



KEY TECHNICAL TOPICS

Wall Rating Steering Committee
Conference Call
May 27, 2020



RATING PROGRAM WORKING GROUP

Objective: Create an outline for program operation and a rating process

Work product includes:

- Outline of program manual
- Program design, policies, & procedures
- List of technical questions for the program

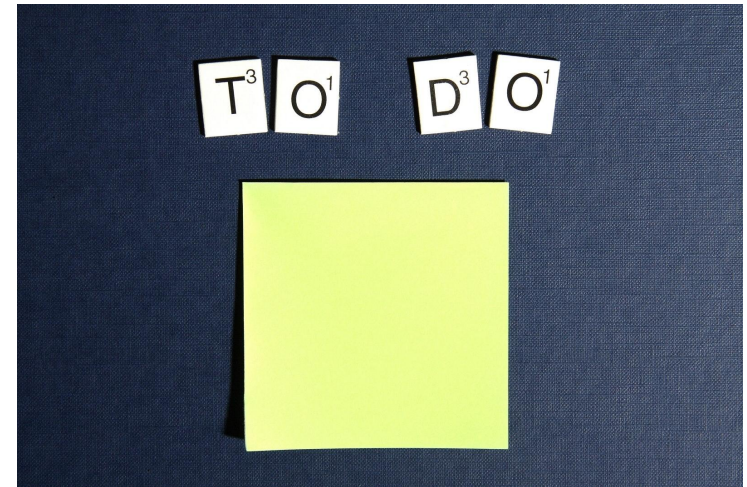




WORK COMPLETED

- First draft of Program Manual
 - Includes testing and rating requirements
 - References CRRC-1 Product Rating Program Manual for roof products
- List of preliminary product types
- Identified topics requiring further discussion and/or supporting data

1. Substrate requirements for architectural paint products
2. Color Family Program structure
3. Weathering requirements





SUBSTRATE



SUBSTRATE REQUIREMENTS

- Goal: Identify **one** substrate appropriate for architectural paint ratings
- Considerations:
 - SR of architectural paint products can vary significantly depending on substrate color and texture
 - Substrate must be commercially available
 - Substrate must be durable for natural exposure (if required) and shipping between labs



SUBSTRATE DETAILS TBD

1. Color
2. Surface texture/roughness
3. Size
4. QA mechanism for ratings (e.g. thickness testing)

- Planned testing on products applied both with and without a primer over Leneta Opacity Chart
- Testing on textured samples to understand SR differences:
 - Textured paints
 - Acrylic-based stucco
 - Cement-based stucco



- Results of textured specimen testing:
 - SR decreases as substrate texture increases
 - Lighter colors see larger differences in SR due to texture





RESOLUTION

- Testing results will identify the substrate that accurately represents installed product performance
 - White substrate may overstate performance
 - Black textured substrate may understate performance



COLOR FAMILY



COLOR FAMILY (ROOFS)

- Limited to prepainted metal products
- Purpose: Reduce aged testing and three-year exposure when rating many products
 - Initial testing of all rated products is required
 - “Representative Element” of Color Family undergoes three-year exposure
- Grouped by color (17 families), technology
 - Assigned SR and TE values for each family



COLOR FAMILY (ROOFS)

Every unique color code/formula number is rated

CRRCC 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	Fluorpon SR Ash Gray 432B045	Metal	Grey	0.35	0.35	0.83	0.83	35	35	
0690-0019-012	Sherwin Williams	Fluorpon 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	

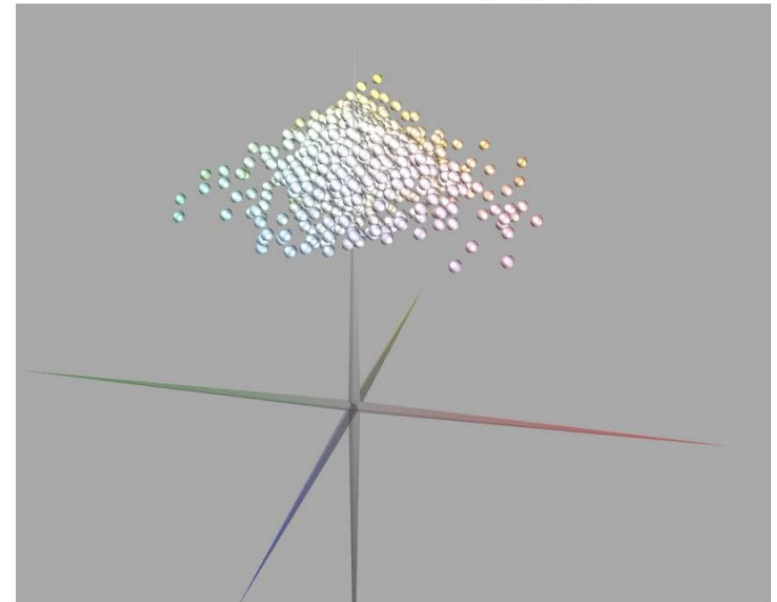


COLOR FAMILY (WALLS)

- Many more color options available
- Additional factors may affect SR:
 - Gloss level
 - Resin chemistry or other price-point variable
 - Technology changes / reformulations
- Initial proposal developed by Dunn-Edwards with 9 color families
 - LRV and CIELAB ranges for each family

- Determine appropriate assigned SR and TE values for each family
- Other companies validate LRV and CIELAB color ranges for each family

Color Family Visual –
WHITES/Off Whites/Pastels (Light)



Courtesy of Dunn-Edwards



WEATHERING



WEATHERING

- Roof program requires three-year weathering at 5° (low slope) or 45° (steep slope) South
- Wall products are exposed at 90° South
 - Less change in SR due to three-year natural exposure



WEATHERING

- Benefits of three-year weathering:
 - Code bodies prefer inclusion of aged data component
 - Consistent with existing roof rating program
 - Helps consumers understand product performance
- Drawbacks of three-year weathering:
 - Expense to Licensees
 - Wait time for a “complete” rating

- Will be discussed in more detail with the permanent Wall Rating Program Committee



- Wall Rating Program Committee will explore other technical topics:
 - Bidirectional reflectance
 - Appropriate test methods for masonry and wood siding products
- Other topics?



QUESTIONS?