

SWPPP Binder Insert – Perimeter Protection

ERTEC Hard Surface Guard™ (HSG)

(Perimeter Sediment Control on hard surfaces)

Definition

Designed for sediment control on hard surfaces, Hard Surface Guard is a temporary sediment barrier with a hinged flap. It is made of high density polyethylene (HDPE) containing an integrated filter and a heavy duty under-seal gasket. During construction, Hard Surface Guard is attached to asphalt, concrete or very hard soil around the perimeter of areas where soil is disturbed. (Installation guidelines are available at www.ertecsystems.com.)

Purpose

Hard Surface Guard (HSG) is used to intercept sediment laden water on hard surfaces and prevent the sediment and associated pollutants from entering the storm water system. The system reduces the velocity of water and allows it to flow-through, discouraging end-around flows, under and overflow. The system filters certain sized smaller particles in suspension, captures a high percentage of total solids and prevents them from flowing through the barrier. The filter develops a filter cake which in turn filters smaller and smaller particles over time. The heavy duty underseal prevents underflows.

Conditions Where the Practice Applies

HSG is recommended for use on flat surfaces, and flatter slopes and smaller drainage areas such as road resurfacing or reconstruction on asphalt lots where low sheet flow and light concentrated flow exists rather than heavy concentrated flow. Unlike silt fence and wattles, advantages to this device are that it seals to hard surfaces without trenching, has an extended life, vehicles can drive over the barrier without permanent damage and has a lower total cost. It can be reshaped, repaired and may also be re-used under most conditions. The product is recyclable at the end of life as #2. In high flow areas, it may be necessary to install multiple rows, or use in combination with other BMPs and it may also be necessary to install a gravel bag behind the product for support.

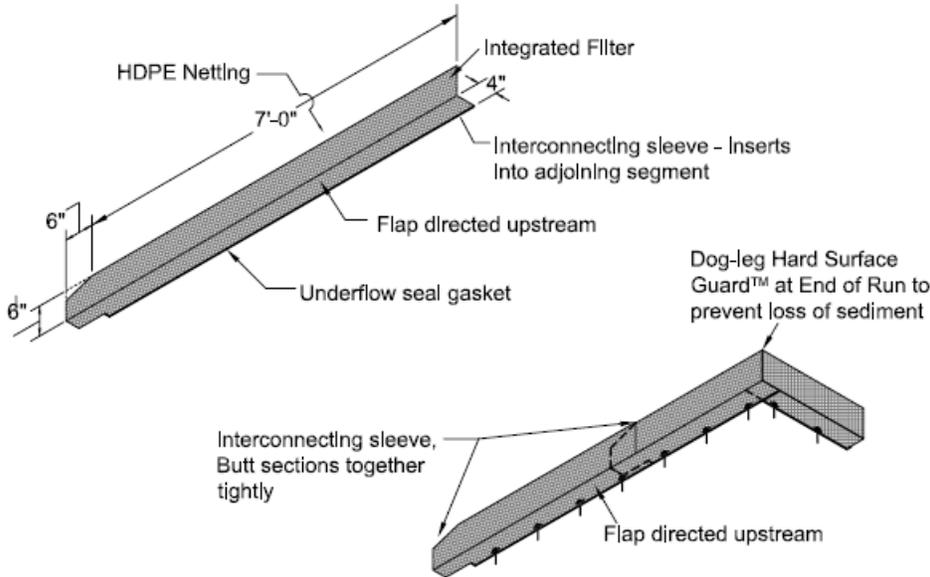
Design Criteria

- Filter Material or outer Jacket: Use ERTEC's HDPE Product. For detailed product characteristics contact ERTEC Environmental Systems @ (866) 521-0724 or www.ertecsystems.com. The unit weight of the system is 0.45 lbs per foot. Each interlocking module is 7 usable feet in length. The freeboard height of the filter is 6.0". The jacket contains at least 8,000 openings per yd².
- For installation procedures, follow the instructions on the attached two drawings. The last in-line HSG should be bent and dog-legged upstream to ensure sediment containment. Slit the flap to bend. If available, drive nails with a powder actuated nail driver (HILTI). 1.5" masonry nails work best on asphalt. On concrete use Red-Head type concrete anchors. When placed on soil surfaces, insure that no gaps exist between the soil and the bottom of HSG. Direct HSG flap upstream.

Maintenance

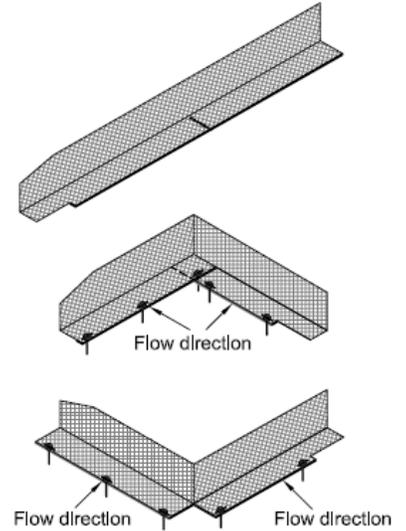
If flattened by multiple equipment drive-overs, reshape to vertical immediately. Repair or replace split or torn HSG. Inspect HSG when rain is forecast. Perform maintenance as needed or as required. Inspect HSG following rainfall events and at least daily during prolonged rainfall. Maintain HSG to provide an adequate sediment holding capacity. Sediment shall be removed when the sediment accumulation reaches 50% of the barrier height. Removed sediment shall be incorporated in the project at designated locations or disposed of outside the project or the road right-of-way in conformance with requirements. Remove the HSG after the site has been stabilized.

SWPPP Binder Insert – Perimeter Protection Installation Details - ERTEC Hard Surface Guard™



Note:

1. To bend Hard Surface Guard™ around obstacles, first slit flap and gasket through to the horizontal crease - with sharp knife or shears.
2. Then bend to desired angle, in either direction, as shown.

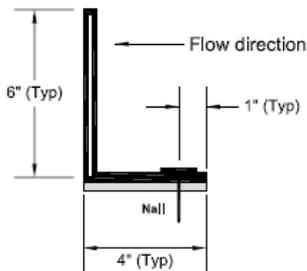


Note:

1. If bend is in this direction, locate gravel bag at the angle to prevent underflow

1. Asphalt Installation

Masonry Nails

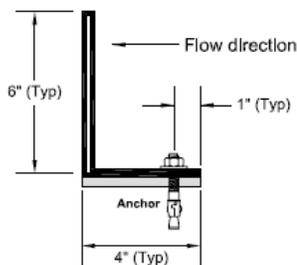


Notes:

1. Install nails flush with netting so that gasket is in good contact with surface.
2. Install 4 to 5 nails per each seven foot segment. Use HILTI X-ZF 1½" fasteners with 23mm pre-mounted steel washer (X-ZF 32 P8 S23) or equivalent with automatic powder-actuated hand tool. If necessary use wedge-type expansion anchor.

4. Alternative Concrete Installation

Concrete Anchors



Notes:

1. Install anchors flush with netting so that gasket is in good contact with surface.
2. Install 4 to 5 anchors per each seven foot segment. Use wedge-type expansion anchor ¼" x 2 ¼".



Hard Surface Guard™

ERTEC Environmental
Systems

www.ertecsystems.com

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