



GroundSmart™ Rubber Mulch Architectural/Bid Specification

Training safety surface for climbing, obstacle, ropes and combat courses

GroundSmart™ Rubber Mulch helps improve training area safety. Uniquely designed and manufactured, GroundSmart™ Rubber Mulch not only meets, but exceeds, today's safety standards and guidelines. GroundSmart™ Rubber Mulch is recommended by the Consumer Products Safety Commission "CPSC" for use as a playground or play area safety surface.

GroundSmart™ Rubber Mulch is certified by the International Play Equipment Manufacturers Association "IPEMA" for critical fall height protection per ASTM F1292-13 and meets the ASTM F1951-99 standard for wheelchair accessibility.



PART I GENERAL

1.1 WORK INCLUDED

The contractor shall provide all labor, materials and appurtenances necessary for installation of GroundSmart™ Rubber Mulch.

1.2 RELATED WORK

Site preparation and maintenance.

1.3 QUALITY ASSURANCE

The contractor shall provide laborers and supervisors who are thoroughly familiar with the installation of rubber mulch products including familiarity with current ASTM standards, CPSC Playground Safety Handbooks and all applicable codes and ordinances.

1.4 REFERENCES

- A. ASTM 1292-13 Standard Specification for Impact Attenuation of Surfacing Materials Within the Use Zone of Playground Equipment
- B. ASTM F1951-99/F1951-14 Standard Specification for Determination of Accessibility of Surface Systems Under and Around Playground Equipment
- C. ASTM F1487-11 Standard Consumer Safety Performance Specification for Playground Equipment for Public Use

PART 2 MATERIALS

2.1 GROUNDSMART™ RUBBER MULCH

- A. DESCRIPTION - GroundSmart™ Rubber Mulch is a loose fill, recycled rubber playground safety surface material.
- B. MATERIAL - The core substrate used in GroundSmart™ Rubber Mulch is recycled auto and truck tires.
- C. SIZE RANGE - The particle size range for GroundSmart™ Rubber Mulch is 5/16" to 7/8". Rubber nuggets are irregular in shape and size.
- D. METAL CONTENT - GroundSmart™ Rubber Mulch is 99.99% metal free. This is based on the number of pieces of rubber with exposed metal and includes both ferrous and non-ferrous metals.
- E. COATING - USDA bio-based certified, non-toxic, polyurethane coating bonded to the rubber and pigmented with iron or titanium oxides. Coating reduces potential zinc leaching versus uncoated or water-base acrylic coated products by up to an additional 69%.
- F. PACKAGING - GroundSmart™ Rubber Mulch is packaged in 1,000 lb or 2,000 lb super sacks strapped to a pallet or 0.8 cu ft poly bags packaged and shrink wrapped with 98 bags per pallet.



2.2 GEOTEXTILE FABRIC (LANDSCAPE FABRIC)

- A. A commercial grade geo-textile fabric is recommended to be installed prior to installing GroundSmart™ Rubber Mulch.

PART 3 EXECUTION

3.1 PRE-INSTALLATION

- A. Ground Preparation
 - 1. The area where GroundSmart™ Rubber Mulch will be installed must be free of debris, foreign materials and other surface materials including wood mulch.
 - 2. The area where GroundSmart™ Rubber Mulch will be installed must be graded for proper drainage with a substrate that is compacted to provide a firm, even base.
- B. Application of geotextile fabric
 - 1. Installation of a commercial grade geotextile fabric is recommended.
 - 2. Seam overlap needs to be a minimum of three inches and all seams need to be properly secured to prevent dirt or other substrate material from mixing with the safety surfacing.
 - 3. Geotextile fabric needs to be properly secured at the perimeter and around all installed equipment posts and polls.

3.2 INSTALLATION OF GROUNDSMART™ RUBBER MULCH

- A. Install GroundSmart™ Rubber Mulch at a uniform level throughout the training area. This can be accomplished through a variety of methods, including blowing, shoveling and raking.
- B. The amount of GroundSmart™ Rubber Mulch used per square foot is dependent upon the required fall height rating.
 - a. To achieve a 10' critical fall height rating per ASTM F1292-13, 5" of GroundSmart™ Rubber Mulch should be compacted to a 4" depth.
 - b. To achieve a 12' critical fall height rating per ASTM F1292-13, 6" of GroundSmart™ Rubber Mulch should be compacted to a depth of 5"
 - c. To achieve a 16' critical fall height rating per ASTM F1292-13, 7" of GroundSmart™ Rubber Mulch should be compacted to a 6" depth.
- C. Once loosely installed and roughly leveled, the product must be compacted and leveled to provide maximum head impact protection and wheelchair accessibility
 - a. A lawn roller used in a crisscross pattern should be sufficient to compact the surface
 - b. High spots and low spots should be raked and filled and re-compacted

PART 4 MAINTENANCE

4.1 Maintenance is required to provide maximum head impact protection and accessibility of the training area.

- A. Upon discovery of a thin, un-compacted or non-level condition, the surface of the training area must be raked and compacted to ensure consistent and proper installed depths.
- B. Periodic replenishment may be required if GroundSmart™ Rubber Mulch has migrated outside of the training area and cannot be reclaimed and a level compact depth for required fall height protection cannot be achieved.



PART 5 WARRANTY

5.1 GROUNDSMART™ RUBBER MULCH WARRANTY

Excludes Non-Colored Rubber Mulch & Infill Products

The GroundSmart™ limited warranty covers product defects in the rubber and warrants that the product is 99.99% wire free as measured by volume and will retain a minimum of 50% of its color for 12 years as long as the product is used in accordance with label instructions and under normal conditions. Any alteration of the product or use other than specified will void the warranty. All claims must include original receipt, a brief explanation and received within 12 years of date of purchase. Upon verification manufacturer will, at its option, refund the purchase price or replace the product. Warranty is limited to the purchase price of the product and does not include any incidental/consequential damages, installation, removal or shipping charges.

Claims are to be submitted to:
ATTN: GroundSmart™ Customer Service Dept.
LTR Products LLC
3410 Midcourt Rd., Suite 108
Carrollton, TX 75006

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