

March 2007

Tek talk

"hot off the roof"



E-las-tek goes to school, saves the day

By Harless Oscisclawski

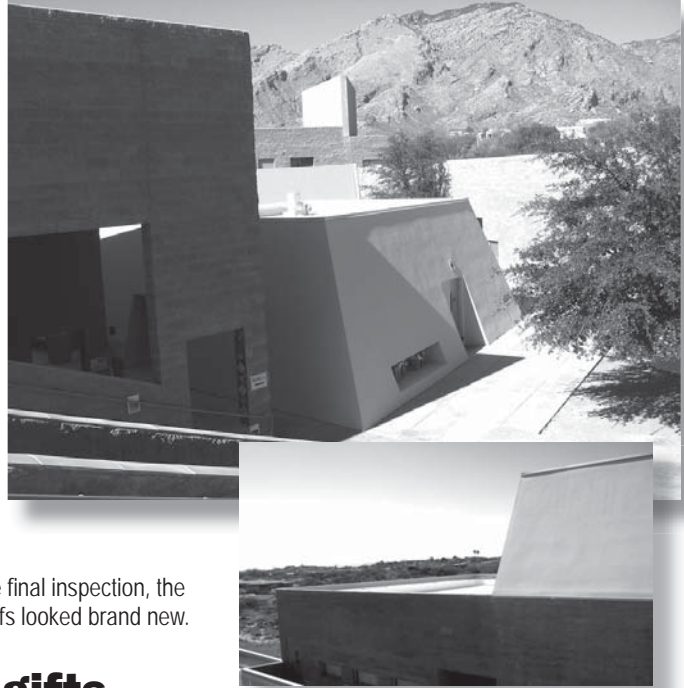
Navarro Roofing was awarded the contract to perform the necessary repairs and roof coating for two buildings at the Ventana Vista Elementary School on North Kolb Road. The challenge was to meet E-las-tek's 10-year roof coating warranty for two buildings at the Ventana Vista Elementary School. For precaution, the school architect requested all moisture issues be addressed first, starting with the roofs, then walls, and to insure positive drainage away from building structures. The school hired separate expert contractors to address and correct these issues.

The school's roof type is a low-slope, flat 8-year-old 4-ply system, and 90-pound fiberglass cap sheet with floor drains. Contractor Hernon Navarro inquired to see if E-las-tek's best roof coating, Solar Tek Extreme would meet the school's requirements. I explained to Hernon that the requirements of E-las-tek's Commercial 10-Year Limited Service-Life Warranty are for Solar Tek Extreme to be applied at a rate of 100 sq. ft. per gallon, per coat, with a minimum

measurement of 30 mil dry to qualify.

This project proved to be quite challenging for a number of reasons. The project was started in mid-January and completed early February. Weather factors, rain and freezing temperatures, multi-roof levels, and the need to allow modified emulsion and roof coating the proper curing time between applications all figured in the project.

When I performed the final inspection, the Ventana Vista School roofs looked brand new. Good job Hernon.



Mexico orphanages grateful for gifts

By Janice Ulrich

Smiles were everywhere as we delivered the 2006 Holiday donations to the two orphanages in Nogales Sonora Mexico in mid December. The girls and boys who live at these homes welcomed us with open arms. We are happy to report the living conditions of the orphanages have vastly improved over the years, thanks to ongoing donations from the Tucson area.

E-las-tek purchased new shoes and coats for each boy and girl, in addition to the wonderful donations from local contractors, friends, warehouses, and dealers. Thank you to all of you from the children!

E-las-tek worked with the Pima Community College staff to coordinate donations this year and drove in caravan with them to Nogales. We plan to work with PCC staff again this year to spread the burden of trying to outfit and give a gift to each of the 60-70 children at the orphanages. Our goal is to make each child feel special.

We'll begin this year's collections in September. Please let us know if you would like to "Adopt a Special Child" for whom you will purchase and wrap a few clothing items and a toy. We'll get the details out to you in the fall. Thanks again for your support!!



Get good adhesion results with thorough roof cleaning

By Rick Ulrich

Adhesion is the most important physical quality in a reflective roof coating. Nothing good can happen unless the coating remains well-adhered to the roof surface. Coatings are often applied to surfaces the applicator knows very little about. It helps to know when the roof was built, when it was last coated, exactly what products were used in making and preserving the roof, what contaminants may have settled on the roof, and so forth. To determine whether a specific coating is a good choice requires an adhesion test.

