RULE OF THUMB FIGURES

BLOCK
2 1/2 BAGS MORTAR PER 100 BLOCK (40 BLOCK PER BAG)
800LB OF SAND PER 100 BLOCK
1.125 BLOCK PER SQ FT OF WALL AREA
75% OF LENGTH OF WALL GIVES NO. OF BLOCK PER COURSE
TAKE HEIGHT OF WALL (IN FEET) TIMES 1.5 FOR NO. OF COURSES

BRICK
APPROX. 7 BAGS MORTAR PER 1000 BRICK (143 BRICK PER BAG)
APPROX. 1 TON SAND PER 1000 BRICK
FIGURE BRICK 7 PER SQ FT OF WALL AREA (ALLOWS FOR WASTE)
1 1/2 BRICK PER RUNNING FOOT ON WALL
4.625 COURSES OF BRICK PER FOOT OF WALL HEIGHT
3 BRICK PER SQ FT FOR PAVING, HEARThS (LAID FLAT SOLID BRICK)

CEMENT PLASTER
1/4" THICK (100 SQ FT) 220LB SAND, 8 BAG MORTAR
1/3" THICK (100 SQ FT) 330LB SAND, 1.2 BAG MORTAR
1/2" THICK (100 SQ FT) 440LB SAND, 1.5 BAG MORTAR

CONCRETE
4-2-1 MIX- 1 TON GRAVEL, 1/2 TON SAND, 5 BAGS CEMENT

FIRE CLAY
2 PARTS FIRE CLAY, 3 PARTS CEMENT

FILLING BLOCK
CORES WITH CONCRETE
12" BLOCK - 1.64 CU YD PER 100 BLOCK (APPROX)
8" BLOCK - .93 CU YD PER 100 BLOCK (APPROX)

FLINTKOTE
APPROX. 3 GAL PER 100 SQ FT (WALL AREA WATER SOLUBLE, BRUSH ON)

MORTAR
MIX 1 PART MORTAR TO 2 TO 2 1/4 PARTS SAND

PLASTIC PIPE
APPROX. 100 LBS GRAVEL PER RUNNING FOOT OF PIPE

SAND-GRAVEL
APPROX. 3000 LBS PER CU YD (NO. YDS TIMES 1.5 FOR TONS)

FASWALL
50 LB BAG COVERS APPROX. 25 BLOCK BOTH SIDES 1/8" THICK

THORSO SEAL
BASE COAT- 60LB PAINT COVERS APPROX. 270 SQ FT WALL AREA

WALL TIES
1 PER EVERY 10 BRICK (100 WALL TIES PER 1000 BRICK)

WHITE SAND
PLASTER AND STUCCO NO. 1 OR 2
SANDBLASTING - NO. 1, 2, 3, OR 4
(NO. 1 FOR FINER JOBS, THE HIGHER THE NO. THE COARSER THE SAND

ZONOLITE (RYOLEX)
4 CU FT BAG FILLS APPROX. 9-12" BLOCK OR 16-8" BLOCK
RESOURCES

Links of Interest:

- Bis.org
- GoBrick.com
- Prosoco.com

* RULE OF THUMB FIGURES *

BLOCK
2 ½ bags mortar per 100 block (40 block per bag)
800 lb. Of sand per 100 block
1.125 block per sq. ft. of wall area
75% of length of wall gives number of block per course
Take height of wall (in feet) times 1.5 for number of courses

BRICK
Approx. 7 bags mortar per 1000 brick (143 brick per bag)
Approx. 1-ton sand per 1000 brick
Figure Brick 7 per sq. ft. of wall area (allows for waste/modular)
1 ½ brick per running foot on wall
4.625 courses of brick per foot of wall height
5 brick per sq. ft. for paving, hearths (laid flat - solid brick)

CEMENT
1/4" thick (100 sq. ft.) 220# sand 8 bag mortar

PLASTER
3/8" thick (100 sq. ft.) 330# sand 1.2 bag mortar
5/8" thick (100 sq. ft.) 440# sand 1.6 bag mortar

CONCRETE
4-2-1 Mix - 1-ton gravel, ½ ton sand, 6 bags cement

FIRE CLAY
2 parts fire clay, 3 parts cement

FILLING BLOCK
12" block - 1.64 cu. yd. Per 100 block (approx.)
8" block - .93 cu. yd. per 100 block (approx.)

