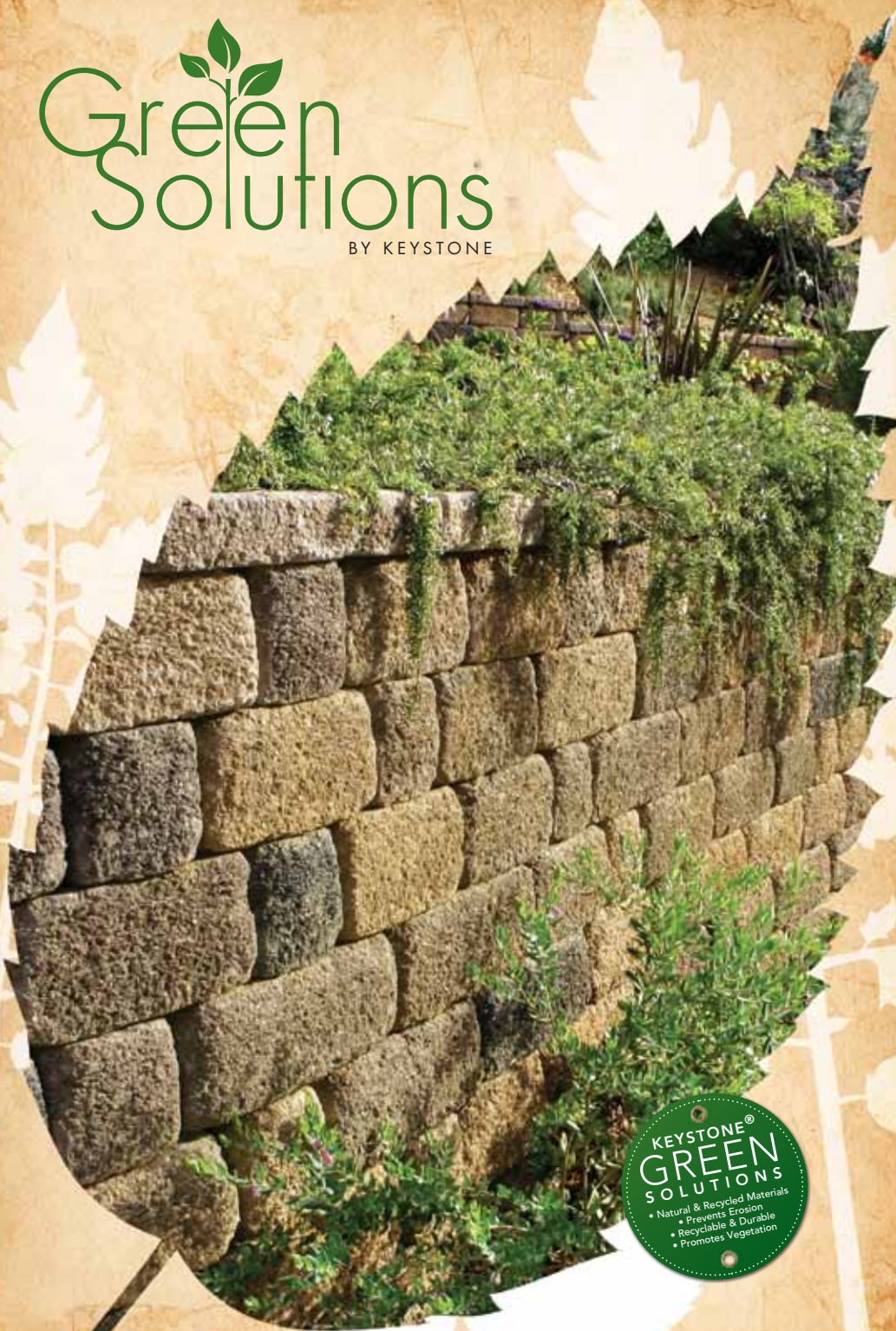


Green Solutions

BY KEYSTONE



KEYSTONE®
GREEN SOLUTIONS

- Natural & Recycled Materials
- Prevents Erosion
- Recyclable & Durable
- Promotes Vegetation



Green Solutions

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Green building, or choosing products and processes that have the least impact on the environment, is changing the world of construction. Choosing to build “green” increases the efficiency of how resources are used and guides design decisions toward environmentally sustainable practices. As more people adopt the principles of green building, products and processes that support green building guidelines will become the new standard.

As the worldwide leader for innovation and excellence within the segmental retaining wall (SRW) industry, Keystone Retaining Wall Systems, Inc. is an environmentally conscious company committed to offering a wide range of site solutions that respond to green building and construction needs. Many of these solutions contribute toward the U.S. Green Building Council’s LEED® (Leadership in Energy and Environmental Design) Green Building Product Rating System™ or other similar programs. Keystone products are also often made of recycled materials and offer a durable, long-lasting solution, thereby reducing the impact on the environment.

Uses Natural and Recycled Materials



Concrete is an environmentally friendly building product composed of both natural and recycled materials. Those recycled products include concrete aggregate, fly ash and iron oxide. During production of SRW units, waste concrete is produced. Most manufacturers crush this concrete into aggregate and reuse it, thereby reducing waste material destined for landfills. Fly ash, a waste material produced and then discarded by coal burning plants, is another component used in the manufacture of concrete SRW units. Recycling fly ash in this way keeps it out of landfills. SRW units also utilize synthetic iron oxide to color the units, which is made by burning recycled scrap steel at high temperatures. The natural and recycled materials utilized in the manufacturing process result in an environmentally conscious and efficient construction product.



