

# Technical Committee Update



Membership Meeting  
June 13, 2013



# Technical Committee Roster 2012-2013

Voting Member	Company	Alternate	Company
Bill Kirn	Quest Construction Products	Paul Riesebieter	Soprema
Ronnen Levinson	Lawrence Berkeley National Laboratory	Hashem Akbari	Concordia University
Andre Desjarlais	Oak Ridge National Laboratory	Rhonda Byrne	Intertek
Gary Whittemore	Sika Sarnafil, Inc.	Mike Ennis	Single-Ply Roofing Industry (SPRI)
Bill Morgan	Malarkey Roofing	Darrel Higgs	DPH Consulting
Scott Kriner	Metal Construction Association	Chuck Praeger	Metal Building Manufacturer's Association
Richard Slomko, Chair	Atlas Material Testing Solutions	Matthew Friday	Q-Lab Weather Research Service
Ted Best	Valspar	Mark Thimons	American Iron & Steel Institute
Jay Cruz	Boral Roofing	Rick Olson	Tile Roofing Institute
Kurt Shickman	Global Cool Cities Alliance	Payam Bozorgchami	California Energy Commission
David Roodvoets	DLR Consultants	Cindy Campbell	Momentum Technologies
Steve Lawrey	CertainTeed Corporation	Ingo Joedicke	Specialty Granules, Inc.
Kurt Sosinski	Tremco, Inc.	Tim McQuillen	Firestone Building Products
Greg Peterson, Vice-Chair	Eagle Roofing	Yoshi Suzuki	MCA Clay Tile
Hal Leland	Western Colloid	Frank Klink	3M
Dave Yarbrough	R&D Services, Inc.	Tyler Westerling	Architectural Testing, Inc.



# **2012-2013 Updates & Accomplishments**



# CRRC Funded Research

- CRRC Board allocated \$15,000 for 2013 research projects
- Funded projects
  - Electronic thickness gage round robin
  - E1918 precision & bias study
  - Directionally reflective product ratings
  - **Aggregate reflectance study**



# **Interlaboratory Comparison**

- Included AITLs and AMTLs
- Results showed high consistency between labs' reported values
- Reduction in reporting errors from 2011
- Staff investigating outlying data points





# Changes to Sample Requirements

- Sample size measured to confirm CRRC minimum dimensions\*
  - Tolerance +/- 1 inch per side
  - Measured to nearest ¼ inch
  - Confirmed on Test Results Report (F-2)
- New samples cannot be held without exposure longer than six months

\* To be approved by Board

# Approved Test Methods

Added:

Electronic gage coating thickness

- ASTM D7091 – *Standard Practice for Nondestructive Measurement of Dry Film Thickness of Nonmagnetic Coatings...*





# Approved Test Methods

Added:

Best Practices for Sample Handling\*

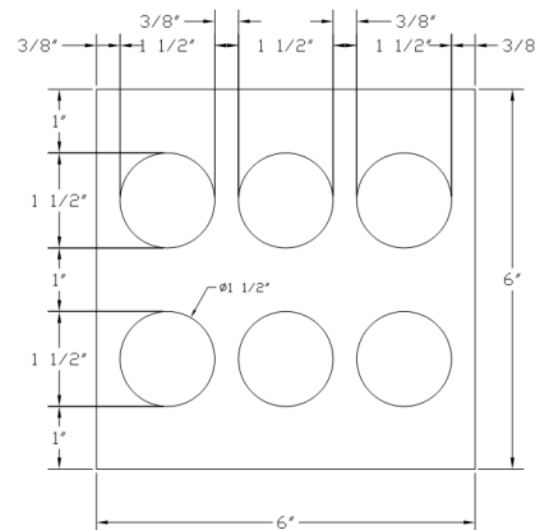
- ASTM G147 – *Standard Practice for Conditioning and Handling of Nonmetallic Materials for Natural and Artificial Weathering Tests*

\* To be approved by Board



# Tile Test Method Update

- Aged measurement point locations same as initial for Template Method
- Randomly selected points are exempt



- Informed by RCMA and RRCI sponsored studies
- Field-applied coatings will be tested and aged on smooth and rough substrates
- Logistics and implementation date TBD by Technical Committee

# Variegated Shingle Test Procedure

- Prepared mono-color shingles tested and aged
- Variegated shingles (final product) initially tested
- Aged SR and TE values calculated based on percentage of granule make-up

Granule Color	Reflectance	Section 1	Section 2	Overall
A	0.30	10.0%	45.0%	37.1%
B	0.38	0.0%	0.0%	0.0%
C	0.30	70.0%	32.5%	33.0%
D	0.28	0.0%	0.0%	2.7%
E	0.28	0.0%	22.5%	25.1%
F	0.25	<u>20.0%</u>	<u>0.0%</u>	<u>2.1%</u>
Total		100.0%	100.0%	100.0%