FLINTKOTE
Approx. 3 gal. per 100 sq. ft. wall area (water-soluble, brush on)

MORTAR
Mix one part mortar to 2 to 2 ½ parts sand

PLASTIC PIPE
Approx. 100 lbs. Gravel per running foot of pipe

SAND-GRAVEL
Approx. 300 lb. per cu. yd. (no. yards x 1.5 for tons)
Approx. 110 lb. per cu. yd. (27 cu. ft. in cu. yd.)

FASWELL
50 lb. bag covers approx. 25 block both sides 1/8" thick

THOROSEAL
Base coat - 60# pail covers approx. 270 sq. ft. wall area

http://www.custombrick.com/resources.html
WALL TIES  1 per every 10 brick (100 wall ties per 1000)

WHITE  Plaster and Stucco - No. 1 or 2
SAND  Sandblasting - No. 1, 2, 3, or 4
       (No. 1 for finer jobs, the higher the No., the coarser the sand)

ZONOLITE  4 cu. ft. bag fills approx. 9-12' block or 16-8' block

* Custom Brick Company cannot accept responsibility for estimating jobs.
  These figures should be used to help customers.
Material Estimating

Measurements

One Ton = 2000 lbs.
One Cubic Yard = 27 Cubic Feet 3'x3'x3' = 27 cubic feet
Square Feet = length x width 10'x10' = 100 sq. ft.

Natural Stone

Full Dimensional Stone
Approx 1.5 tons per pallet
Building Stone 3" to 5" thick approx 35-40 sq. ft. per ton
3 bags of mortar and 1/2 yard of sand per ton of stone.

Thin Veneer
Less than 15 lbs. per sq. ft.
Approx 125 sq. ft. per pallet
Approx 8 sq. ft. per EZ Pac Mini
**Thin Brick & Natural Stone must be thoroughly washed prior to installation. Please download the "Natural Stone Thin Veneer" brochure for additional details.**

Flagstone
Thin Patio 1" to 1/2" thick covers approx 150-180 sq. ft.
Patio Grade 1" to 2" thick covers approx 100-120 sq. ft.
Slabs 2" to 3" thick covers approx 75-100 sq. ft.

Concrete Masonry Units (CMU)

4"x8"x16" = 1.125 block per sqft
2 ½ bags mortar per 100 block (40 block per bag)
1/2 yard of sand per 100 block

Brick Sizes & Square Footage Info

Approx. 7 bags mortar per 1000 brick (143 brick per bag)
Approx. 1 yard of sand per 1000 brick
4.5 brick per sq. ft. for paving, hearths (laid flat - solid brick)
Wall Ties- 1 per every 10 brick (100 wall ties per 1000)

Modular Size- 3 5/8"d X 2 1/4"h X 7 5/8"l
Approx 6.86 per sqf
Standard Size- 3 1/2"d X 2 1/4"h X 8"l
Approx 6.55 per sqf
Queen Size- 2 3/4"d X 2 3/4"h X 8"l
Approx 5.5 per sqft
**Engineer Size**: 3 1/2"d X 2 3/4"h X 8"l
Approx 5.5 per sqft
**Big John Size**: 3"d X 2 5/8"h X 8 5/8"l
Approx 5.33 per sqft
**King Size**: 3"d X 2 5/8"h X 9 5/8"l
Approx 4.8 per sqft
**Executive or 3x10 Size**: 3"d X 3"h X 10"l
Approx 4.1 per sqft
**Roman Size**: 3 5/8"d X 1 5/8"h X 11 5/8"l
Approx 6 per sqft
**Norman Size**: 3 5/8"d X 2 1/4"h X 11 5/8"l
Approx 4.57 per sqft
**Utility Size**: 3 5/8"d X 3 5/8"h X 11 5/8"l
Approx 3.0 per sqft
**Closure**: 3 1/2"d X 3 5/8"h X 7 5/8"l
Approx 5.4 per sqft
**Wall Unit**: 3 1/2"d X 7 5/8"h X 7 5/8"l
Approx 2.25 per sqft
**4x16 Size**: 3 5/8"d X 3 5/8"h X 15 5/8"l
Approx 2.25 per sqft
**8x16 Size**: 3 5/8"d X 7 5/8"h X 15 5/8"l
Approx 1.125 per sqft