The best field test we are aware of is to apply 1-inch by 6-inch polyester roof fabric strips with the coating of preference to the subject roof using a three-coursing technique. Multiple strips should be applied to large roofs or where roof surface conditions vary. Leave 2 inches uncoated at one end. Allow four days in dry weather for coating to cure, longer if weather is cool or damp.

In our shop, we apply a piece of duct tape around the uncoated fabric end, punch a hole in the center of the taped strip, then use a

simple fish scale (an inexpensive digital model from Cabelas) to pull the fabric. Pull the scales vertically, slowly increasing the tension while watching the dial. Note the maximum pounds of resistance before the fabric suddenly tears free. Anything two-pounds or higher is fine. Even without a scale, fabric that releases with little pressure indicates a coating adhesion problem.

If the test surface was well cleaned before conducting the test and the test fails, a different coating should be tried. If the surface was not cleaned thoroughly, clean it again and retest.

Is testing required for every small, routine job? Maybe not, but the risk increases on larger roofs where adhesion failures could be very expensive to correct. Single-ply materials such as EPDM, PVC, TPO, Hypalon, modified bitumen, or unknown roofing materials should always be given an adhesion test. TPO is currently very difficult to coat and EPDM requires special preparation before coating.

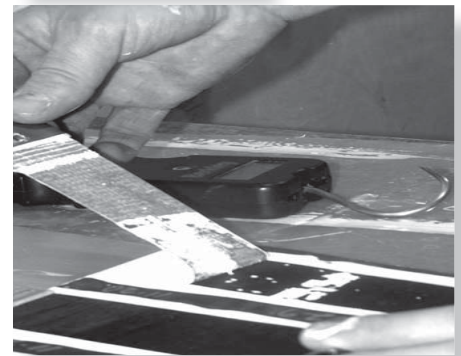
Appropriate cleaning of the entire roof surface will virtually always improve coating adhesion, and is imperative to minimize the chance of blisters and coating failures in ponding water areas. We will discuss proper cleaning more thoroughly in the next issue.

To see a demonstration of tear-off testing,



Left: Jerry Rockwell uses a fish scale to pull the fabric from a test-strip to determine the coating adhesion.

Below: Tear-off shows cohesion failure, but very strong bond.



please stop by our plant and Jerry Rockwell will review our techniques with you. Your E-las•tek sales and service rep could help you with this on a rooftop also.



New lab disperser saves time and money

Jerry Rockwell demonstrates how the Lab's new 1-gallon disperser unit functions. (Note: Safety glasses would be worn if Jerry was actually making a batch of test coating.)

The Model CM-100 Disperser will permit quick and highly accurate lab preparation of 1-gallon test products, saving the time and expense of making a 50-gallon minimum on the production floor when a sample is needed. The disperser grinds raw materials and resins at speeds up to 10,000 RPM.

E-las•tek to participate in national roof coating study

By Rick Ulrich

A major field weathering study of reflective roof coatings is being undertaken this year by the Reflective Roof Coatings Institute (RRCI). The purpose of the study is to measure the impact of various factors on the loss of solar reflectance in white coatings over time. White roof coatings have become the primary means of converting conventional dark roofs into cool roofs that save energy, roofing materials, and make a positive contribution to environmental quality. All white coatings lose reflectivity over time, and this is the first study to measure the significance of factors that influence the loss of solar reflectance.

Factors to be studied include the effect of various roof substrates, coating film thickness, different climates, and different coating types on reflectivity. Acrylic, polyurethane, and silicone chemistries will be applied to the six most common roof substrates at three different film thicknesses. Samples will be weathered in three climate zones — humid Southeast, colder upper Midwest, and arid Southwest. Periodically, over the three-years of the study, the panels will be tested for total solar reflectance by an independent third party and the results published.

E-las•tek is a member of RRCI and we will be responsible for the arid weathering samples. Coating samples are now being made in a Florida shop and should arrive for the start of exposure testing around April 1st. Study results are expected to be watched closely by State and Federal agencies that are working to improve energy efficiency, and will be useful to specifiers, roofers, and the public.

RRCI promotes the study, application, and performance of reflective roof coatings, and includes prominent coatings manufacturers from around the country as well as raw materials suppliers.

Solar reflectance is a comprehensive measure of reflected solar energy because it includes visible light, invisible ultraviolet, and infrared radiation. The often quoted *visible light reflectance* includes less than half of all solar radiation. The initial solar energy of white coatings are generally in the 80% to 86% range versus the 88% to 92% numbers often published for visible light reflectance.



