

Part III- Sustainable Tools

The background of the slide is a vibrant, futuristic landscape. It features a large, glowing green and blue globe of Earth in the foreground, with several smaller, similar globes floating in the air. The scene is illuminated by bright, ethereal light, creating a sense of depth and a high-tech, sustainable environment. The overall color palette is dominated by greens, blues, and whites, with a soft, hazy atmosphere.

The background of the slide features a stylized globe of the Earth with several white orbital lines or paths around it, set against a soft, blurred background of green and blue light. At the top, there is a horizontal rectangular box with a blue-to-white gradient and a thin black border.

Important Note

For definitions on terms in this section, you may wish to reference:

Part I: History, Definitions, Players, etc.

LEED Tools- Spec Language

- **Under the submittal section (1.3):**
 - **Manufacturer's Standard Sustainable Design Certification (LEED Documentation)**
 - "Must report and/or address (if answer not available) material source sight, material manufacture sight, VOC level, recycled content, renewable material content (if applicable) as pertinent areas of consideration in designing sustainably for these product types as outlined in LEED™"
 - "Must be signed by (electronic signature- i.e. not "wet" acceptable) company representative with LEED-AP status."
- **Performance Standards for Material, VOC (Sealant Shown):**
 - "...meeting VOC requirements of pertinent CARB/AQMD Rule (SCAQMD #1168 or BAAQMD 8-51) for sealants VOC (4% by weight VOC or less in less than 16 oz. package or less than 250 g/L in larger package)."
 - Additional verbiage being developed as products become GREENGUARD/IAQ certified

LEED Tools- GREENGUARD/IAQ Certs

- **Many products have or will soon have GREENGUARD IAQ Certification**
 - This will fulfill VOE/IAQ needs in:
 - IgCC
 - LEED
 - CHPS
 - Other programs globally.
- **Certificates are on the GREENGUARD web site (www.greenguard.org) and are linked to on our product pages.**
- **These are being kept as separate documents from the LEED Letters as they will be required in systems where most LEED information is not.**

Sustainable Building Solutions

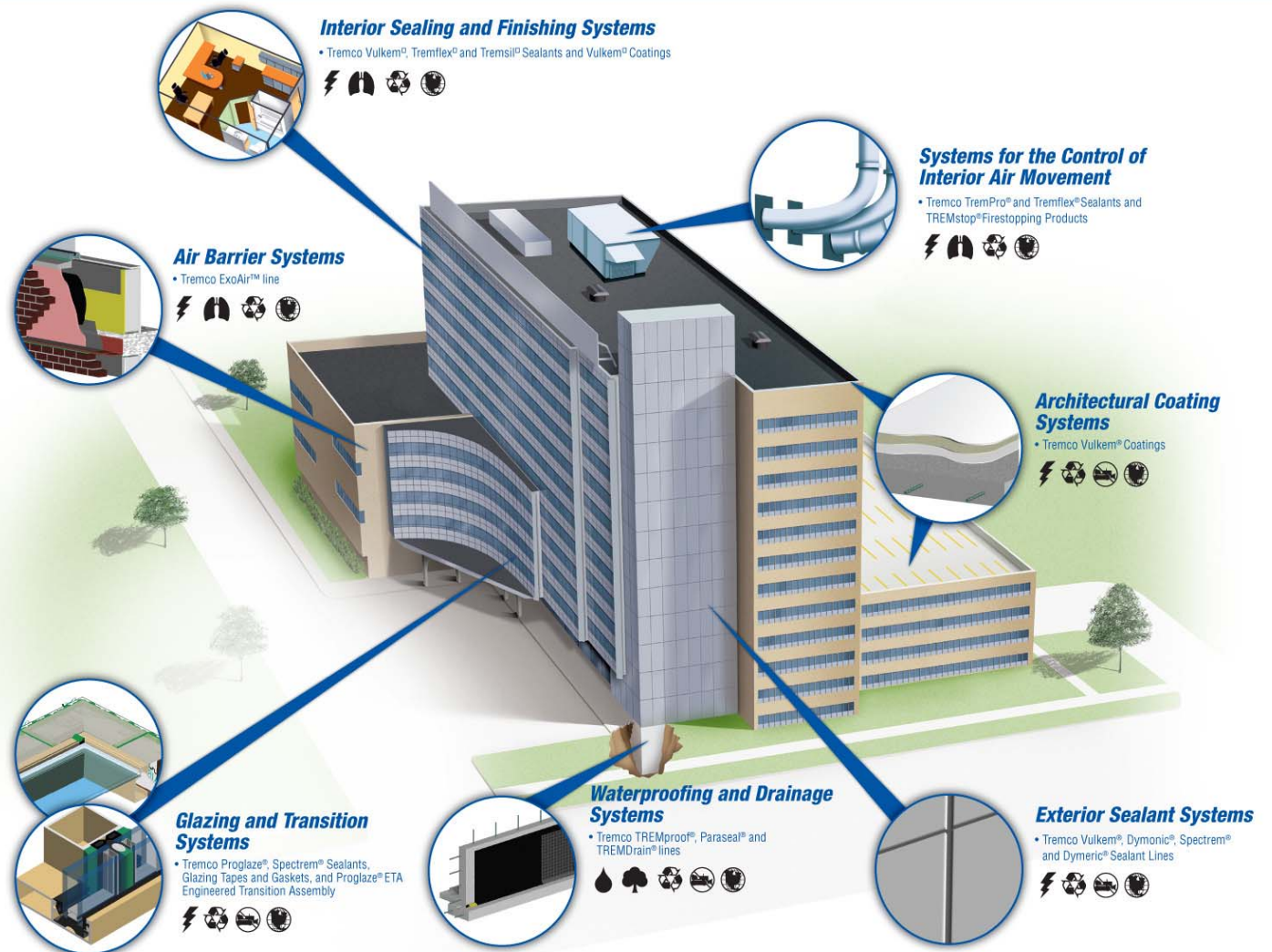
The fate of the environment we are all a part of has never been in jeopardy more than today. That is why it is more important than ever before to act in an environmentally responsible manner. We at Tremco's® Commercial Sealant & Waterproofing (CSW) Division are leading the way in the construction industry by doing our part to make sure the buildings we provide construction and renovation solutions for provide the ultimate in performance for long-term durability while minimizing any negative impact on Earth's resources.