* Square footage estimates are based on use of a 3/8" Mortar Joint. For specific regional availability and sizing, please contact your Metro Brick representative. Estimating blueprints is a courtesy. Take-offs are not guaranteed. Double check quantities with mason prior to ordering.
Calculate Number of Brick Needed for your project
1. Add up the total square footage of brick wall area.
   (Multiply height x length of brick wall area.)
2. Add up the total square footage of masonry openings.
   (Window and door areas not requiring brick.)
3. Subtract masonry opening square footage from brick wall area square footage.
4. Multiply this number of 7 if using modular size brick
5. Multiply this number by 5.8 if using engineer size brick

Example:
1530 Square feet of wall area. 154 square feet of windows and doors (Masonry Openings)
1530 minus 154 = 1376 Square feet of brick wall
1376 x 7 = 9,976 modular size brick
1376 x 5.8 = 8,394 engineer size brick

How to Figure Pavers:
1. Add up the total square footage of the horizontal area.
2. Multiply this number by 5

Example:
10 x 10 area - 100 Square Feet of paving area.
100 Square Feet x 5 = 500 pavers needed for a 100 square foot area.
Calculations and Conversions

Calculations
View Calculator

How to compute the amount of materials needed:

• Sold by the cubic yard: soil, mulch, compost, fill dirt.
• Sold by the ton: aggregates, sand, ball diamond clay, golf course material.

Inches to Feet
1" divided by 12"= .08'
2" divided by 12"=.17'
3" divided by 12"=.25'
4" divided by 12"=.33'
5" divided by 12"=.42'
6" divided by 12"=.50'
7" divided by 12"=.58'
8" divided by 12"=.67'
9" divided by 12"=.75'
10" divided by 12"=.83'
11" divided by 12"=.92'
12" divided by 12"=1.0'

For materials sold by the cubic yard:
• L x W x D divided by 27 = cubic yards
• Multiply length by width = square feet
• Multiply square feet by depth (inches divided by 12) = cubic feet
• Cubic feet divided by 27 to= cubic yards

For material sold by the ton:
Use the same formula as calculating for cubic yards
Multiply the cubic yards by the tons per cubic yard conversion (table 2)

Area of a circle:
3.14 X the radius (1/2 the diameter of a circle) squared = square feet. You can now take the square ft to cubic yards or tons.

Conversion Chart on Coverage for Mulches and Compost

1 cubic yard will cover:
• 324 Sq. Ft. = 1" Deep
• 162 Sq. Ft. = 2" Deep
• 108 Sq. Ft. = 3" Deep
• 81 Sq. Ft. = 4" Deep
• 65 Sq. Ft. = 5" Deep
54 Sq. Ft. = 6" Deep

3.0 cubic ft bags will cover:
• 36 Sq. Ft. = 1" Deep
• 18 Sq. Ft. = 2" Deep
• 12 Sq. Ft. = 3" Deep
• 9 Sq. Ft. = 4" Deep
• 7 Sq. Ft. = 5" Deep
• 6 Sq. Ft. = 6" Deep

Yard to Ton Conversions

<table>
<thead>
<tr>
<th>Material</th>
<th>1 yard = 1.4 ton</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mulch</td>
<td></td>
</tr>
<tr>
<td>Mixed Soils</td>
<td></td>
</tr>
<tr>
<td>Compost</td>
<td></td>
</tr>
<tr>
<td>Silica Sand</td>
<td></td>
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<tr>
<td>Slag</td>
<td></td>
</tr>
<tr>
<td>Gravel</td>
<td></td>
</tr>
<tr>
<td>Decorative Stone</td>
<td></td>
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<tr>
<td>Recycled Concrete</td>
<td></td>
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<tr>
<td>Brick Materials</td>
<td></td>
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<tr>
<td>Ball Diamond Clay</td>
<td></td>
</tr>
<tr>
<td>Limestone</td>
<td></td>
</tr>
</tbody>
</table>

To convert yards squared yards to yards cubes, divide by 9
To convert cubic feet to cubic yards, divide by 27

