

| 1596B108                |             |
|-------------------------|-------------|
| Finish - Black (Smooth) |             |
| Material - ABS Plastic  |             |
| Quantity                |             |
| 1596B108                | 1 Box       |
| 1596B108-10             | 10 Boxes    |
| 1596B108-BULK           | Bulk Packed |

**HAMMOND  
MANUFACTURING™**

**1596B108**

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# Potting Boxes (1596 Series)

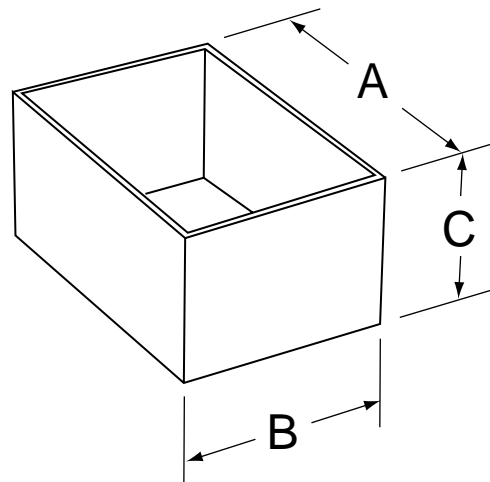
Plastic



| Part Number | Units | Dimensions |      |      |
|-------------|-------|------------|------|------|
|             |       | A          | B    | C    |
| 1596B109    | inch  | .46        | .46  | .35  |
|             | mm    | 12         | 12   | 9    |
| 1596B110    | inch  | .85        | .55  | .46  |
|             | mm    | 22         | 14   | 12   |
| 1596B101    | inch  | .98        | .79  | .59  |
|             | mm    | 25         | 20   | 15   |
| 1596B112    | inch  | .98        | .98  | .98  |
|             | mm    | 25         | 25   | 25   |
| 1596B102    | inch  | 1.18       | .79  | .59  |
|             | mm    | 30         | 20   | 15   |
| 1596B111    | inch  | 1.18       | 1.18 | .79  |
|             | mm    | 30         | 30   | 20   |
| 1596B103    | inch  | 1.57       | 1.37 | .79  |
|             | mm    | 40         | 35   | 20   |
| 1596B107    | inch  | 1.57       | 1.57 | .79  |
|             | mm    | 40         | 40   | 20   |
| 1596B113    | inch  | 1.57       | 1.57 | 1.15 |
|             | mm    | 40         | 40   | 29   |
| 1596B104    | inch  | 1.96       | 1.57 | 1.18 |
|             | mm    | 50         | 40   | 30   |
| 1596B108    | inch  | 1.96       | 1.96 | 1.18 |
|             | mm    | 50         | 50   | 30   |
| 1596B105    | inch  | 2.95       | 1.98 | 1.39 |
|             | mm    | 75         | 50   | 35   |
| 1596B114    | inch  | 2.95       | 2.95 | 1.57 |
|             | mm    | 75         | 75   | 40   |
| 1596B115    | inch  | 3.50       | 2.52 | 1.28 |
|             | mm    | 89         | 64   | 32.5 |
| 1596B106    | inch  | 3.93       | 2.36 | .99  |
|             | mm    | 100        | 60   | 25   |

## KEY FEATURES

- One piece molded construction.
- Molded from black general purpose ABS plastic.
- Temperature rated -20° to +94° C.
- 1.0 mm (0.04") wall thickness.



