



The improved function and long-lasting characteristics of recycled rubber bring quality to customers' product lines while serving the important function of reaching conservation goals.

Much of the recycled rubber produced by Liberty Tire Recycling is used as crumb rubber and industrial feedstock for manufacturers, as tire derived fuel for use in industry, or as rubber mulch in landscaping and playground applications.

## CRUMB RUBBER

Liberty Tire Recycling has the capacity to produce more than 300 million pounds of crumb rubber annually for a wide variety of innovative uses.

With a network of crumb rubber manufacturing locations, Liberty Tire produces a wide variety of mesh sizes with 30- as the finest. For certain applications – such as those required to make automotive parts and coatings – Liberty Tire provides crumb rubber as “feedstock” to companies that produce finely ground rubber powders.

## PRODUCT INNOVATIONS

As manufacturers discover the value of recycled rubber and embrace the environmental impact of recycling, scrap tires continue to be shredded and ground into various sizes of powders, crumbs and nuggets for use in more and more products.

- Welcome mats
- Railroad ties
- Anti-fatigue mats
- Acoustical underlay
- Portable speed bumps

***Beyond molded rubber products and coatings, recycled rubber is used to enhance road surfaces, power factories, beautify landscapes, protect children at play, and improve athletic surfaces...***





## WHERE THE RUBBER MEETS THE ROAD.

Rubberized asphalt highways ride quieter, last longer, and use significantly less paving material than traditional asphalt. Crumb rubber comprises 15- to 22-percent of the mix in rubberized asphalt along with traditional binder. But the result is anything but traditional.

Rubberized asphalt diminishes maintenance costs and provides a smoother, safer ride for motorists. In many cases, rubberized asphalt is laid using the same equipment as traditional asphalt, requiring no additional capital investment for contractors or municipalities.

### **Resists cracking and rutting.**

Cracks in asphalt are caused by vertical or horizontal movements beneath the overlay as a result of traffic loads, temperature fluctuations, and shifting earth. Rubberized asphalt reduces the occurrence of cracking with superior elasticity. Rubberized asphalt is also stiffer than conventional paving, which means that it resists rutting and increases pavement life.

### **Improves skid resistance. Decreases splash and spray.**

The safety of rubberized asphalt is greatly improved as a result of several unique attributes. Pavements made from rubberized asphalt exhibit greater skid resistance, and decreased splash and spray in wet conditions.

### **Decreases maintenance costs. Requires no additional capital investment.**

In use for more than 40 years, rubberized asphalt is laid using the same equipment as traditional asphalt in most cases and the longer-lasting properties reduce long-term maintenance costs. Plus, utilizing recycled rubber derived from scrap tires provides a reliable and consistent supply of material.

### **Rides quieter. Reduces stockpiles of scrap tires.**

Noise pollution on highways and interstates continues to increase as traffic levels increase. However, rubberized asphalt is proven to reduce noise levels by upwards of 5 decibels. And rubberized asphalt provides an outlet for between 500 and 2,000 scrap tires per lane mile of pavement. So, for a 1-mile section of a four-lane highway, between 2,000 and 8,000 tires are creating a longer-lasting, safer, and more cost-effective roadway.





## A LITTLE BOUNCE IN YOUR STEP.

As a decorative landscape cover, recycled rubber mulch has the same appearance as wood or stone mulch with none of the drawbacks. Rubber mulch is nontoxic and non-staining, and minimizes airborne dust and particles. Plus, rubber mulch is applied once and remains fresh for years.

- Resistant to wind, water and sunlight
- Reduces bug and rodent infestation
- Does not decompose or compress
- Will not blow away or wash away
- Will not fade for up to 12 years
- Wheelchair accessible
- Long lasting and low maintenance

As safety surfacing, a six-inch layer of recycled rubber mulch will cushion a child's fall from as high as 16 feet, providing up to 50 percent more fall-height protection than wood mulch using half of the material. Liberty Tire manufactures rubber chips in a variety of sizes that can be found in retail stores and at playgrounds nationwide.

Organic mulching and playground surfacing requires application after application because of their rapid rate of decomposition. Recycled rubber saves money by remaining bright and plush for years with minimal maintenance. And rubber mulch not only saves trees, but provides an outlet for keeping millions of scrap tires out of landfills each year.

### **THIS GRASS IS ALWAYS GREENER.**

Crumb rubber also enhances the performance of a variety of sports surfaces, providing infill for sports fields, and paving for running tracks and equestrian surfaces.

Crumb rubber adds cushioning and springiness to protect athletes. Surfaces made from crumb rubber dry quickly, drain excess moisture, reduce dust and mud, and minimize freezing. Rain or shine, a field comprised of crumb rubber is always ready for action.



**Liberty**  
TIRE RECYCLING





## FUEL FOR A SUSTAINABLE FUTURE.

Liberty Tire sells more tire-derived fuel (TDF) than any other tire processor in North America, conserving vast amounts of natural resources.

As an alternative energy source to coal, oil and natural gas, TDF is consumed by cement kilns, pulp and paper mills, and power plants across the continent.

Based on more than a decade of testing, the U.S. Environmental Protection Agency recognizes the use of tire-derived fuels as a viable alternative to the use of fossil fuels.

TDF is one of several viable alternatives to prevent newly generated scrap tires from inappropriate disposal in tire piles, and for reducing or eliminating existing tire stockpiles.

When used as an alternative energy source, TDF produces more energy than coal – generating up to 16,000 BTUs per pound – with lower moisture, sulfur, nitrogen and ash. A million tires used as fuel in place of coal reduces carbon dioxide emissions by 19.5 percent.

Potentially, all of the scrap tires produced in the U.S. annually could provide an energy source equivalent to 13 million barrels of crude oil.

### Of the 130 million scrap tires used as fuel per year:

- Cement industry - 41 percent
- Pulp and paper mills - 20 percent
- Electric utilities - 18 percent
- Industrial/ institutional boilers - 13 percent
- Dedicated tire-to-energy facilities - 8 percent

Source: Rubber Manufacturers Association

