

Cool Colored Shingle Initiative

Lessons Learned

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Quick Facts - Experience

- **All GAF-Elk Cool Colored Shingles have been certified at 25% reflectance or above by an AITL and are listed by the CRRC.**
- **Samples of all Cool Colored Shingles have been submitted to the Atlas Test Farm for aging through the CRRC program.**
- **Samples exposed for 23 months have shown no significant loss in reflectance.**



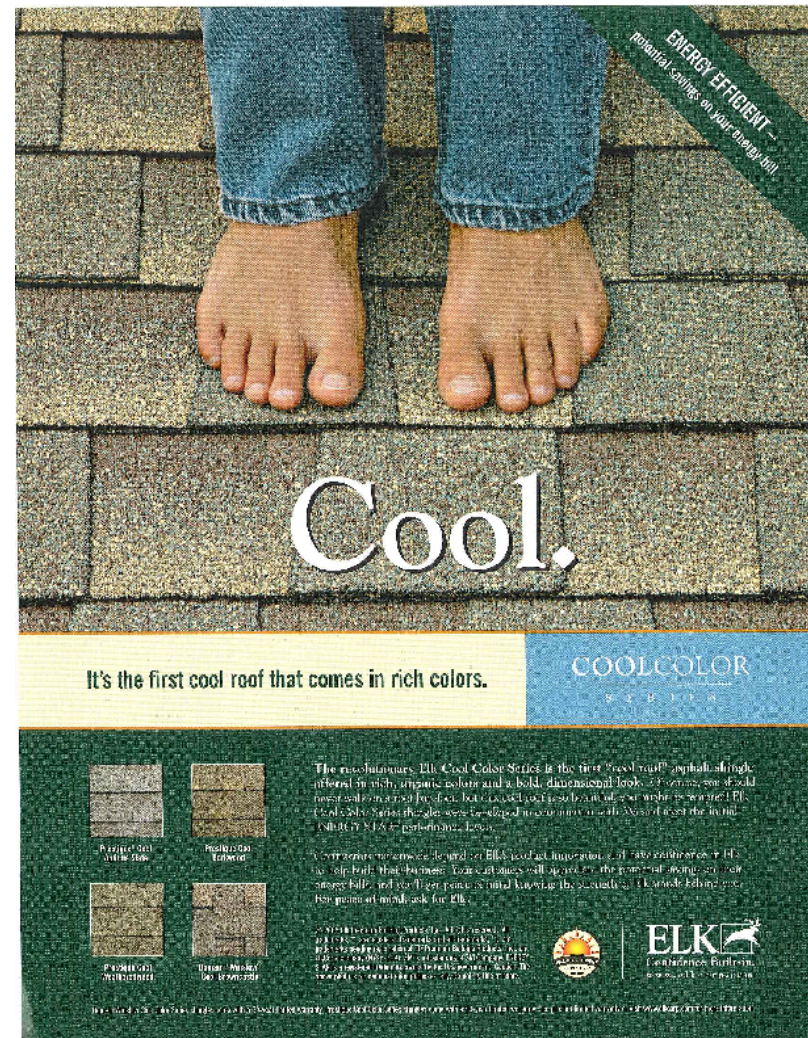
Products In Market Today

Maintain Reflectance Overtime

Shingle	Solar Reflectance Initial	Solar Reflectance Aged – 2 yr	Thermal Emittance Initial	Thermal Emittance Aged – 2 yr
Cool Weatheredwood	0.26	0.26	0.92	0.92
Cool Barkwood	0.27	0.26	0.92	0.93
Cool Antique Slate	0.27	0.27	0.92	0.91

Quick Facts - Experience

- Products launched in March 2005
- Products actively promoted in the industry, including advertising in various roofing magazines.
- Reception has been mixed.
- Sales... less than 1600 homes since introduction





Barriers To Greater Success

- Limited Color Palette... due to 25+ reflectance requirement

Reflectance of "20" Allows Full Range Of Shingle Colors Consumers Want

Color Intensity vs. Solar Reflectance



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Cool Colored Shingle Implementation



Barriers To Greater Success

- Limited Color Palette... due to 25+ reflectance requirement

- High Costs
 - Slows manufacturing process by as much as 1/3
 - Requires higher usage of much more expensive reflective granules

- Logistic Difficulty... double inventories, product complexity and increased storage issues; complications for builder, distributor and contractor



What We Recommend To Help Assure Success

Modify the shingle requirement to allow greater color choice and lower cost.

- Reflectance: 20% minimum
Emittance: 0.75 minimum
OR
- SRI: 16

Same Requirements for new construction and alterations

Require the use of cool roofing products only in climate zones where economic justification can be made.

- California Zones 10-15 (New construction and alterations).



What We Recommend To Help Assure Success

Why?

1. Colors Consumers Want... allows broad selection; reduces complexity in the marketplace.
2. Reasonable Investment... more efficient manufacturing and logistics; more acceptable consumer value
3. Environmentally Effective... approximately double the current reflectance of shingles in the market; better than Energy Star™



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QUESTIONS?