WALL RATING WORKING GROUP

Conference Call
May 13, 2020

CRRC ANTITRUST STATEMENT

Although the Cool Roof Rating Council is a broad-based 501 (c) 3 organization, it does include numerous competitors in the roofing industry and thus care must be taken to scrupulously abide by federal and state antitrust laws. As you know, the CRRC has in effect Antitrust Compliance Guidelines. Members should remember that antitrust compliance is important at all times whether at formed meetings such as this or in social settings. At this and other CRRC meetings participants should not discuss sensitive issues including pricing, profitability, payment terms, and allocating markets or customers or anything else recommended against in the antitrust guidelines.

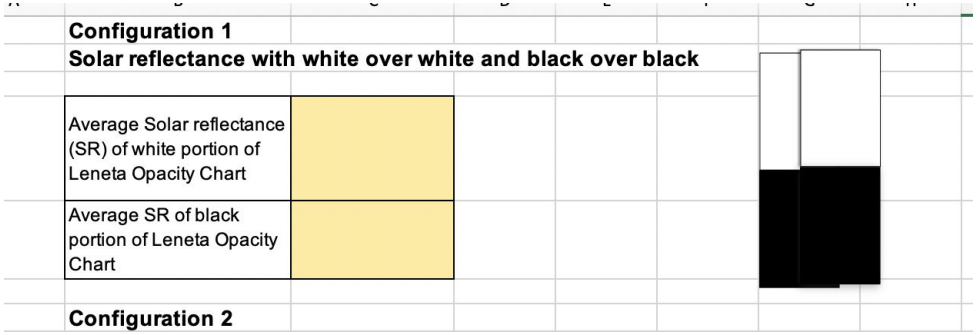
TODAY'S AGENDA

Topic	Time
Substrate primer testing check-in	5 min
Results of textured product testing	40 min
Color Family discussion	35 min
Wrap-up and next steps	5 min

SUBSTRATE PRIMER TESTING

CHECKING IN

- Goal: Observe differences in solar reflectance of paint colors with and without primer over Leneta Opacity Chart
- Status of testing
  - Who still plans to conduct this testing?
  - Timeline?



Configuration 1	
Solar reflectance with white over white and black over black	
Average Solar reflectance (SR) of white portion of Leneta Opacity Chart	
Average SR of black portion of Leneta Opacity Chart	
Configuration 2	

TEXTURED PRODUCTS TESTING SUMMARY

OVERVIEW

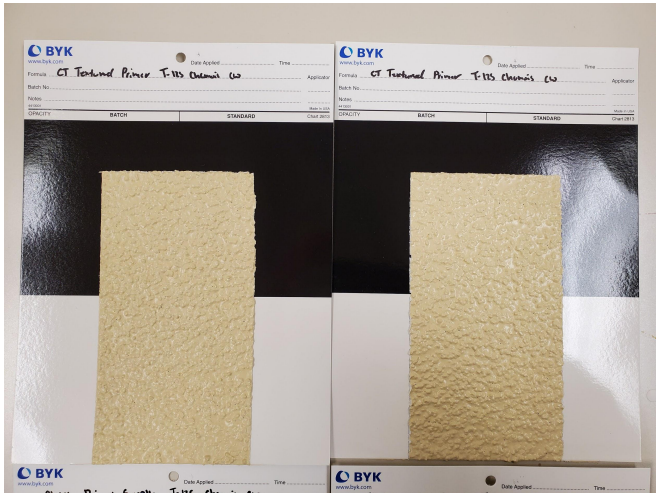
1. Testing conducted by Tnemec/Tex-Cote
2. Testing on textured samples donated by Life Paint
3. Testing on stucco samples donated by stucco manufacturer

GOAL

- Understand effect of substrate texture on SR
  - If no significant difference: smooth is fine
  - If significant difference: be conservative (rough)
- Strongly prefer **one** substrate to utilize for ratings
- Substrate must be consistent, durable, and transportable

TNEMEC/TEX-COTE TESTING

- Compare SR of a topcoat applied over smooth vs. textured primer
  - Topcoat thickness and primer thickness kept constant



TNEMEC/TEX-COTE TESTING

- Very little difference due to substrate color or texture

	Black substrate	White substrate
Smooth specimen 1	0.64	0.65
Smooth specimen 2	0.64	0.64
Textured specimen 1	0.63	0.62
Textured specimen 2	0.63	0.62

LIFE PAINT TESTING

- Light, medium, and dark gray samples
  - Four 12” by 12” prepared specimens of varying textures in each color
    - Smooth, Medium, Medium-Heavy, Heavy (lace)
  - Leneta drawdown of each color