Using the widely accepted LEED™-NC v.2.2 system as our base point, we have outlined here the ways our organization can help make sustainable design a reality throughout the building. We are working to help ensure a sustainable environment for ourselves, our customers and our world...one building at a time.

Products/Systems symbol key

-  Products or Systems that may Assist in Energy Saving or Result in On-site Renewable Energy Production as Defined in:
 - Heat Island Effect Reduction
 - Minimum Energy Performance
 - Optimizing Energy Performance
 - On-Site Renewable Energy
-  Products or Systems that may Assist in Water Conservation or Reclamation as Defined by:
 - Stormwater Design
 - Water-Efficient Landscaping
 - Innovative Wastewater Technologies
 - Water Use Reduction
-  Products or Systems that may Assist in Land/Site Conservation as Defined by:
 - Development Density/Connectivity
 - Brownfield Redevelopment
 - Site Development
 - Water-Efficient Landscaping
-  Products/Systems that may Assist in Achieving a Positive Contribution to Indoor Air Quality as Defined by:
 - Low-Emitting Materials
 - Indoor Chemical and Pollutant Source Control
-  Products or Systems that may Contain Recycled Content or Whose Use Helps Divert Materials from Landfills as Defined in:
 - Construction Waste Management
 - Recycled Content
-  Symbolizes the Ability to Help in the Conservation/Reuse of Existing Structure or Materials as Defined by:
 - Building Reuse
 - Materials Reuse
-  These are Possible Regional Materials as Defined in:
 - Regional Materials

Note: While not all products or systems under any given line may be applicable to sustainable design, the majority are. Please contact your Sales Representative or Tremco Technical Services for help in determining how these and other products and systems may fit your sustainable design needs.



Tremco Commercial Sealants & Waterproofing LEED™ Product Guide

Sustainable Sites			Products to Consider
Credit 2	Development Density & Community Connectivity	1	Paraseal LG allows for redevelopment in minimal footprint/dense areas
Credit 3	Brownfield Redevelopment	1 to 2	Paraseal GM and TREMproof 260 protect from contaminant intrusion
Credit 5	Site Development , Protect or Restore Habitat	1	Paraseal LG allows for redevelopment in minimal footprint/dense areas
Credit 7	Heat Island Effect , Non-Roof and Roof	1 to 3	White Coatings
Water Efficiency			Products to Consider
Credit 1.1	Water Efficient Landscaping , Reduce by 50%	1	Planter Boxes Contribute to Calculation
Credit 1.2	Water Efficient Landscaping , No Potable Use or No Irrigation	1	Water gathered with TremDrain
Credit 2	Innovative Wastewater Technologies	1	TREMDrain to Gather, Reuse Water
Credit 3	Water Use Reduction	1 to 2	TREMDrain to Gather, Reuse Water
Energy & Atmosphere			Products to Consider
Prereq. 2	Min		:HVAC needs
Credit 1	Opt		:HVAC needs
Check Our Web Site for the Latest Version!			
Materials & Resources			Products to Consider
Credit 1	Building Reuse	1 to 3	Almost all sealants and coatings can be used with existing material to be reused
Credit 2	Construction Waste Management	1 to 2	Reusable drums, pails and tote packaging, cartridges and pails can be recycled, pallets are reusable
Credit 3	Materials Reuse	1 to 2	Almost all sealants and coatings can be used with existing material to be reused
Credit 4	Recycled Content	1 to 2	All packaging has some recycled content
Credit 5	Regional Materials	1 to 2	Regionally Dependent
Credit 6	Rapidly Renewable Materials	1	Vulkem Coatings with Castor based polyols
Indoor Environmental Quality			Products to Consider
Credit 4.1 and 4.2	Low-Emitting Materials , Adhesives/Sealants & Paints/Coatings	1 to 2	All coatings, urethanes, glazing products, firestopping, residential and acrylics are LV, Most other materials as well.
Credit 5	Indoor Chemical & Pollutant Source Control	1	All sealants help manage air movement
Innovation Design & Process			Things to Consider
Credit 1.1	Innovation in Design: Provide Specific Title	1	Novel Ideas, Design Help
Credit 2	LEED Accredited Professional	1	Michael Schmeida