Water



Sand



Recycled Concrete



Fly Ash





Prevents Erosion

Soil erosion is a serious environmental threat and a major contributor to the degradation of water quality. Wind, rain and runoff displace soil particles from bare or sparsely covered earth. This reduces the stability of the original site and can impair the performance of downstream drainage systems.

In many instances, SRWs are a cost-effective solution to eroding soil. Keystone walls are often used as part of conservation efforts along channels and waterways, near steep earthen slopes, and in other critical applications.

When taller wall heights are required, geogrid reinforcement can be added to a wall design to create the appropriate solution.

The result is a long-term, economical solution that minimizes or eliminates soil erosion.



Recyclable / Durable

Made of concrete, SRW units offer a long-lasting retaining wall solution for both structural and landscaping projects. Concrete is a durable building material that surpasses the lifespan of retaining wall alternatives such as timbers or railroad ties. The durability of concrete can be defined as its ability to resist weathering action, chemical attack, and abrasion while maintaining its desired engineering properties. Concrete SRW units also avoid the use of toxic materials that are sometimes found in treated timber and other materials.



SRW units are also recyclable. When a SRW is no longer needed or desired, the units can simply be removed from the site and repositioned elsewhere or crushed and recycled into new SRW units.



Promotes Vegetation

Keystone offers an innovative planting system that can produce a lush blanket of irrigated vegetation. The unique cavity of Keystone's plantable unit is perfect for plants up to one gallon in size. This product also allows for placement of irrigation systems and provides the natural drainage that encourages plant root growth and allows the wall structure to spring to life.

With the ability to support rich plant life, Keystone plantable units bring degrees of depth and color previously unavailable in a structural wall product.

MTDB Laurel Street Crossing • San Diego, CA



LEED Credits



The U.S. Green Building Council's LEED® (Leadership in Energy and Environmental Design) Green Building Rating System™ is based on points and evaluates the overall performance of a green building project by assessing each of the materials and systems used in combination. The number of points earned determines the level of LEED certification the project receives (Certified, Silver, Gold, or Platinum).

The chart below represents some possible LEED credits available with Keystone products. Actual credits granted will vary by project and/or product manufacturer.

SUSTAINABLE SITES			5 points
<input type="checkbox"/>	Credit 5.1	Site Development <i>Protect or Restore Habitat</i>	1
<input type="checkbox"/>	Credit 5.2	Maximize Open Space <i>Provide a high ratio of open space to development footprint to promote biodiversity.</i>	1
<input type="checkbox"/>	Credit 6.1	Stormwater Design, Rate and Quantity Control <i>Limit distribution of natural water flows by managing stormwater runoff.</i>	1
<input type="checkbox"/>	Credit 6.2	Stormwater Design, Treatment <i>Implement a stormwater management plan that reduces impervious cover, promotes on-site filtration and eliminates contaminants.</i>	1
<input type="checkbox"/>	Credit 7.1	Heat Island Effect, Non-Roof <i>Reduce heat islands.</i>	1

MATERIALS & RESOURCES			8 points
<input type="checkbox"/>	Credit 2.1	Construction Waste Management <i>Divert 50% from Disposal.</i>	1
<input type="checkbox"/>	Credit 2.2	Construction Waste Management <i>Divert 75% from Disposal.</i>	1
<input type="checkbox"/>	Credit 3.1	Materials Reuse <i>5% of Materials Reused.</i>	1
<input type="checkbox"/>	Credit 3.2	Materials Reuse <i>10% of Materials Reused.</i>	1
<input type="checkbox"/>	Credit 4.1	Recycled Content <i>10% (Post-Consumer + 1/2 Pre-Consumer)</i>	1
<input type="checkbox"/>	Credit 4.2	Recycled Content <i>20% (Post-Consumer + 1/2 Pre-Consumer)</i>	1
<input type="checkbox"/>	Credit 5.1	Regional Materials <i>10% Extracted, Processed, and Manufactured Regionally.</i>	1
<input type="checkbox"/>	Credit 5.2	Regional Materials <i>20% Extracted, Processed, and Manufactured Regionally.</i>	1

INNOVATION & DESIGN PROCESS			2 points
NOTE: ID credits are awarded for exceptional performance above LEED requirements. Below are some areas to consider:			
<input type="checkbox"/>	Credit 1.1	Innovation in Design: Structural Advantages	1
<input type="checkbox"/>	Credit 1.2	Innovation in Design: Life-Cycle Benefits	1



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We reserve the right to improve our products and make changes in the specifications and design without notice. The information contained herein has been compiled by KEYSTONE and to the best of our knowledge, accurately represents the KEYSTONE product use in the applications which are illustrated. Final determination of the suitability for the use contemplated and its manner of use are the sole responsibility of the user.



Mixed Sources
 Product group from well-managed forests, controlled sources and recycled wood or fiber
www.fsc.org Cert no. BV-COC-340655
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