

INTRODUCTION TO HESCO BASTION

By

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HESCO Description: Modular, soil filled barrier that is comprised of welded wire mesh cages that are lined with geotextile fabric allowing a soil filled and stackable barrier (imagine them being like soil filled building blocks)





HESCO Construction – A simple 4-step process



Step 1:
Carry HESCO to the site



Step 2:
Stretch out the HESCO



Step 3:
Join HESCO's together



Step 4:
Put fill material inside and
compact every foot by foot

What is HESCO used for?

(well described as soil filled building blocks)

Common civil engineering applications include

- Flood Defense Barriers
- Debris Flow Protection
- Erosion Control
- Retaining Walls and Embankments

Common Military Applications

- Blast Walls for Car Bomb Protection
- Explosives Containment
- Creating bunkers, raised towers
- Creating Shooting Ranges

Other Interesting Applications

- Creating of buildings (bunkers, towers, garages, houses, and even a school!)
- Creating of sound barriers
- Primary and Secondary Containment Operations – against contaminants or ballistic threats



Example: HESCO stopping 7'6" of flood water on the Mississippi for over 30 days TWICE!



Gap Closures using HESCO



Example: 12' tall HESCO structure that sank 3' down into the mud



TECHNICAL SPECIFICATIONS

FLOOD BARRIERS

FLOODLINE™ 4836 UNIT



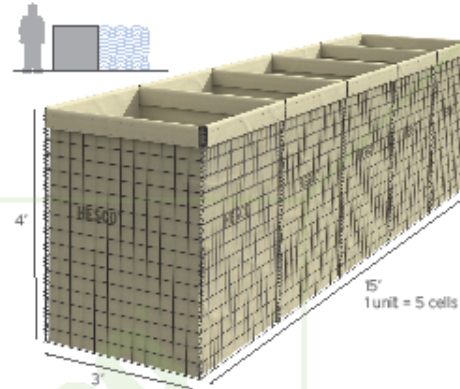
| UNIT | HEIGHT | WIDTH | LENGTH |
|-------------------|---------------|---------------|----------------|
| SL4836 (Beige) | 4" (0.23m) | 3" (0.91m) | 15" (4.57m) |
| SL4836 (Green) | 4" (0.23m) | 3" (0.91m) | 15" (4.57m) |

Geotextile-lined units suitable for a wide range of uses, including the construction of walls and barriers, flood protection, erosion protection, protection against accidental explosions and homeland security applications. STORM LINED units are particularly suitable in flood areas where damage from floating debris may be an issue.

GENERAL SPECIFICATIONS

Geotextile-lined welded mesh barrier coated to ASTM A 856. All wires conform to BS EN 10219-2:2012. Zinc-Aluminum coatings are to BS EN 10244-2:2009, where appropriate. The geotextile is a heavy-duty, non-woven, permeable polypropylene fabric, available in either beige or green color.

All dimensions and weights are nominal. Diagrams and product images are for illustrative purposes only.



PACKAGING AND TRANSPORT INFORMATION

FLAT-PACKED INDIVIDUAL UNIT DIMENSIONS & WEIGHTS

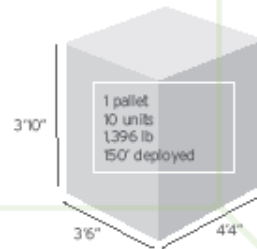
| HEIGHT | WIDTH | LENGTH | WEIGHT |
|---------------|-----------------|---------------|--------------------|
| 5" (0.13m) | 3'6" (0.91m) | 4" (1.22m) | 13.6 lb (6.2kg) |

PALLET INFORMATION

| PER PALLET | HEIGHT | WIDTH | LENGTH | WEIGHT |
|------------|------------------|-----------------|-----------------|---------------------|
| 10 units | 3'10" (0.97m) | 3'6" (0.96m) | 4'4" (0.32m) | 1,396 lb (633kg) |