Desert tan...it's different!

By Rick Ulrich

Desert tan roof coatings are popular and becoming more so each year. About one in five pails sold by E•las•tek is a tan coating.

While desert tan roof coatings tend to be similar to corresponding white coatings, there are differences in formulation that customers should know. The two major considerations for desert tan coatings are achieving the tan color that customers prefer and controlling the drying speed to ensure good adhesion.

The high titanium dioxide content that makes roof coatings white and energy reflective fight against colorants added to make it brown. Too much colorant can create water sensitivity and adhesion problems in the dry film. The solution is to reduce the titanium level while increasing a powder that does not have much color effect, allowing the use of less colorant. Because it contains less titanium, the applied tan coating is less solar reflective than a white coating and will have a shorter service life.

The two major considerations for desert tan coatings are achieving the tan color that customers prefer and controlling the drying speed to ensure good adhesion.

Tan coatings retain some titanium because it is helpful in slowing the solar damage that wear out the coating. However, over time, the tan color becomes lighter due to the accumulation of white powders on the surface where some of the resin binder has burned away. This same dynamic occurs on white roofs but is invisible. Customers should expect some lightening and improved solar reflectance, as tan coatings age. This is not a defect!

Tan roof coatings are often applied over asphalt emulsion or existing tan coatings. On very sunny days, the surface being coated can be hot causing the tan to dry very quickly. Once applied, the new coating attracts additional heat causing it to skin over. If drying is too fast, moisture can be trapped below the coating surface leading to future blisters. Additional water or glycol is used in manufacture to slow drying, however, customers should still apply tan coatings to cool



Jerry Rockwell measures the reflectivity of a coating that has been drawn-down onto a Leneta card. The instrument used is a spherical spectrophotometer.

roof surfaces early or late in the day or in overcast conditions.

Because of the changes noted here and the new chemistry introduced by colorants, tan coatings tend to have lower solids and slightly lower tensile strength than their white counterparts. Please keep this in mind when reading a product data sheet.

Gravel roof can be a weighty problem

By Steve Mink

Roofs are built in many different ways. In Tucson, BUR (built-up), tile, and shingle seem to be most popular. In Phoenix, tile, foam, and shingle prevail. In Albuquerque, New Mexico, the gravel roof is king.

Gravel roofs have been around for many years and some people swear by them. However, they can become a homeowner's nightmare. Gravel roofs are comprised of fiberglass plies mopped on plywood with hot asphalt. Then a flood coat of hot asphalt is applied and immediately covered with gravel. The gravel, or 'ballast' as it is sometimes referred to, is to protect the flood coat from the sun's UV rays. While this is great in theory, this type of roof is difficult for homeowners to maintain.

We recently hosted a display booth at the Albuquerque Home and Garden Show and discussed gravel roofs with many in attendance. We listened to many, many complaints from homeowners searching for leaks they could not find in their gravel roofs; this has been one of the wettest years for Albuquerque, with lots of snow that, in some cases, meant shoveling off the roof.

Elusive leaks is only one of the common problems of a gravel roof. Other problems are caused by the fact that gravel is heavy and dirt accumulates in the gravel, hindering drainage. Gravel also absorbs heat that effects cooling cost

in the summer. (Albuquerque can get over 100 degrees.)

E•las•tek recommends that homeowners convert their gravel roofs in good condition to a lightweight easy-to-maintain coated roof.

The most difficult step to changing from a gravel roof to coated is that the gravel has to be removed (unless it is embedded in the flood coat). No matter how hard you work, a small amount of gravel will remain embedded, but you need to remove as much as possible to assure adequate coating adhesion.

Once the gravel is removed, the roof needs to be thoroughly cleaned and patched. Next, the surface needs to be renewed. This is accomplished by applying two coats of asphalt emulsion and letting it cure to manufacturer's specifications. Finally, apply two coats of E•las•tek roof coating to complete the transformation.

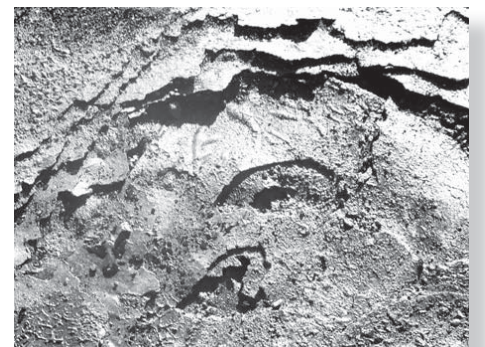
For homeowners who do not want to take on this task, we recommend licensed roofing contractors who could do the job for them.