LIFE PAINT TESTING

Comparison of textures

LIFE PAINT TESTING

	Average Solar Reflectance				
	Drawdown	Smooth	Med.	Med.-Heavy	Heavy (Lace)
Light Gray	0.55	0.54	0.50	0.49	0.47
Medium Gray	0.37	0.36	0.32	0.32	0.31
Dark Gray	0.18	0.18	0.16	0.16	0.16

LIFE PAINT TESTING

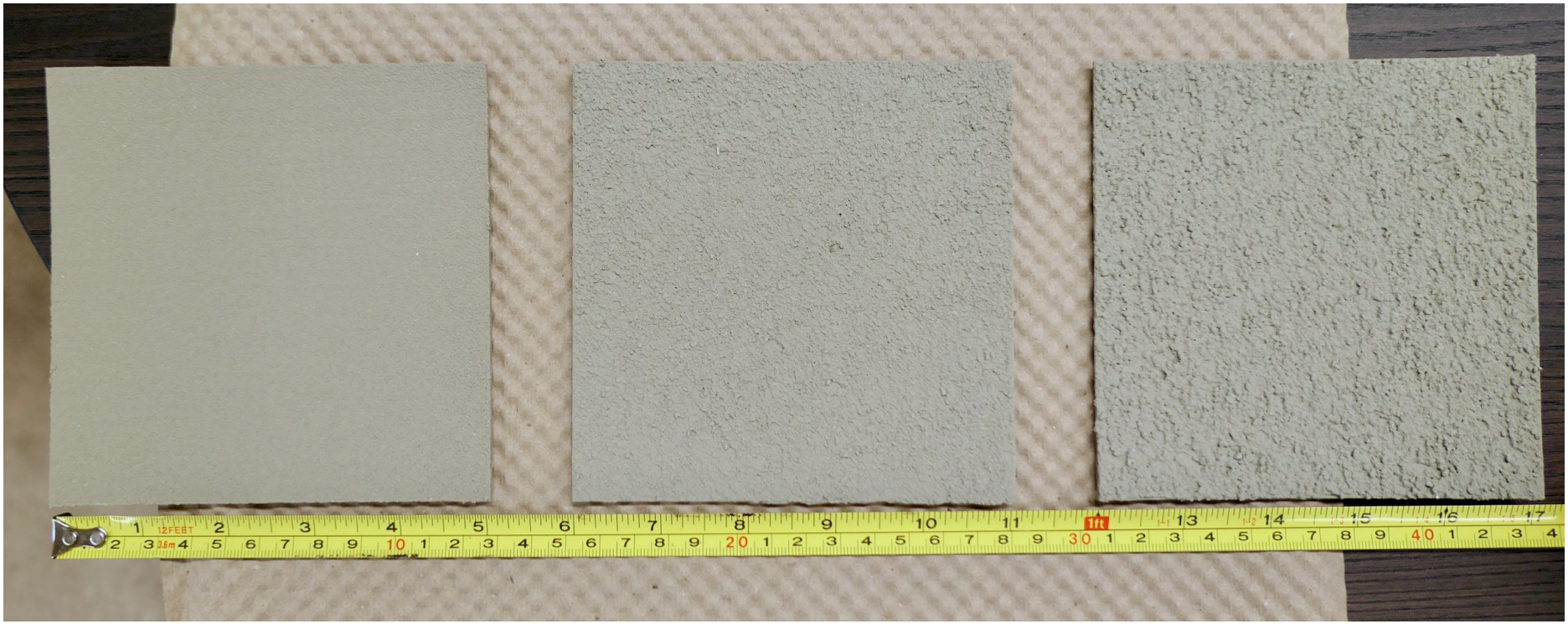
	Average Solar Reflectance			SR Difference	
	Drawdown	Smooth	Heavy (Lace)	Drawdown vs. Heavy	**Smooth vs. heavy**
Light Gray	0.55	0.54	0.47	0.08	**0.07**
Medium Gray	0.37	0.36	0.31	0.06	**0.05**
Dark Gray	0.18	0.18	0.16	0.02	**0.02**

STUCCO TESTING

- Acrylic-based finishes
  - Two colors: White and Gray
  - Three textures: Fine, Medium, Coarse
- Cement-based stucco finish
  - Two colors: Yellow and Gray
  - Varied textures
- All specimens 5” by 5”

