

BOLD & GOLD® ECT3 BIOSORPTION ACTIVATED MEDIA

1.1 Description

Bold & Gold® ECT3 media is a Biosorption Activated Media (BAM) for storm water treatment in conjunction with other structural or non-structural stormwater Best Management Practices (BMPs). Bold & Gold® (B&G) is a patented product developed at The Stormwater Management Academy at The University of Central Florida. Environmental Conservation Solutions, LLC. is the licensed provider of the Bold & Gold® media. Contact Environmental Conservation Solutions, LLC. for price quotation.

Environmental Conservation Solutions, LLC.
PO BOX 607356
Orlando, FL 32860
(407) 298-5121

1.2 Responsibility

The contractor shall be responsible for the satisfactory delivery, stockpiling, installation and maintenance of the Bold & Gold® ECT3 media during construction based on information provided in the Contract Documents and as provided by the supplier. The B&G® ECT3 media shall be purchased from an approved source.

1.3 Material

1.3.1 Composition: The Bold & Gold® ECT3 media shall be manufactured with mineral materials and no organic materials. The final product shall have less than 4% passing the 200 sieve. The media mix shall be composed of 75% expanded clay (light-weight aggregate of maximum aggregate size of ¾ inches) and 25% sorption materials composed of recycled tire chip with no measurable metal contents. Percentages shall be determined by in place volume. The mix shall have an average dry unit weight of non-compacted media less than 40 pounds per cubic foot and be non-flammable up to 482° F. Water passing through the media must not exhibit acute or chronic toxicity and does not change the pH of the filtered water by more than 1.0 unit. The material will have a water holding capacity of at least 4%, as measured by porosity, and total porosity of 45%. The permeability as measured in the laboratory must be greater than 128 inches per hour. The Bold & Gold® ECT3 media has a dissolved phosphorus (DP) removal capacity that exceeds 0.2 mg DP/gram of media as measured in the laboratory during normal operating conditions. Environmental Conservation Solutions, LLC. will provide certification of authenticity on the above composition and performance.

1-3.2 Storage and Handling: At the contractor's option, the Bold & Gold® ECT3 media may be delivered pre-mixed and ready to install or the material components delivered separately and mixed on site by an Environmental Conservation Solutions, LLC. representative. Pre-mixed material shall be stored in a covered and well-drained area. Material shall not be stockpiled longer than 30 days before installation to prevent separation of the material due to rainfall.

1.4 Construction

1-4.1 Delivery of the Material: Bold & Gold® ECT3 media may be delivered to the jobsite premixed OR the component materials may be delivered for onsite mixing.

1-4.2 Premixed Delivery: Bold & Gold® ECT3 media shall be mixed by Environmental Conservation Solutions, LLC. and delivered to the jobsite ready for installation. The delivered material shall be certified to meet the patent requirements.

BOLD & GOLD® ECT3 BIOSORPTION ACTIVATED MEDIA

1-4.3 Onsite Mixing Delivery: The mixing shall be done either in a pugmill or other mechanical mixing system that has the capability of uniformly mixing the component material to the requirements of Section 1.3.1 of this specification. Mixing by front end loader is acceptable. An Environmental Conservation Solutions, LLC. representative shall be on site for inspection of the mixing at least once during every 300 cubic yards of mixing onsite. Care shall be taken to avoid contaminating the component material with the existing ground in the stockpile area. The contractor shall obtain approval of the engineer of his proposed mixing method. Immediately after every 300 cubic yards of B&G® ECT3 media is mixed, the contractor shall take one sample and test the mixed material to show it meets pH, permeability, particle-size distribution, and relative density requirements of Section 1.3.1 of this specification. The mixed material may be stockpiled and covered for up to 30 days before installation.

1-4.4 Installation: Surface on which the Bold & Gold® ECT3 media is placed shall be reasonably smooth and within ± 1 of the elevations shown in the plans. The surface of the Bold & Gold® ECT3 media shall be placed loosely or compacted to meet the requirements as specified by the design engineer. The Bold & Gold® ECT3 media shall not be installed until all areas that drain to it have the final stabilization in place. If the installed Bold & Gold® ECT3 media becomes contaminated with sediment it shall be removed and replaced at the contractor's expense. If rutting to the Bold & Gold® ECT3 media occurs due to vehicles or equipment during installation the contractor shall repair it to the grades and elevations in the plans.

The Bold & Gold® ECT3 media may be placed in one lift and compacted to the density specified in the plan by the design engineer. The compacted thickness will be no less than the thickness shown in the plans. Clean water with no contaminants may be added to the material to meet the compaction requirements. If the compacted Bold & Gold® ECT3 media has an in-place density greater than 105% of the required density, the material will be reworked to meet density requirements.

1-5 Applications

1.5.1 Recommended for use in inter-event flow using Up-flow filter at wet pond and Down-flow filter at dry basins (filtration).