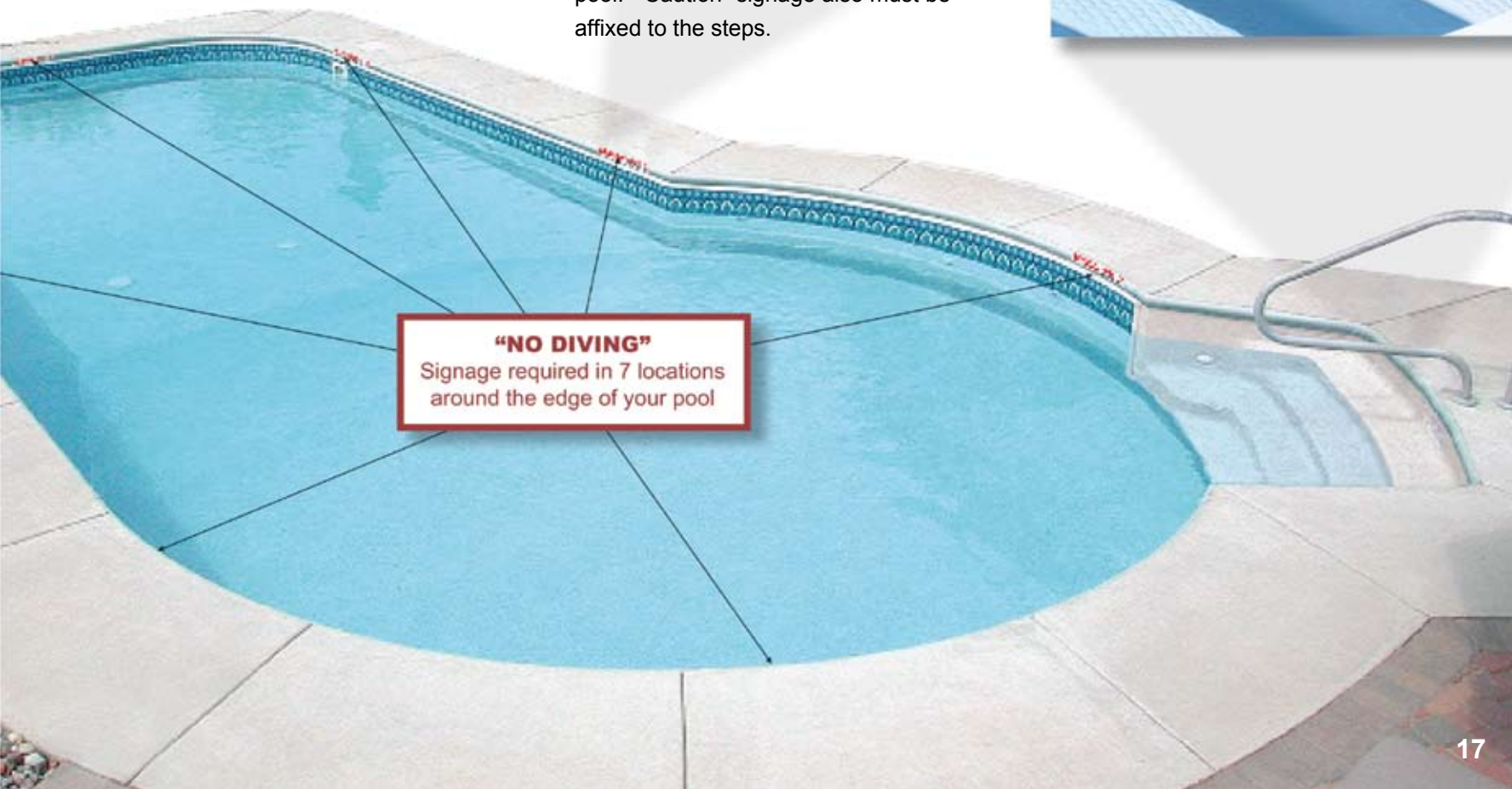


This "Area Warning Sign" is an example of the signage which must be permanently and conspicuously affixed in the pool area so it can be easily seen by everyone using the pool.



IMPORTANT!

► "No Diving" signage must be installed on the coping around the perimeter of your pool. "Caution" signage also must be affixed to the steps.



