



Technical Committee Update

Membership Meeting
June 27, 2012



Technical Committee Roster 2011-2012

Voting Member	Company	Alternate	Company
Bill Kirn	National Coatings	Tim Kersey	Siplast
Ronnen Levinson	Lawrence Berkeley National Laboratory	Hashem Akbari	Lawrence Berkeley National Laboratory
Andre Desjarlais	Oak Ridge National Laboratory	Bill Miller	Oak Ridge National Laboratory
Stan Graveline	Sika Sarnafil, Inc.	Mike Ennis	SPRI
Bill Morgan	Malarkey Roofing	Darrel Higgs	DPH Consulting
Scott Kriner, Chair	Metal Construction Association	Chuck Praeger	Metal Building Manufacturer Association
Richard Slomko, Vice Chair	Atlas Material Testing Technology	Matthew Friday	Q-Lab Weather Research Service
Ted Best	Valspar	Mark Thimons	American Iron & Steel Institute
Wade Shepherd	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
Richard Allan Snyder	CertainTeed Corporation	Tim McQuillen	Firestone Building Products
Kurt Sosinski	Tremco, Inc.	Ingo Joedicke	ISP Minerals Inc
Greg Peterson	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.



2011-2012 Updates & Accomplishments



2012 Research & Study Budget

- CRRC Board allocated \$90,000 to support research in 2012
- Currently funded projects
 - Electronic thickness gage round robin
 - E1918 precision & bias study
 - Directionally reflective product ratings



AITL Interlaboratory Comparison

- Updated inaccurate title of “Round Robin”
- Study results compared to other labs and database values for same products
- 2011 Study results showed high consistency between labs
- Plan to integrate AMTL labs into process for 2012 comparison



Random Testing +/- Threshold

- Random testing results must now be within +/- 0.05 to pass
- Formerly only lower threshold enforced
- Cedar/ extruded polymer product compound ratings held only to lower threshold



Changes to Test Results Reports

- Reporting ambient conditions (temperature, relative humidity)
- All nine initial samples tested for all products
- PDF form performs calculations and checks for errors automatically



Color Family Table Update

- Adjustments to the Color Family Table for Dark Blue's Hunter L range and Medium to Light Brown's Hunter b range

TABLE 1: CRRC Color Families and Characteristics

	Color Family	Hunter "L" range	Hunter "a" range	Hunter "b" range	Default SR	Default TE
1	Red	17 to 29	+7 to +36	0 to +15	0.25	0.83
2	Terra Cotta	20 to 38	+15 to +30	+6 to +16	0.35	0.83
3	Bright Red	23 to 38	+35 to +49	+10 to +48	0.35	0.83
4	Beige / Off-White	59 to 86	-5 to +5	-3 to +23	0.55	0.83
5	Tan	51 to 65	-2 to +7	+6 to +21	0.45	0.83
6	Dark Blue	13 to 35	-7 to +6	-25 to -2	0.25	0.83
7	Med to Light Blue	34 to 55	-12 to -3	-25 to -8	0.32	0.83
8	Dark Brown	17 to 30	-1 to +9	0 to +10	0.25	0.83
9	Med to Light Brown	25 to 58	-2 to 17	+2 to +26	0.32	0.83
10	Dark Green	18 to 45	-20 to -3	-25 to +11	0.25	0.83
11	Med to Light Green	24 to 70	-20 to 0	-25 to +11	0.32	0.83
12	White	76 to 89	-3 to +2	-3 to +10	0.65	0.83
13	Bright White	>85	-3 to +1	-3 to +6	0.70	0.83



Interim Cedar Test Method

- Uses Test Method 1 across a range of naturally occurring wood colors
- Interim status to be reassessed in 2013

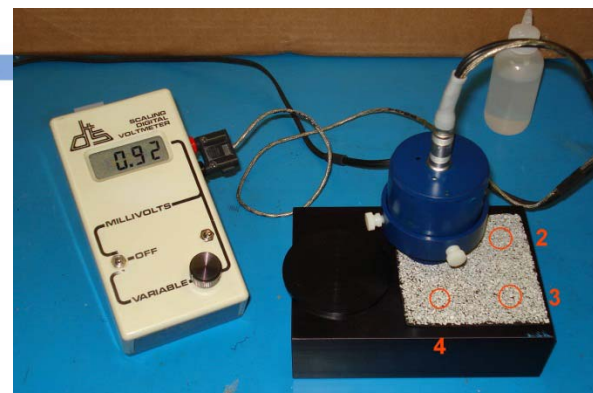


Reflectometer Study

- Three rounds of comparisons between Devices & Services v5 and v6 instruments
- Technical Committee found differences to be not significant
- Version 6 devices must be run in v5 emulation mode



Slide Method



- C1371 not developed for products of high thermal resistance
- Slide Method study showed increased precision for all product types
- Slide Method approved for all products except coatings on uninsulated metal panels



Current Studies & Technical Issues



Electronic Thickness Measurement Devices

- Study compares micrometer to electronic thickness gage
- Received CRRC research funding to purchase shims of a known thickness
- Results will be analyzed at a future TC meeting





E1918 Precision & Bias Study

- Developed in partnership with ASTM
- Received CRRC research funding to purchase instruments and pay lab time
- Two instruments, 3 samples & 7 labs
- Results expected late 2012
- May influence changes to E1918



Exhibit 3 - Annual Membership Meeting 2012



Directionally Reflective Products

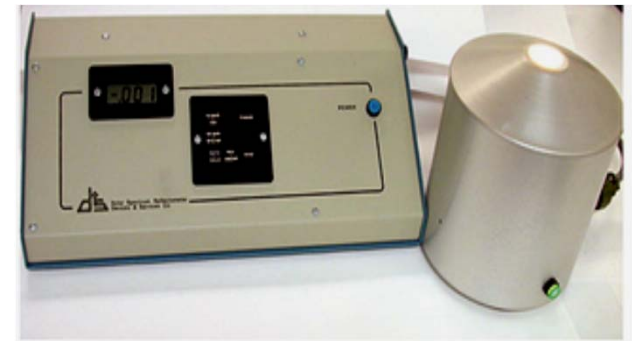
- To develop a rating method for directional products
- Received CRRC research funding to support grad student for one year
- Partnering with Concordia University





CRRC-1 Test Method 1 Precision Statement

- Conducting precision study for CRRC-1 Test Method 1
- Evaluate repeatability and reproducibility





Curved Tile/Aggregate Thermal Emittance

- Evaluate challenges to measuring thermal emittance for some product types
- Consideration if assigned default value is appropriate



Exhibit 3 - Annual Membership Meeting 2012



ASTM E408 Consideration

- Working with device manufacturers AZ Technology and Surface Optics to update E408 to include new devices & hemispherical emittance
- Technical Committee to reassess E408 for use in CRRC





Solar Working Group

- Working group investigating synergy between photovoltaic panels and cool roofing





NIST Traceable Standard for Emittance

- Approaching National Institute of Standards and Technology (NIST) to develop a traceable standard for thermal emittance





Method Evaluation

- Evaluating impacts of changes in test methods on CRRC ratings
- Determine if retesting of all/some of CRRC products is required
- Will determine technical requirements of retesting if needed



Upcoming Technical Committee Meetings

- August 8 – Conference call
 - 2 hours (10 am – 12 pm PT)
- October 31 – In-person
 - Denver, CO
 - 8 hours (9 am – 5 pm)



Questions