TRANSPORT INFORMATION

| TYPE | PALLETS | UNITS | DEPLOYED LENGTH |
|---------------|---------|-------|--------------------|
| 13.5 Trailer | 31 | 310 | 4,650' (0.470m) |
| 20' Container | 16 | 160 | 2,400' (0.32m) |
| 40' Container | 36 | 360 | 5,400' (0.646m) |



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Examples of stacked HESCO structures



Examples of testing done on HESCO

Typical Wall Configuration Testing, USA

6.8 tons travelling at 82 kph (51mph)



Car Bomb Testing – 880 pounds of Ammonium Nitrate “fertilizer bomb” @ 15’ of standoff



Car Bomb Testing – 880 pounds of Ammonium Nitrate “fertilizer bomb” IN CONTACT



Blast Testing – 220lbs of ANFO @ 3' away

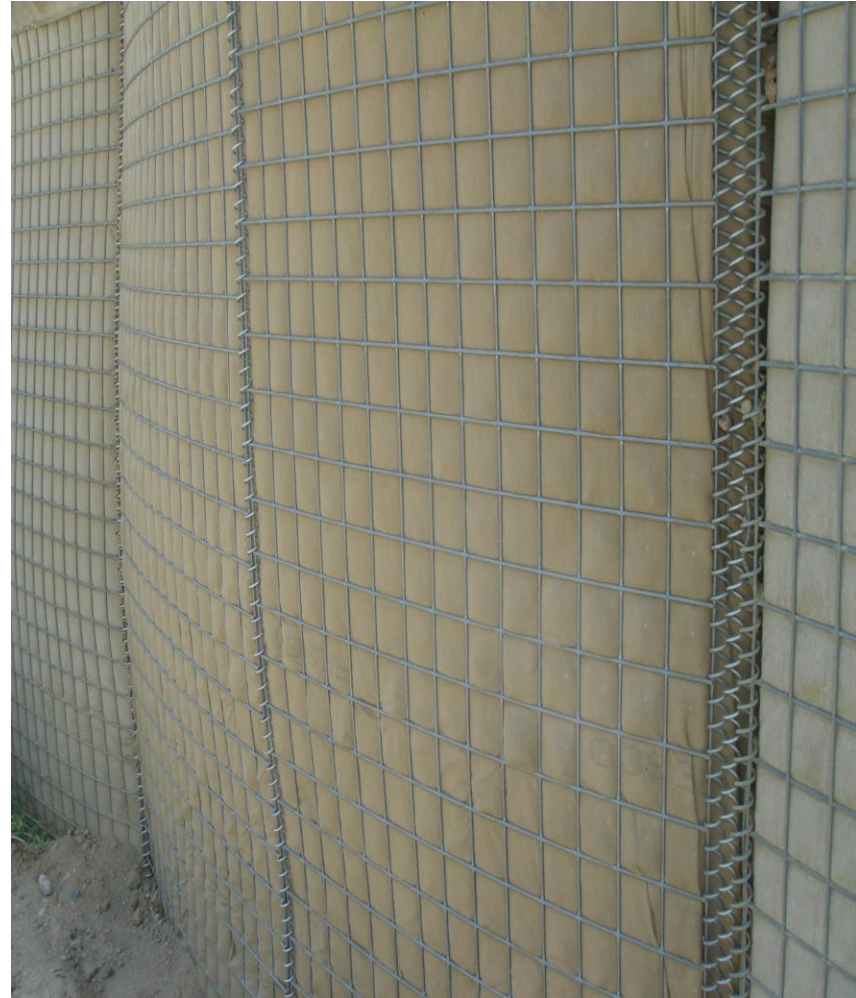


Sand Versus a Course Aggregate

Repairing Damaged Units



Repaired Unit



Fieldcraft with HESCO – Using trees for added stability



Fieldcraft: Adding 'buttress cells' or 'anchor cells' for added stability



Fieldcraft: Plumbing Pipes through HESCO



Fieldcraft: Additional Examples



Blending HESCO into the Environment



Any Questions???

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