<table>
<thead>
<tr>
<th>Vehicle</th>
<th>Size</th>
<th>Volume</th>
</tr>
</thead>
<tbody>
<tr>
<td>S-10 Pickup Truck</td>
<td>4' x 6'</td>
<td>Water level = 1 yd. Heaping = 1.5 yds.</td>
</tr>
<tr>
<td>Full size pick-up</td>
<td>8' bed</td>
<td>Water Level = 2 yds. Heaping = 3 yds.</td>
</tr>
<tr>
<td>Single Axle 1 ton (350) with dump bed</td>
<td>96&quot;L x 78&quot; W x 28&quot; H</td>
<td>Water Level = 5 1/2 yds. Heaping = 6 yds.</td>
</tr>
<tr>
<td>1.5 ton (350 Super Duty)</td>
<td>120&quot; L x 84&quot;W x 25&quot; H</td>
<td>Water Level = 6 yds. Heaping = 7 yds.</td>
</tr>
<tr>
<td>2 ton (F800)</td>
<td>120&quot;L x 84&quot;W x 37&quot; H</td>
<td>Water Level = 8 yds. Heaping = 10 yds.</td>
</tr>
<tr>
<td>Triaxle (LT8000)</td>
<td>192&quot;L x 88&quot;W x 60&quot;H</td>
<td>Water Level = 22 yds. Heaping = 25 yds.</td>
</tr>
<tr>
<td>Triaxle (LT9000)</td>
<td>214&quot;L x 88&quot;W x 74&quot;H</td>
<td>Water Level = 30 yds. Heaping = 35 yds.</td>
</tr>
</tbody>
</table>

How much mulch do I need?

How to read the table:
• Figure the length of the area to cover.
• Figure the width of the area to cover.
• Multiply length by width to calculate the square footage.
• Locate the square footage on the chart on the next page.
• Locate the number in inches you want to fill (depth) across the top of the chart. (We recommend 2-4 inches for mulching; 12" for playground surfaces)
• The number in the column represents the number of cubic yards required.

**Base Material Calculation**

The following formula is used to calculate the amount of base gravel only:

- **NOTE:** Base should extend 6" below your finished installation for structural purposes.
- **Step 1:** Length x width = total square feet of area
- **Step 2:** Total square feet of area x depth (inches divided by 12) = total cubic feet of area
- **Step 3:** Total cubic feet of area divided by 27 = total cubic yards of material needed
- **Step 4:** Add 10 to 20% to above calculation to allow for compaction

**Limestone Screening Calculation**

The following formula is used to calculate the amount of Limestone Screening:

- **Step 1:** Length x width = total square feet of area
- **Step 2:** Total square feet of area x depth (inches divided by 12) = total cubic feet of area
- **Step 3:** Total cubic feet of area divided by 27 = total cubic yards of material needed
- **Step 4:** Add 10 to 20% to above calculation to allow for compaction

**Jointing Sand Calculation**

The following formula is used to calculate the amount of jointing sand:

- **Step 1:** Length x Width = total square feet of area
- **Step 2:** Total square feet of area + 100 (coverage of 1 bag) = total # of bags required
- **Step 3:** Round up to the next full bag

- **NOTE:** Reduce coverage of 1 bag in step #2 to 75 when calculating for a circular pattern job.

**Edging Calculations**

- **Step 1:** Total linear feet/15 = Number of pieces required
- **Step 2:** Repeat step 1 for all sides requiring edging
- **Step 3:** Add all individual calculations
- **Step 4:** Round up to the next full piece count
- **Step 5:** Number of pieces x price per piece = cost of material
NOTE: Edging includes 4 spikes per 15 ft section.

Miscellaneous:

- 1 acre = 43,560 square feet
- 1.3079 Cubic Yards = 1 Cubic Yard
- 2000 lbs = 1 Cubic Yard
- ' = feet
- " = inches
- radius = 1/2 diameter
From: Gail Crowdis [gail.c@alliancegator.com]
Sent: Tuesday, June 26, 2012 2:12 PM
To: Lynn Smith
Subject: RE: What it the coverage per bag?

The coverage for the sand is as follows:

Narrow joints 65-85 sq. feet per 50 lb bag – Wide joints 22-42 sq. ft per 50 lb. bag  based on a 2 ¾” depth.

The Gator Dust coverage is:

20-30 sq. ft per 50 lb bag.

Regards,

Gail Crowdis
Alliance Designer Products, Inc.
gail.c@alliancegator.com
1-866-212-1611

From: info@alliancegator.com [mailto:info@alliancegator.com]
Sent: June 26, 2012 9:13 AM
To: ‘Gail Crowdis’
Subject: FW: What it the coverage per bag?

-----Original Message-----
From: Lynn Smith [mailto:LSmith@illinoisbrick.com]
Sent: June 25, 2012 4:08 PM
To: ‘info@alliancecp.com’
Subject: What it the coverage per bag?

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* Provide excellent customer service
* Always deliver products and service in a timely manner