“LEED Letters”

- Provide all pertinent info in an easy-follow format.
- Would be attached to the submittal paperwork.
- The only “written contact” with a product manufacturer.
- Specific enough to get information, generic enough to be used universally.

Tremco Incorporated

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TREMCO
Commercial Sealants & Waterproofing



July 21, 2010

RE: ExoAir 220- Green Building Product Information (LEED® Information)

Tremco, as an organization, is committed to quality, responsive to both internal and external customers, our employees, our community and environment, and we will treat all with respect and good stewardship.

Material Manufacturing Location:

ExoAir 220 is manufactured in Medina, Ohio. Should your job site be within 500 straight-line miles of Medina, this material will help contribute positively towards the Locally Manufactured Material Credit.

Raw Material Extraction Information:

No single extracted material is used to produce the majority of this product. Additionally, all raw materials come from one of several sources which in-turn come from one of several raw material feed stocks. As such, point source for the raw materials cannot be determined.

Rapidly Renewable Raw Material Information:

ExoAir 220 contains 0% rapidly renewable raw material content by weight.

Recycled Content Information (by weight- All in Packaging):

5 Gal Bucket	2.82% (2.35% Post Industrial, 0.47% Post Consumer)
1 x 55 Gal Drum	8.87% (All Post Industrial)
Tote	0%

VOC Content Information:

ExoAir 220 has a VOC content of 2g/L equaling <1% by weight. These levels are below those for Bituminous Mastics and Coatings and as defined by SCAQMD.

Additional Information:

Air barrier systems, when properly installed, have been shown to reduce energy costs for HVAC by as much as 40% versus buildings without fully-adhered air barriers. This is important to remember as utilizing such an air barrier system such as ExoAir may assist in earning energy points within LEED.

Should you have any questions or require additional information, please do not hesitate to contact Technical Services or your local Tremco Field Representative.

Sincerely,

Michael Schmeida
LEED Accredited Professional

PPM

Sustainable Building Solutions

Why These Letters

- **The LEED submittal process and system.**
 - **Manufacturer Provided and Signed Product Information**
 - “One stop shopping”
 - **Required on more and more projects.**
 - **Concise Way to Address Pertinent Credits**
 - **Material Sources**
 - **Manufacturing Location**
 - **Renewable Materials Content**
 - **Recycled Content (% by weight)**
 - **VOC**
 - **Others???**
 - **Easy to post on web**
 - www.tremcosealants.com/commercial/green/lead.asp

Letter from the Top

- **All letters have the product(s) listed in the subject line.**
- **All letters have the date of composition**
 - Updated as needed.
- **All letters have the USGBC member logo**
 - As members, we agree to follow the rules, protocols, etc. set forth by USGBC and work to promote those throughout industry.
- **Introductory Paragraph**
 - “Philosophical Statement”

- **2nd Paragraph- Place of Manufacture**

- **This is where the material is made.**

- Filling does not count as the place of manufacture.
 - If there are multiple components, the place where the majority component is made is listed as the place of manufacture.

- **Why is this important?**

- Regionally made materials have smaller carbon footprints due to decreased transport
 - Regionally made materials help support the local economy

- **How is the distance calculated?**

- We have a letter in the General Information Section of the LEED Letters on the web. This will tell anyone exactly how to get the distance and references a USGBC recognized method/online tool.

More Content

- **3rd Paragraph- Place of Harvest**
 - **This is where the raw materials are taken from.**
 - This could be mined, grown, slaughtered, etc.
 - If there are multiple components, each would need listed by weight %.
 - **Why is this important?**
 - Regionally harvested materials have smaller carbon footprints due to decreased transport
 - Regionally harvested materials help support the local economy
 - **Our Products...**
 - With the exception of Paraseal products containing bentonite, we cannot reasonably know where any of the raw materials we use have their origins.
 - All of our letters explain this briefly in this section and why we cannot give the information.
 - In addition, we have a letter in the General Information Section of the LEED Letters on the web explaining this in greater detail.