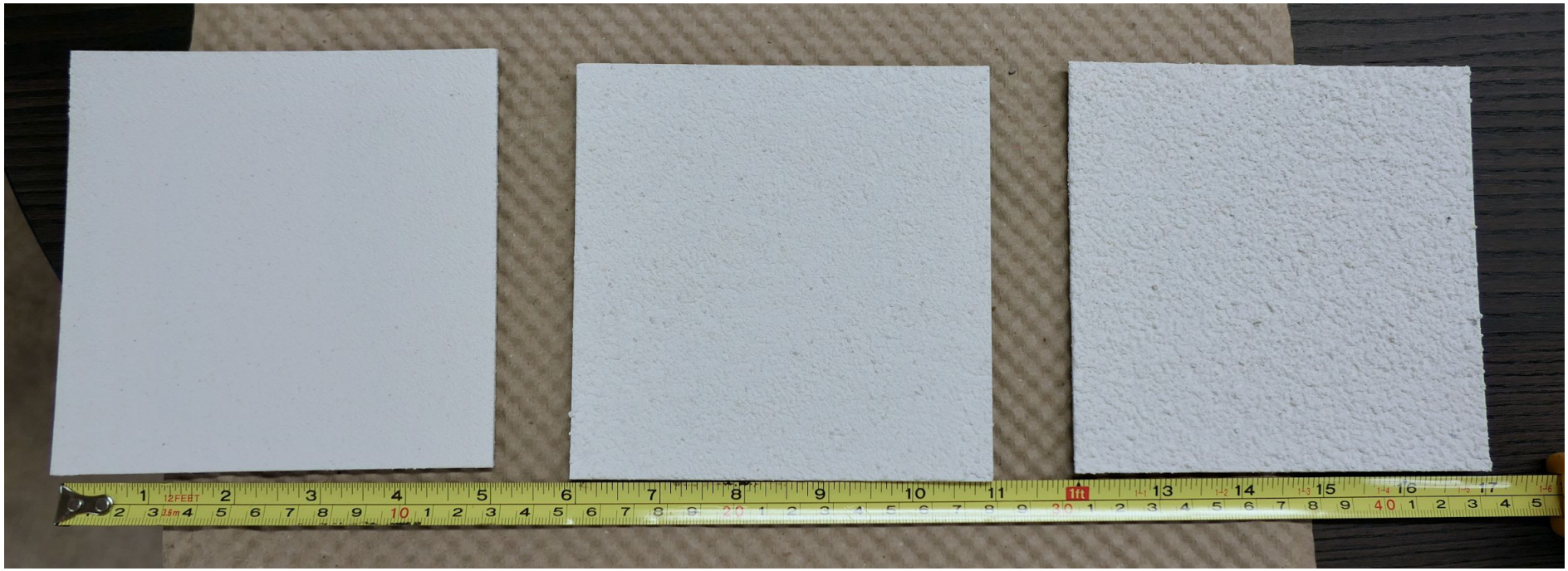
Acrylic-based gray

- Fine, Medium, Coarse



Acrylic-based white

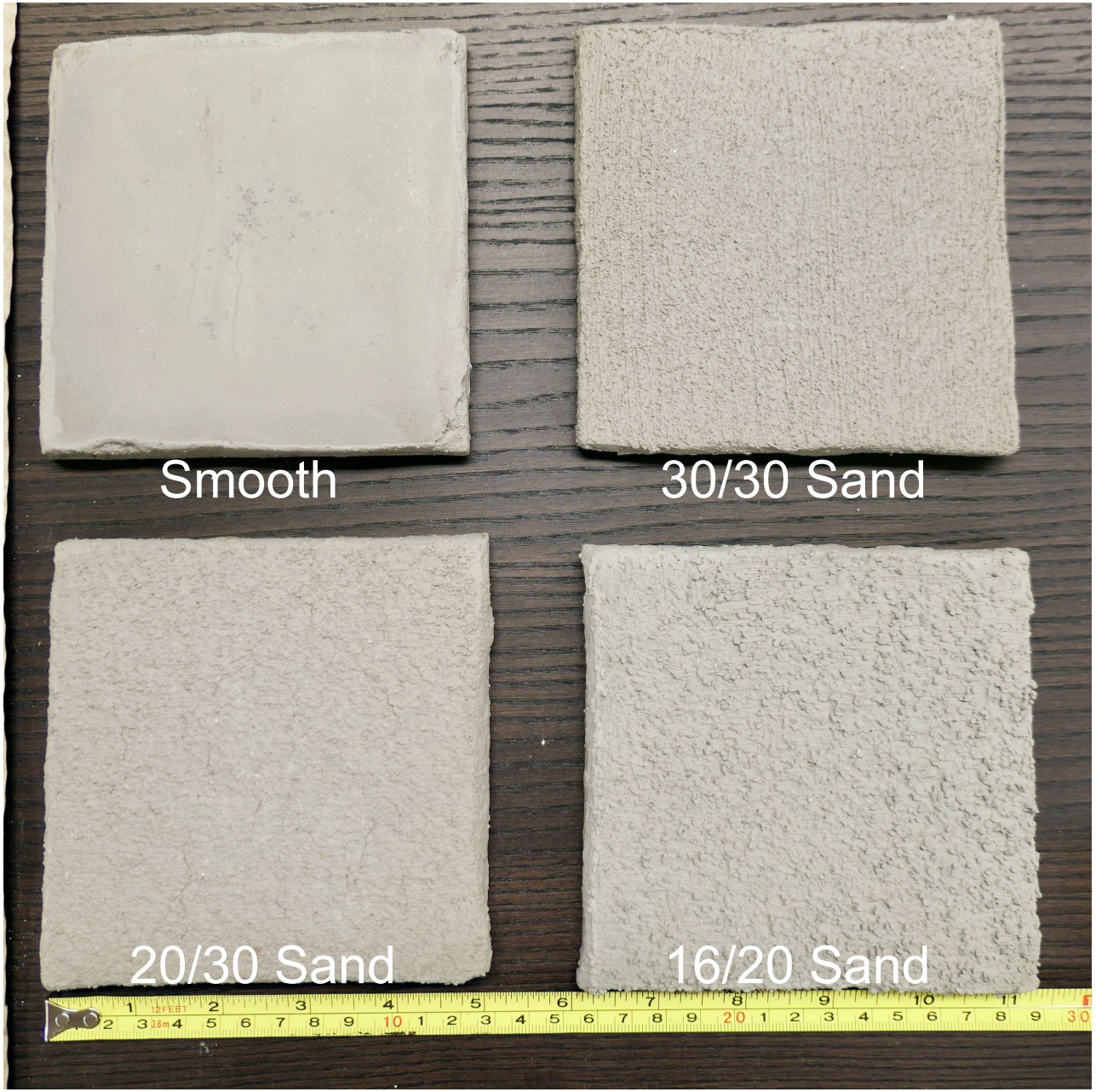
- Fine, Medium, Coarse



Cement-based yellow

- Smooth, Heavy Dash, Combed

Cement-based gray



STUCCO TESTING: ACRYLIC

	Average Solar Reflectance			SR Difference
	Fine	Medium	Coarse	Fine vs. Coarse
White	0.72	0.70	0.67	0.05
Gray	0.24	0.23	0.22	0.02

STUCCO TESTING

Yellow results

Average Solar Reflectance			SR Difference
Smooth	Heavy Dash	Combed	Smooth vs. Combed
0.64	0.57	0.54	0.10

STUCCO TESTING

Gray results

- 30/30 sand doesn't appear to be the most rough but had the lowest SR

Average Solar Reflectance				SR Difference
Smooth	30/30 Sand	20/30 Sand	16/20 Sand	Smooth vs. 30/30
0.30	0.27	0.28	0.28	0.03

DISCUSSION

- Based on these results, what would be the best substrate choice for architectural paints?

COLOR FAMILY DISCUSSION

CURRENT COLOR FAMILY PROGRAM (ROOFS)

- Prepainted metal products
  - Always rated over primer, topcoat usually 0.7 mils
- Grouped by color (17 families), technology
- Every unique color code/formula number is rated

CRRC PROD. ID	MANUFACTURER	BRAND AND MODEL	PRODUCT TYPE	COLOR	SOLAR REFLECTANCE		THERMAL EMITTANCE		SRI		MO
					INITIAL	3 YEAR	INITIAL	3 YEAR	INITIAL	3 YEAR	
0690-0024-019	Sherwin Williams	**FLUROPON** Ash Gray 432R1584	Metal	Grey	0.35	0.35	0.83	0.83	35	35	