"NO DIVING"
Signage required in 7 locations around the edge of your pool

Designing Your Outdoor Recreation Room

Artesian

12'-1" x 23'-11"
16' x 31'-10"
18' x 35'-11"
22' x 40'



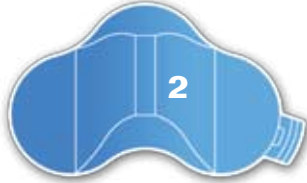
Grecian Lazy-L

16'-6" x 33'-6"
18'-6" x 41'-6"
19'-6" x 43'-1"



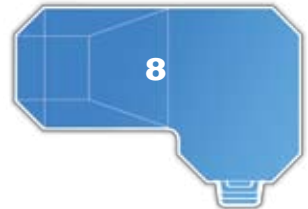
Aspen

17'-1" x 24'-1"
21'-3" x 33'-5"
23'-6" x 40'-5"
29'-11" x 43'-5"



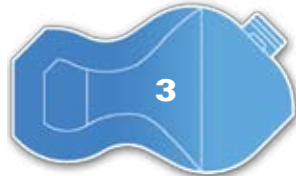
Grecian True-L

16'-6" x 43'-9" x 23'-8"
18'-6" x 43'-9" x 27'-1"
20'-6" x 44'-9" x 30'-9"



Auburn Lake

20'-7" x 36'-7"
22'-9" x 38'-8"
24'-1" x 41'-9"



Grecian

14'-3" x 28'-3"
16'-6" x 32'-6"
18'-6" x 36'-6"
20'-9" x 39'-9"
22'-9" x 43'-9"



Baja

16'-2" x 30'-6"
17'-11" x 35'-9"
20' x 40'-4"



Lagoon

12' x 24'-6" x 24'-2"
16' x 33' x 35'-9"
18' x 40'-2" x 33'-6"
20' x 38'-8" x 39'-3"

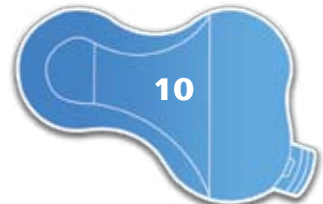


Figure Eight

12' x 24'-5"
16' x 29'-7"
18' x 33'-6"
20' x 36'



Lap

10' x 40'



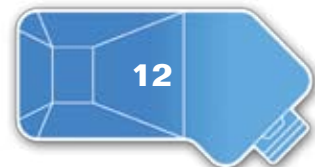
Gothic

16' x 30'
18' x 34'
20' x 38'



Lazy-L

Radius	90 Degree
14' x 36'-4"	14' x 36'-2"
16' x 40'	16' x 40'-8"
18' x 43'-9"	18' x 43'-7"
20' x 47'-6"	20' x 48'-4"

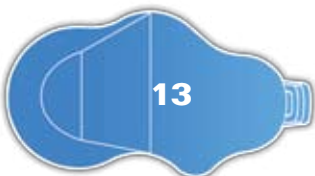


All pool shapes are for illustration purposes only. Pool shape selection options may change without prior notice. See your pool dealer for sizes and/or shapes not illustrated.



Mountain Lake

- 15'-10" x 25'
- 20'-4" x 34'
- 25'-5" x 43'-11"
- 26'-6" x 46'-2"



Oval

- 12' x 26'
- 18' x 27'-8"
- 15' x 30'-6"
- 18' x 35'-8"
- 16' x 32'-9"
- 20' x 40'-1"
- 17' x 34'-6"
- 22' x 39'-6"



Rectangle

- 12' x 24'
- 14' x 28'
- 16' x 32'
- 18' x 36'
- 20' x 40'
- 22' x 44'



Roman End

- | 90 Degree | Radius |
|-----------------|--------------|
| 15'-8" x 32'-7" | 16' x 32'-1" |
| 18'-1" x 35'-9" | 18' x 35'-6" |
| 19'-6" x 40'-4" | 20' x 40'-8" |



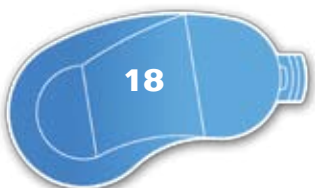
Roman Double End

- 16'-6" x 32'-8"
- 18' x 36'
- 19'-8" x 40'



