Tire-Derived Products in Construction:
Residential, Commercial & Industrial

Tire-derived products (TDPs) can help achieve construction goals in several capacities, with designers able to choose from a variety of California-made tire-derived products for state-of-the-art solutions. Recycled rubber has qualities that make it ideal for solving many building construction issues. TDPs can provide vibration insulation, high abrasion and impact resistance, low UV degradation, resistance to water and wear and tear, all while reusing a valuable material from the waste stream. These products, when designed and used in accordance with regulations, may

LEED credits possible using TDPs:

- Recycled Content
- Regional Materials
- Acoustic Performance
- Rainwater Management
- Heat Island Effect
- Innovation in Design
- Outdoor Water Use Reduction

Figure 1: The Columbia Place Hotel and Condominiums in Washington D.C. placed over 1,180,000 ft2 of 5mm QuietSound Acoustic Rated Underlayment, utililizing an estimated: 145,000 lbs. of California Crumb Rubber.

play a role in achieving LEED credits and ADA requirements. Recycled rubber has high material efficiency and a longer life cycle than many competing products.

A wide variety of tire-derived products are available for residential, commercial and industrial construction projects. Products may range from coatings and sealants to coupling fittings for plumbing and sewer applications to flooring and roofing. These products are designed to deliver the unique performance benefits of rubber to specialized applications where they are most needed.

Acoustical Underlayment

U.S. Rubber Recycling makes and distributes flooring and underlayment products made primarily from recycled rubber tires. QuietSound™ Rolled Underlayment, for example, is designed to reduce noise transmission in multi-story buildings *(figure 1)*. Recycled rubber provides sound reduction while remaining impervious to the elements. Unlike natural cork, recycled rubber remains permanently resilient and will not become brittle with exposure to air. It prevents the sound transmission of foot traffic to the floors below and effectively deadens the transmission of interior noise. This recycled rubber underlayment can also be used as a crack suppressant for concrete floors.

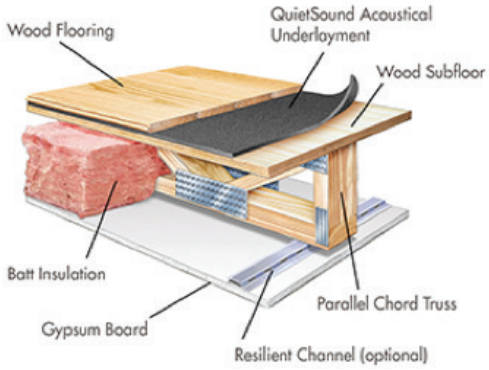

Figure 2: The Altitude Sky Lounge in San Diego, CA. 3,440 square feet of Rubberway multi-purpose installation features a custom blend of colors selected to fit with the current furniture and ambiance and provides sound dampening to the floors below. This surface replaces the previous USSA rubber surface that was in place for ten years.

Rubber Surfacing Systems

United Sustainable Surfacing of America (USSA) provides advanced synthetic grass, sport and recycled rubber surfacing systems, manufacturing, materials, installation, maintenance and life cycle management services. The Rubberway Multi-Purpose is

a customizable poured rubber surfacing system that consists of ½" recycled crumb rubber mixed with binder, then poured and troweled over an asphalt or concrete sub-base *(figure 2)*.

This flooring system in light colors can be used to combat the heat island effect by reflecting more of the sun's incoming rays, and together with its insulating properties, reduce building heating and cooling costs. Additional benefits of this rubber rooftop surfacing include sound-dampening, providing a more comfortable environment for building occupants, and a high coefficient of friction for a safe, non-slip surface. These surfaces can be porous, allowing rainwater to seep through into the existing drainage system which promotes quick drying and reduces puddling, or it can be made impervious and have its own drainage system.

TDP products for construction include:

- Coatings and sealants
- Pipe couplings and fittings
- Interior and exterior flooring
- Acoustic floor underlayment
- Roof membranes, coatings and shingles
- Accessibility ramps and landings

Solar Reflective Shingles Malarkey Roofing Products® has been utilizing SBS rubber polymer technology to modify their asphalt roofing for 30 years. As opposed to conventional oxidized asphalt, these composite shingles work cohesively to add strength and flexibility, as well as fortify the surface of the product. Nexgen™ polymer modified asphalt combines the existing Flexor™ with post-consumer or post-industrial reclaimed content, including recycled rubber polymers *(figure 3)*. Polymer modified asphalt is exclusively blended for several of their shingle lines.

Figure 3: Ecoasis™ Costa is an architectural shingle featuring solar reflective granules similar to standard shingle colors and fortified with Nexgen™ asphalt made with recycled rubber.

For More:

For more information on these and other TDP producers and their products, please see CalRecyle's online TDP catalogue at www2.calrecycle.ca.gov/TDPCatalog/

We invite you to let us now about your ideas and needs for other products that could be made from recycled rubber.

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