0690-0024-009	Sherwin Williams	**Fluropon SR** Ash Gray 432B045	Metal	Grey	0.35	0.35	0.83	0.83	35	35	
0690-0019-012	Sherwin Williams	**Fluropon SR** Ash Gray 432B161	Metal	Grey	0.32	0.32	0.83	0.82	31	31	
0690-0039-006	Sherwin Williams	**WeatherXL** Ash Gray	Metal	Grey	0.35	0.35	0.83	0.83	35	35	

PROPOSED COLOR FAMILY PROGRAM (WALLS)

- Architectural coating products
- 9 color families
  - Assigned SR and TE values for each family
  - LRV and CIELAB ranges for each family
- Possibly a pastel color family
  - Similar LRV values, but different colors
    - Light blue [negative b*] vs. light yellow [positive b*]
    - Light green [negative a*] vs. light red [positive a*]

UNRESOLVED QUESTIONS

- **Do other variables significantly affect SR?**
  - Gloss level
  - Resin chemistry or other price-point variable
  - Technology changes / reformulations
- How do we manage the logistics of listing potentially thousands of paint codes?

NEXT STEPS

- Complete testing to find low and high LRV for each color space
- Other companies validate proposed color families
- Fulfill other data needs as described in previous slides

NEXT STEPS

TIMELINE

- May 27, 2020: WRSC votes on Wall Rating Program proposal
- June TBD: Next working group call
- June 18, 2020: Board meeting to vote on proposal

- 2022: Program launch (if approved)

QUESTIONS?