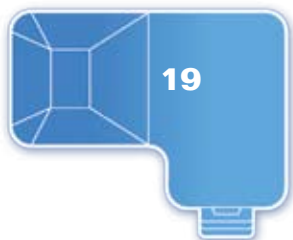
True Kidney

- 13'-3" x 26'-2"
- 17'-10" x 32'-5"
- 20'-9" x 37'
- 23'-8" x 41'



True-L

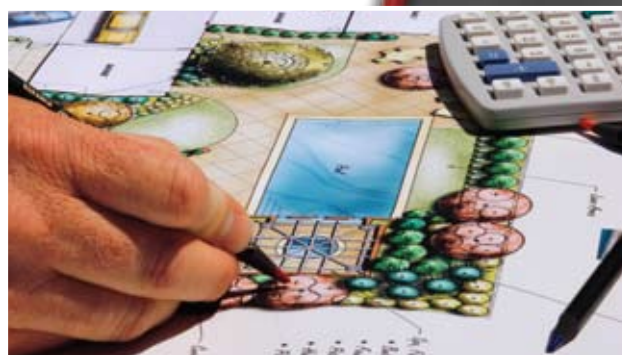
- 16' x 38' x 24'
- 18' x 38' x 26'
- 20' x 44' x 30'



There's A Shape For Everybody

Swimming pools come in a variety of shapes and sizes, providing an endless amount of options to make your pool the perfect decision for your family. From free-form shapes to narrow lap pools, there is no wrong answer when it comes to the question of what kind of pool you choose for your family. Important considerations are the available space for an installation and your budget. Pools can be very elaborate or elegantly simple. We encourage you to talk candidly with your independent pool professional to have all your questions answered before they turn over the first shovel of dirt. They are there to assist in making your dreams come true.

Choose from one of the standard shapes shown here or speak with your Pool and Spa Professional about designing the custom shaped pool of your dreams.



No Diving signage must be installed around the perimeter of a pool in accordance with the instructions provided by the liner manufacturer.

Liners

Pool liners are designed to set the tone and mood of your swimming pool. Liners are available in different designs and colors as well as different thicknesses. Beautifully designed to coordinate and blend with any landscape design, there are many styles that fit your lifestyle and outside decor perfectly!

STEPS



A wide variety of step options are available and made from BASF Loran Thermoplastic, DR Acrylic / Fiberglass reinforced or even a liner over a step.



Only
Alpha
Pool Products

For more information regarding our steps visit
www.onlyalpha.com



StructuralArmor™

Regular Safety Cover

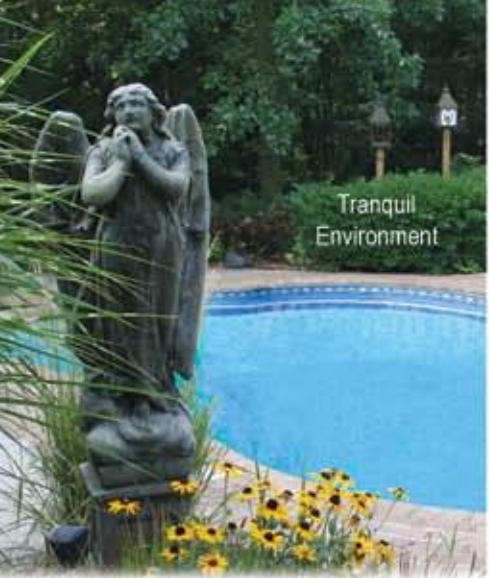


Pool covers are designed to be tough and withstand the elements. When properly installed by a professional pool contractor, a safety cover will keep your pool clean, beautiful, and enjoyable.

Automatic Pool Cover



Lower pool cover image courtesy of...
Automatic Pool Covers, Inc.



Tranquil Environment



Sizzling Food



Poolside Waterfall

Accessorize

A pool is a reflection on your individual style. There are many ways to make your pool a one-of-a-kind oasis. Your imagination can run wild when thinking about how you can accessorize your swimming pool to your individual taste.