Though we're seeing fewer gravel roofs on new homes, there are still many homes that can benefit from the conversion to a lightweight cool roof with E•las•tek.

For more information, ask for our brochure on *How to Coat a Gravel Roof*, or check the bulletin online at www.elastek.com.



These photos of gravel roofs taken in Albuquerque show the wear of a wet winter with an abundance of heavy snow.



Recycling — Are you doing your part?

By Leilani Rothrock

The United States leads the world in producing garbage or solid waste. Even compared to other wealthy industrialized countries such as Japan or countries in Europe, we generate twice as much solid waste per capita. This is not a record we should be proud to hold.

At Tucson's Los Reales landfill, more than 2,000 tons of garbage arrive every day, much of it recyclable. First of all, building a landfill today costs taxpayers millions of dollars. Then the City of Tucson spends precious money to bury material it could be selling to recycling companies. The good news is that with Tucson's blue barrel program we have increased our recycling rate from 9% when the Tucson Recycles program was implemented in 2002 to 23% today. The bad news is that although recycling has been growing steadily over the last 20 years, Tucson is way below the national average.

Recycling saves natural resources, creates jobs, earns money for the City, and diverts materials from local landfills. Each one of these items affects us personally, but let's focus on earning money for the City. The last annual report of Tucson's Environmental Services states that approximately 50,000 tons of recyclables were diverted from the landfill over the last fiscal year. The sale of these recyclables created \$1.4 million in revenue for the City. If we hadn't recycled, the cost to the City of dumping those materials would have been \$1.1 million. Bottom line, recycling efforts netted a \$2.5 million savings to the City of Tucson!

At a time when the City Council is talking about raising the City sales tax, why don't we think about creating more City revenue from recycling? There are 15 Neighborhood Recycling Centers in Tucson and most of us have curbside recycling available. I hear a lot of excuses as to why people won't recycle and yet I believe that it takes no more effort to recycle than to throw



something away. It does take a thought and a plan. **Learn what is on the recycle list and make an effort to get it in the right barrel.** (See www.tucsonrecycles.org for detailed list and more information.)

Recycling at work is just as important and is simple once you make it a routine. Investigate the possibility of having a recycling bin at your workplace or learn where the Neighborhood Recycling Centers are located and incorporate a weekly drop off into your regular driving routes.

Please, do your part to increase recycling in Tucson!



Leilani makes sure that E-las•tek employees recycle all clean cardboard, junk mail, office paper, newspaper and plastic bottles that are part of operating E-las•tek on a daily basis. There are several drop-off points located around the building to allow our employees to deposit

items as soon as they are identified as recyclable. Convenience is one of the first hurdles to overcome to get members of a business to cooperate. E-las•tek employees are even encouraged to bring recyclables from home and use the company dumpster if they don't have curbside recycling.



WELLNESS CORNER

By Leilani Rothrock

Trying to quit smoking?

GET MOVING!



Kicking butt in a cardio-conditioning class will help you kick your cigarette habit. A recent study at Medical Fitness Team in Vienna, Austria, found that after three months, 80% of smokers who did a cardio and strength-training workout three times a week while using a nicotine-replacement therapy of their choice (patch, gum, or inhaler) were able to give up smoking. Only 52% of those who used nicotine replacement alone were successful in quitting. Plus, unlike such tools as prescription medications, exercise has no negative side effects.

Take a cue from the research lab and walk, cycle, jog, and lift your way to a smoke-free and strong, fit body.

This method also helps with the concern of putting on pounds. Focus on two things:

1. Get more active
2. Let healthy foods become your new vice

The increased activity can help offset weight gain associated with smoking cessation and also reduce the craving for cigarettes. Clearing out junk foods and stocking up on fruits, vegetables, yogurt, and nuts can also help you avoid temptation while improving the odds you'll quit smoking and keep the pounds off.

Make 2007 the year—pick a date and start!

What do you mean you can't come to work because of snow?