# Cedar Test Method

- Test method confirmed by Technical Committee
- No longer “interim” designation





# Default Thermal Emittance Values

- Technical Committee proposed assigning generic TE values for tile products
- Not approved by Board, under further discussion and investigation





# **Current Studies & Technical Issues**





# E1918 Precision & Bias

Laboratory  
testing  
(complete)

Analyze  
study data  
with ASTM

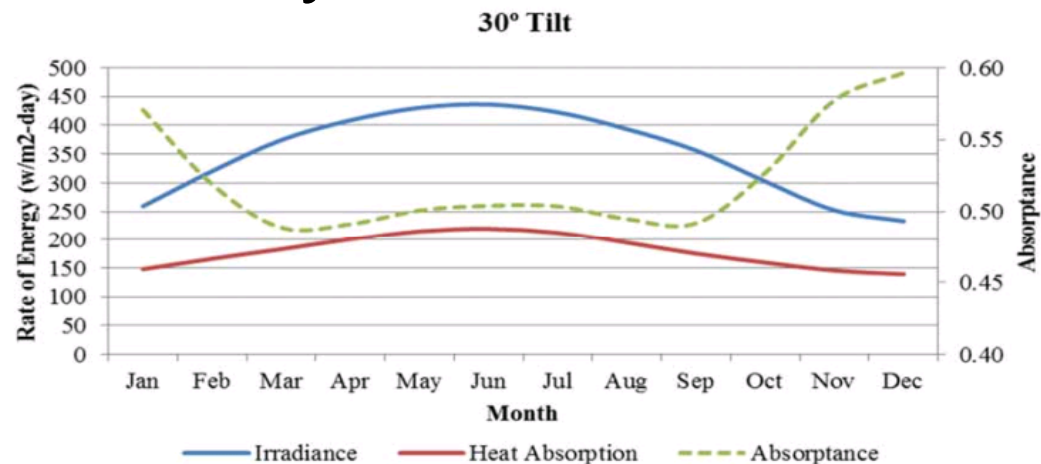
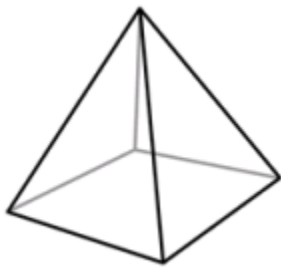
Develop  
P&B  
statement

Update  
E1918  
standard



# Directionally Reflective Products

- Developing a rating and labeling method for directional products
- Partnering with Hashem Akbari at Concordia University



# Aggregate Reflectivity

- Researching testing and rating methods for aggregate and ballast products
- Collaboration with Lawrence Berkeley Lab and A-1 Grit Company





# **ASTM E408**

## **Consideration**

- Collaborated with device manufacturers to update E408
- Revision submitted to ASTM Committee for approval
- Technical Committee to reassess revised E408





# Method Evaluation

- Evaluating Slide Method impacts via round robin study
- Investigating if retesting of CRRC products is required
- Will determine technical requirements of retesting if needed



# CRRC-1 Test Method 1 Precision Statement

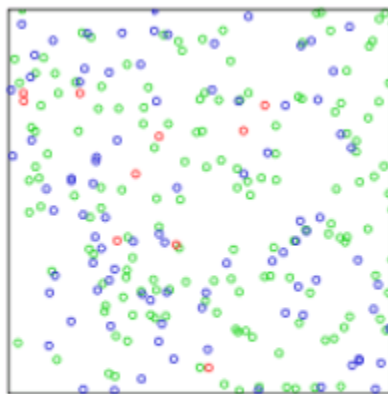
- Conducting precision study for CRRC-1 Test Method 1
- Will evaluate repeatability and reproducibility
- Study on hold until round robins completed



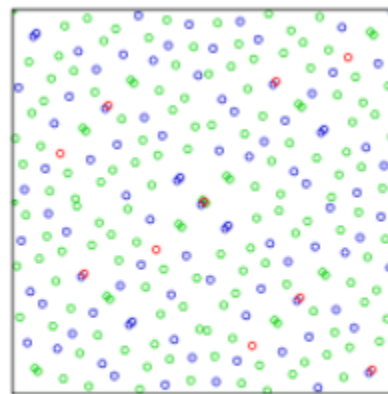


# Test Method #1 Point Selection

- Investigating quasi-random point selection technique
- Goal is to have faster convergence of standard error



[Pseudorandom sequence]



[Low-discrepancy sequence (Sobol sequence)]



# Upcoming Technical Committee Meetings

- August 8 – Conference call
  - 2 hours (10 a.m. – 12 p.m. Pacific)
- October 24 – In-person
  - San Francisco, CA
  - All day
- Contact [jeff@coolroofs.org](mailto:jeff@coolroofs.org) to attend