Distinguished Privacy



Sports & Activities



Enchanting Landscapes

Maintenance...It's Really Not An Issue

With today's advancements in technology, maintaining a swimming pool is easy. Consult your swimming pool professional on different products that are available to make maintenance a breeze.

Automatic Pool Cover

In-Floor Cleaning System



Only Alpha Pool Products/Trivector Manufacturing Inc. does not manufacture or endorse diving boards or slides. Any use or installation of diving boards or slides must be in strict compliance with each such equipment manufacturers specifications and recommendations, the Association of Pool and Spa Professionals Standards, as well as all local building codes and regulations; and recommendations from the American Red Cross and the Consumer Product Safety Commission.

Vinyl Liner Pools...There is an Advantage!

- Pool components are manufactured in a controlled environment by machinery and have long manufacturer warranties.
- Easy and least expensive to repair as the pool consists of components.
- Replacing a liner is more economical than resurfacing other pool types.
- Some standard shapes like L-shapes provide a combination of large diving and shallow play areas.
- Can be custom designed to any shape and size and can achieve the high end look of a concrete pool without the high cost.
- Countless liner designs and color choices.
- Smooth surface is easy to clean and maintain and is skin friendly.
- Quality structures are self-supporting.



Concrete/Gunite Pools...Disadvantages

- Most expensive pool in the market and is difficult to clean and maintain.
- Surface is porous and most susceptible to damage caused by water chemistry..
- Must be resurfaced every 7-15 years at considerable cost.
- Plumbing is very expensive to repair as it is encased in concrete.
- Perimeter tile, which is necessary for these pools, is beautiful but requires maintenance and is susceptible to freezing damage.
- Surface can be rough on the feet and skin.
- Correct installation takes months and being concrete, it is prone to cracking and concrete cracks are very difficult to repair permanently.
- Pool is manufactured on site and there are very short if any warranties on pool surface and pool structure.

Only
Alpha
Pool Products

One piece Fiberglass Pools...Disadvantages

- Even the largest fiberglass pools are at best average in size and advertised sizes don't represent the true size of the usable pool.
- Cannot be custom designed to fit your individual taste, entertainment goals or landscaping desires.
- When the surface fades or deteriorates, it is very difficult and expensive to resurface.
- The structure is not self-supporting and may collapse or buckle if emptied.
- Difficult and expensive to repair and has the potential for very extensive damage.
- Suspiciously short warranties on some color surfaces and no warranties against floating or buckling.

Safety 1st Safety 2nd Safety Always!

- Supervise bathers at all times.
- Educate all bathers about your pool and your rules before allowing them to enter.

Reading the "safety literature" is vital for the safety of your family. We insist that you read each and every piece of literature that is normally enclosed in your pool liner package. You should find several important items with which you must become familiar, including:



- 1) "DANGER" no diving area warning sign.
- 2) "No Diving" stickers.
- 3) "Caution" sticker for pool steps.
- 4) "The Sensible Way to Enjoy Your Pool," a booklet published by The Association of Pool & Spa Professionals (APSP).



APSP has other excellent publications that are available. These publications can be ordered by calling or writing them at the Association of Pool & Spa Professionals, 2111 Eisenhower Avenue, Alexandria, VA 22314, (703) 838-0083; or by visiting the APSP consumer web site at www.theapsp.org.



Ask your independent Pool and Spa Professional or contractor about obtaining additional safety information.



IMPORTANT!

"No Diving" signage must be installed on the coping around the perimeter of your pool. "Caution" signage also must be affixed to the steps.

The pool photographs in this brochure are for illustrative purposes only. The pools were constructed using individual components from many different manufacturers.

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Only Alpha Pool Products/Trivector Manufacturing Inc. stands behind every product we produce pursuant to those representations which are stated in our written warranty. Your dealer/builder/contractor is an independent business person and not an agent or employee of Only Alpha Pool Products/Trivector Manufacturing Inc. We cannot and do not accept any responsibility for any representations, statements or contracts made by any dealer/builder/contractor.

Only Alpha Pool Products/Trivector Manufacturing Inc. does not manufacture liners nor warrant the liners. All vinyl liners are warranted by the original equipment manufacturer.

Only
Alpha
Pool Products

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