By Todd Myers

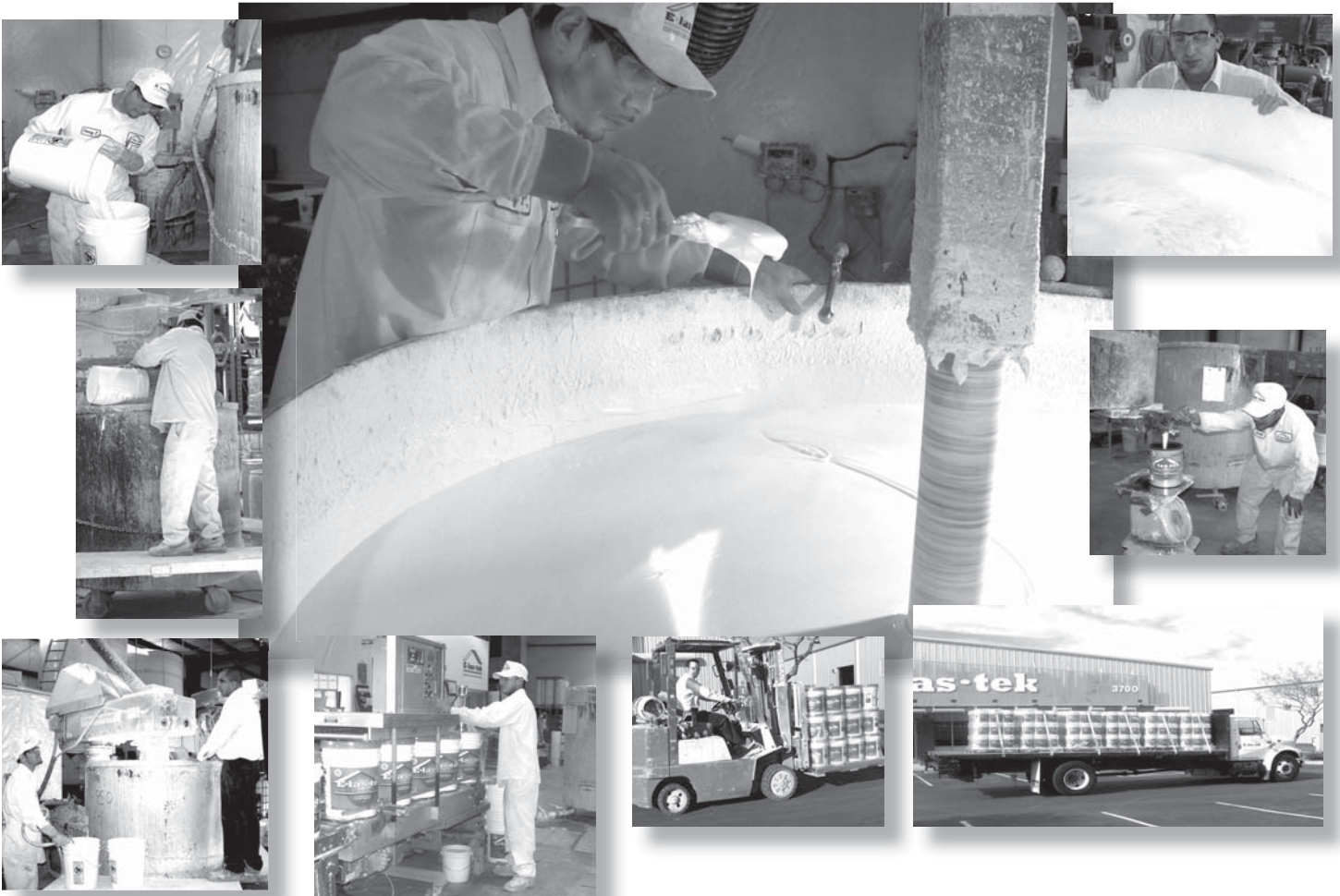
A SNOW day ... what's that? Well it's true, it does snow in Tucson, Arizona.

On the eve of January 21, the skies opened and dumped snow over most of the State, as a cold front



moved through. It was a pretty sight the next morning, but it was difficult for most everyone to get to work due to bridge closures, kids staying home from school, and other traffic issues.

Of course, the snow soon melted in most areas and it turned into a beautiful sunny day, leaving little-to-no evidence behind.



Is it soup yet? Just another day in production...from batching to delivery

That E-las-tek roof coating you bought did not just get all creamy, smooth, and elastomeric and pour itself into our pretty 5-gallon pails. To make the coating, it takes at least a half-dozen very skilled members of our production crew, working dilligently with several highly specialized machines and following dozens of

precise formulas and protocol each day to assure that every coating and product manufactured in the E-las-tek shop is processed to exact specifications. That translates to quality roofing products for our customers.

