Material Price List

Description	Price/ft
80/20 1"x1" AL square extrusion	$3.00
1"x0.125" AL square tubing	$1.00
0.125"x1" AL rectangular bar stock	$1.00
0.125"x2" AL rectangular bar stock	$2.00
0.5"x2" AL rectangular bar stock	$8.00
1"x2" AL rectangular bar stock	$16.00
1"x1"x0.125" AL angle	$3.00
1.5"x1.5"x0.125" AL angle	$4.50
2"x2"x0.125" AL angle	$6.00
1" AL round bar stock	$5.00
2" AL round bar stock	$20.00
1" Schedule 40 PVC (plastic) pipe	$1.00
2" Schedule 40 PVC (plastic) pipe	$2.00
3" Schedule 40 PVC (plastic) pipe	$3.00
4" Schedule 40 PVC (plastic) pipe	$4.00

Prices on additional materials and sizes not shown available online at

http://mscdirect.com
http://mcmaster.com
http://www.onlinemetals.com/

Computing Cost for Material not on Price List

As you work on your projects and talk with the TAs about material selection, you might find material in the lab that you want to purchase for use on your project, but it's not listed on the material price sheet. Use the equivalent price per volume for the same type of material (aluminum or steel flat bar, round bar, angle, sheet, etc)

If, for example, you desire to make motor mounting brackets out of 3/16" x 4" aluminum flat bar, how would you compute the price?

A quick glance at the price list on the previous page does not show this size material.

We need to use the equivalent price per volume for the same type of material, so let's choose 1/8" x 2" aluminum bar stock, which the price sheet lists as costing $2.00 per foot. To calculate the equivalent price per volume, simply use the ratio of cross sectional areas (since we're still comparing cost per 1 foot length):

$2.00/ft × (3/16" x 4") / (1/8" x 2") = $2.00/ft × (3) = **$6.00/ft**

Therefore, the 3/16" x 4" aluminum flat bar would cost $6.00/ft.

If your design requires two pieces of 3/16" x 4" aluminum flat bar that are 4.5" long each, the total cost would simply be:

$6.00/ft × (1 ft/12 in) × 9" = **$4.50 (ans)**

Sheetmetal Price List

Description	Price/ft^2
0.035" (20 GA) steel sheet	$2.35
0.048" (18 GA) steel sheet	$3.20
0.060" (16 GA) steel sheet	$4.00
0.035" (20 GA) alum sheet	$3.20
0.048" (18 GA) alum sheet	$4.00
0.060" (16 GA) alum sheet	$5.00

Prices on additional sheet-metal or aluminum sizes not shown available locally at

Lowes	**376-9900**
Zells/Ace Hardware	**378-4650**
Boone Welding	**372-9533**
Roger's Welding	**372-7734**

Or online at

http://mscdirect.com
http://mcmaster.com
http://www.onlinemetals.com/

Computing Cost for Sheetmetal

When purchasing sheetmetal for your project, **you must buy the smallest rectangular piece from which you can make your part.** For example, if you need to make a part out of 16 gage steel sheetmetal that measures 6" x 12" and has 3" chamfers on the corners, you must pay for the entire 6" x 12" piece of material (no one will be able to use the "drops" from the corners of the part).

To calculate the price for this part, simply look up the cost for 16 gage steel sheetmetal from the previous page ($4.00/ft^2) and scale accordingly:

$4.00/ft^2 \times$ (6 in x 12 in) / (144 in^2/ft^2) = **$2.00 (ans)**

Therefore, our part would cost $2.00 if made from 16 gage steel sheetmetal.