



PolyStar® Recycled Rubber Mulch LEED™ New Construction Credit Compliance

PolyStar® Rubber Mulch for Playgrounds, Landscaping, Tree Wells, & Trails qualify for LEED™ credits in several LEED™ areas.

1) Heat Island Effect LEED™ credit 7.1



This credit refers to products that contribute to a reduction of the “heat island effect” by affecting solar reflectance, thermal emittance, permeability and tree preservation.



Loose Fill Rubber Mulch



Landscaping Mulch



Bound Playgrounds & Trails

PolyStar® Rubber Mulch for Playgrounds, Tree Wells, Landscaping & Trails utilize a loose or poured-in-place system which results in a seamless, attractive, resilient and durable surface in a variety of colors. Other than its ability to easily follow curves and surface irregularities like mounds and hollows and to pour around obstacles such as fire hydrants, posts, trees and other obstacles, the system has a high degree of:

- a) **Permeability;** Allows water penetration through the sidewalk or tree well which both irrigates and reduces run-off problems.
ASTM F 1551:Gal/min/yd²: **75.**
- b) **Reflectance:** A wide range of colors allows selection to be made to suit reflectance requirements of the project.
Reflectance Index: ASTM E 903 Maximum (Light Gray, Cypress) **42.00**
- c) **Thermal Emittance:** The same range of colors affects the thermal emittance of the surface and can be selected for the particular project requirements.
ASTM C1371 Thermal Emittance Minimum (Light Gray, Cypress) **.83**
- d) **Tree and Shrub preservation.** The product was developed to provide a superior method of providing protection for tree roots and, by allowing water penetration, to greatly reduce the problems of root heave caused by water starvation – which often results in destruction of the tree. Trees can be left in place providing shade and retaining moisture.

LEED™ SS Credit 7.1: Intent: Reduce Heat Islands (thermal gradient differences between developed and undeveloped areas) to minimize the impact on microclimate and human and wildlife habitat. **Requirement:** Provide any combination of the following for 50% of the site landscape: Shade (within 5 years occupancy), paving materials with a Solar Reflectance Index of at least 29, open grid pavement system. Or, place a minimum of 50% of parking spaces under cover. Any roof used to shade covered parking must have an SRI of at least 29.

2) Recycled Content:

PolyStar® RubberMulch for Playgrounds, Tree Wells, Landscaping and Trails utilizes 100% recycled tires when all recycled rubber is used. The Recycled SBR is 1-6 inches thick so the recycled content without binder is 100% recycled material. Based on the cost formula of Credit 4.1 the recycled content exceeds the requirement by having a recycled content of between 85% (SBR only) including non-recycled binder cost. With binder in bound applications will range about 85 % recycled.

LEED™ MR Credit 4.1, 4.2: Intent: To increase demand for building products that incorporate recycled materials thereby reducing the impact of extracting and processing virgin materials. **Requirements:** Use materials with a recycled content such that the sum of post-consumer recycled content plus one half of the pre-consumer content constitutes **at least 10%** (based on cost) of the total value of the materials in the project.

3) Regional Materials:

PolyStar Rubber Mulch for Playgrounds, Tree Wells, Landscaping and Trails utilizes 100% locally manufactured or produced materials in California. Elsewhere in the USA, we use locally derived materials whenever they are available.

LEED™ MR Credit 5.1, 5.2: Intent: To increase demand for building materials and products that are extracted and manufactured in the region where they are used, thereby supporting the use of indigenous resources and reducing the environmental impact resulting from transportation. **Requirement:** Use building products that have been extracted, harvested or recovered as well as manufactured, within 500 miles of the project site for a **minimum of 10%** (based on cost) of the total materials.

4) Storm Water Design:

PolyStar® Bound Rubber Mulch Systems for Playgrounds, Treewells, Paths & Trails by virtue of being permeable absorb significant quantities of rain water thus reducing the volume of run off, and providing filtration & irrigation, particularly relative to concrete or asphalt

LEED™ SS Credit 6.1, 6.2: Intent: Reduce or eliminate water pollution by reducing impervious cover, increasing on-site infiltration, eliminating sources of contaminants, and removing pollutants from storm water runoff. **Requirements:** Implement a storm water management plan that reduces impervious cover, promotes infiltration, and captures and treats stormwater runoff from 90% of the average annual rainfall using best management practices.

5) Innovation in Design:

PolyStar® Rubber Mulch was developed and introduced in 1996 to divert tires from landfills and provide innovation in its design to emulate a natural wood mulch or wood bark appearance. This creative method of providing a permeable, resilient, colorful & attractive, and durable surfacing solution utilizing recycled tires represents a Green Building alternative to any other mulch product or system available. It is fire retardant and sliver proof. The material can be seamless when bound together, helps retain moisture to plants and trees, diverts tires from landfills, does not produce fungus and inhibits weeds. It is **non-linear** thus allowing it to follow curves and go around corners as well as accommodate contour changes; **resilient**, providing a comfortable good traction, and safe surface thus reducing liability damages from slipping or falling. It also uses no lead or other heavy metal content materials so, once cured, when bound it is **non-toxic**. As indicated in the foregoing Credits, the PolyStar Rubber Mulch product system exceeds requirements in every category thus qualifying for additional LEED ID Credit 1 credits.

LEED™ ID Credit 1.1 to 1.4 : Intent: To provide design teams and projects the opportunity to be awarded points for exceptional performance above the requirements set by the LEED for new construction Green Building Rating System and/or innovative performance in Green Building categories not specifically addressed by this rating system. **Requirements:** In writing, identify the intent of the proposed innovation credit, the proposed requirement for compliance, the proposed submittals to demonstrate compliance, and the design approach (strategies) that might be used to meet the requirements. **Please see Attached Appendix for this submittal.**