From measuring raw materials, to batching, filling pails, loading pallets and the truck, to

delivering to you, it's a well-oiled routine, supervised by Robert Yrigoyen. Crew members include Danny Samorano, Danny Portillo, Bernie Johnson, and Jason LaPrel.

So here's to all the hands-on quality workmanship that goes into each product we sell. Thanks guys!

E-las-tek Culture & People win a SASIE Award

We've never exactly thought of ourselves as 'sassy' ...or 'SASIE' as the award is named. We soon learned that 'SASIE' is the Southern Arizona Small Business Association's acronym for *Southern Arizona Smart Inspiring Enterprises*. Now that's more like it!

Late last year E-las-tek was nominated for a SASIE Award in the Culture & People category, and by January, we learned we were a finalist. On Tuesday evening, March 6, ASBA hosted the gala awards cetermony at the classic Fox Theatre in downtown Tucson. And E-las-tek was named the winner of the Culture & People SASIE in the 11-to-25-employee category!

Janice Ulrich accepted the award for the company, and thanked the E-las-tek staff, many who were present with family and friends, for their ongoing role in maintaining the integrity and ethics of the business.

We already knew that E-las-tek's culture and people are the best, the award just confirms that others realize it too. Now we're SASIE-fied!



Springtime is 'Prime Time' for E-las-tek retailers – are you ready?

By John Richard

With intense summer heat just a few short months away, it is now the peak selling season for E-las-tek's retail dealers. This year will mark our 4th annual Spring Super Sale, with heavy promotion of Solar Tek Extreme in radio, TV and print media. In addition to southern Arizona, we will be launching advertising campaigns in new markets around the state, including Yuma and the Phoenix Metro area.

Approximately half of all roof coating sold during the year will be bought in the three to four Spring months. It is critical that you focus efforts now to maximize your annual sales of E-las-tek coatings. Remember, the 'big boxes' will gladly take those sales you leave on the table!

To make sure your store is ready to take advantage of this once-a-year spike in retail sales, we recommend looking over the following checklist:

- **Product in Stock** – While this seems like a no-brainer, some stores are often caught off guard by the surge in demand for roof coatings. Remember, a simple recoat of a small house will take three to five 5-gallon pails, plus Crack & Joint Sealant, and Polytek fabric. Also, don't forget to have extra brooms, roller frames, covers, and extension poles on hand.
- **Prominent Displays** – Roof coating sales can make a significant impact on a store's profitability, and sales will benefit from a prominent display. Consider end-caps, pail pyramids, and pallets in high visibility areas of the store. Empty display pails are available at no charge.
- **Literature/Video Near Product** – No matter how knowledgeable your sales staff, there are some customers who want to inform themselves, without assistance. Always keep a supply of our

pamphlet, *Basic Instructions & Selection Guide* near the product (also available in Spanish). It's a simple, yet informative tool for increasing sales and ensuring the customer's application goes smoothly. Also, consider letting E-las-tek's Training Video run continuously on a monitor near the display. It's available in both VHS and DVD formats. And don't forget to refer customers to our website, www.elastek.com for detailed how-to bulletins, product sheets, MSDS, and more.

- **Train Your Staff** – E-las-tek offers free, in-store annual training to its dealers. While the training video is an excellent introduction to our products, live training sessions allow for Q&A and hands-on product experience.

For literature, videos, pails, training, or other help getting your store ready for E-las-tek Prime Time, contact your E-las-tek sales representative or call us at 1-866-ELASTEK.

E-las-tek steals the show with its new display booth

By Todd Myers



E-las-tek's on-the-road presence has a new look, thanks to a new trade show display. New 'life-size' graphics have been added to attract attention across the crowded show halls, and the show is brought to life with the addition of a selection of visual presentations.

Our new electronic presentations provide eye-catching visuals to draw show-goers into the booth. We've produced several continuous-loop slide shows, PowerPoint presentations, and utilize our training video to project on to a 24-inch flat-panel high-definition monitor, controlled by a new laptop.

The *jobing.com* recruitment fair, held at the Tucson Convention Center in January was the premiere of the new E-las-tek booth. We experienced a much more favorable response from attendees at this year's event, as evidenced by the quality resumes we accumulated at the show. Several show-goers commented that the E-las-tek booth was, by far, the best booth at the show, and we'd have to agree.

The new display has since been showcased in Phoenix for the TAP show and at the Albuquerque's Home & Garden Show with the same overwhelming interest.

TekTalk

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