- **4th Section- Recycled Content**

- This includes packaging as allowed by USGBC...
 - We do not sell just a “blob” of product. The package is part of the product we supply.
- This is broken down by post-industrial (also known as pre-consumer) and post-consumer content.
 - In the USGBC sheets provided to project managers, these amounts are weighted differently in determining the recycled content value of a product.
- This is done by weight %, with those % values subsequently broken down in the letter by post-consumer and post-industrial where applicable.
- Why is this important?
 - Using recycled materials where possible preserves limited resources for future needs.
- Our products
 - We list content in the various units we supply a material in.

Yet More Content

- **5th Section- Renewable Materials Content**
 - A renewable material is one that has a source which can be regrown within 10 years.
 - This is done by weight % of the product itself
 - For multi-component products, it is the weight % of the mixed, as-used material
 - Why is this important?
 - Using renewable materials where possible preserves limited resources for future needs.
 - Helps get us out of the “petroleum cycle”.
 - Our products
 - Currently this is in 950NF and Vulkem 191-LV-CA. However, more renewable materials are becoming available that meet our needs.

More Letter Content

- **6th Section- VOC Content**

- The VOC content is listed after discounting water and exempt solvents as well as the “as applied” product.
 - This is per SCAQMD (1168 for sealants, AIM for coatings) or BAAQMD (8-51 for sealants) guidelines as outlined in LEED.
 - As applied means, in the case of a multi-component material, the mixed material ready to apply.
- The letters list the VOC content for the highest level possible in a product
 - Products with multiple colors often have different levels of VOC in the different colors.
 - For the sake of minimizing the amount of letters and confusion, we list the highest level as a way to “cover” both us and our customers.
- Why is this important?
 - VOC content directly relates to ground level ozone/smog and is critical in the LEED process in insuring IAQ standards.

More Information

- **After the VOC content, some letters may have an additional paragraph with additional green building/LEED related information**
 - **This section is intended as a way of letting customers know how a product or system may contribute toward green building goals.**
 - A section of credits is always referenced.
 - Specific industry information is listed where applicable
 - The how is listed, as well as a note making sure to reference the LEED system for more specific details
 - **Why is this important?**
 - It shows our product and LEED knowledge.
 - It is a little “sales piece” for that system or product.

Other General Information on Letters

- **Letters are intended as stand alone submittal and documentation pieces**
 - All that is needed from us regarding the green properties of a product
 - No other separate documentation (i.e. MSDS, etc.) is required.
- **Letters have all been written and signed by a LEED AP**
 - The LEED AP acknowledges by signing that based on knowledge of LEED and products that information is correct, knowing that intentional misrepresentation could mean losing the AP status.
 - Signature of a company representative also means no other signatures are required on any submittal forms per USGBC policy.
- **Letters intentionally do not list specific credits by name/number**
 - Each system (EB, CI, NC, etc.) has a different numbering system and occasionally different names.
 - Letters as universal as possible.
 - Each section clearly indicates the information being supplied.

FAQ's

- **Can we tell the product cost/value for my calculations?**
 - No.
 - Due to regional pricing, distributors and contractors marking up differently, etc., we have no idea what was paid for the product used.
 - The customer should reference the invoice for the material for this data and submit a copy as supporting documentation.
- **Can you tell me how far from the job site the material was manufactured?**
 - Not exactly, but here's some help...
 - USGBC has recommended several web sites to determine this. We recommend the web site Google Earth:
<http://www.daftlogic.com/projects-google-maps-distance-calculator.htm>
 - The center of town to center of town method is accepted by USGBC and straight-line distance is the methodology

FAQ's

- **Do Tremco reps have to fill out submittal forms?**
 - **No**
 - **GBC has stated in their workshop for product manufacturers that they do not want us to fill out individual submittal forms for every project.**
 - **The fear is by having manufacturers reps fill out forms, there is a possibility introduced for falsification.**
 - **We will submit standard documentation and we will assist our customers in interpreting that documentation if needed, but should not be involved directly in filling out forms, spreadsheets, etc.**
 - **Remember, our letters with a representatives signature are what is required and preferred.**
 - **NOTE: It is a “red flag” for GCBI auditors if forms are filled-in/signed by reps and that can delay projects months!**

Last of the LEED Letter FAQ's

- **Do we have or need to have independent verification of the properties we list?**
 - **No**
 - USGBC has specifically chosen the standards it references to reflect industry standard practices.
 - Only in a couple of cases is independent certification absolutely required in LEED, and none of those are applicable to our products.
 - The letter, being a signed company document is a legally binding document.