# Technical Information

| Properties of Plastic Materials  |           |             |          |                     |             |                |                            |
|--|-----------|-------------|----------|---------------------|-------------|----------------|----------------------------|
| Property   | Units     | Test Method | ABS      | ABS Flame Retardant | Polystyrene | Poly-carbonate | Fiber Reinforced Polyester |
| <b>Mechanical Properties</b>   |           |             |          |                     |             |                |                            |
| Tensile strength @ yield   | PSI       | ASTMD638    | 5890     | 5250                | 3200        | 10000          | 6000                       |
| Tensile elongation @ break   | %         | ASTMD638    | 22       | 15                  | 50          | 100            | 0.5                        |
| Tensile modulus  | PSI       | ASTMD638    | 290,000  | 260,000             | 285,000     | 810,000        | 1,600,000                  |
| Flexural modulus   | PSI       | ASTMD790    | 290,000  | 260,000             | 285,000     | 810,000        | 1,600,000                  |
| Flexural Strength  | PSI       | ASTMD790    | 8200     | 6800                | 18100       | 17000          | 15000                      |
| Izon impact (1/8") - notched   | FT LB/IN  | ASTMD256    | 4.5      | 3.9                 | 2.1         | 16             | 4.5                        |
| Specific gravity - solid   | -         | ASTMD792    | 1.04     | 1.22                | 1.17        | 1.2            | 1.95                       |
| Hardness, Rockwell R   | R         | ASTMD785    | 100      | 100                 | 40          | 118            | 40                         |
| (Bercol Scale)   |           |             |          |                     |             |                |                            |
| <b>Thermal Properties</b>  |           |             |          |                     |             |                |                            |
| Melt index   | GM/10-MIN | ASTMD1288   | 3        | 4                   | 3           | 7              | -                          |
| Heat Deflection Temp @455 KPA  | °F(C)     | ASTMD648    | 205(96)  | 185(85)             | 188(87)     | 284(140)       | 392(200)                   |
| Heat Deflection Temp @1820 KPA   | °F(C)     | ASTMD648    | 181(83)  | 165(74)             | -           | 268(131)       | -                          |
| Vican softening temperature  | °F(C)     | ASTMD1525   | 217(103) | 190(88)             | 203(95)     | 310(154)       | -                          |
| Flame characteristics  | -         | UL94        | HB       | VO                  | HB          | HB             | VO                         |
| Thermal conductivity   | W/M.C     | ASTMC177    | 0.19     | -                   | 0.16        | 0.19           | 0.001                      |
| <b>Electrical Properties</b>   |           |             |          |                     |             |                |                            |
| Specific volume resistance   | Ohm/cm    | ASTMD257    | 10 E15   | 10 E13              | 10 E16      | 10 E16         | 10 E15                     |
| Dielectric strength  | V/MIL     | ASTMD149    | 140      | 400                 | 215         | 160            | 400                        |
| <b>Other Properties</b>  |           |             |          |                     |             |                |                            |
| Water absorbtion   | %         | ASTMD570    | 0.3      | -                   | 0.1         | 0.15           | 0.16                       |
| * Material classified 94HB is combustible!   |           |             |          |                     |             |                |                            |
| Values noted above are typical values for reference only. These values may vary between material manufacturers and within normal manufacturing tolerances. |           |             |          |                     |             |                |                            |

| Resistance of material to different media   |             |     |                  |                |
|---|-------------|-----|------------------|----------------|
| Material  | Polystyrene | ABS | Flame Retard.ABS | Poly-carbonate |
| Gasoline  | -           | 0   | 0                | -              |
| Diesel Oil  | -           | +   | +                | 0              |
| Sea Water   | +           | +   | +                | -              |
| Hydrochloric Acid, 10%  | +           | +   | 0                | +              |
| Weak Alkaline   | +           | +   | +                | -              |
| Strong Alkaline Solution  | +           | +   | +                | -              |
| Atmospheric Influences  | 0           | 0   | 0                | +              |
| Lactic Acid   | +           | +   | +                | +              |
| Acetone   | -           | -   | -                | -              |
| <b>Value at room temperature: + = stable, 0 = relatively stable, - = unstable</b>   |             |     |                  |                |
| Simultaneous exposure to different media may alter the resistive properties of a material! To be safe, it is advisable to test the cases for sufficient resistance to the material under the condition of the specific application. |             |     |                  |                |

## Flammability Rating

### 94 V-0

Test samples are extinguished within 5 seconds average time. None of the test samples burn longer than 10 seconds. No test samples emit burning particles.

### 94 V-1

Test samples are extinguished within 25 seconds average time. None of the test samples burn longer than 60 seconds. No test samples emit burning particles.

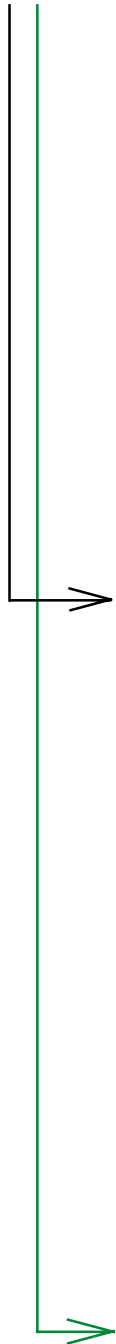
### 94 V-2

Similar to 94 V-1, except test samples emit burning particles during the test. The test sample is extinguished in all cases mentioned above. If the sample continues to burn after 25 seconds a horizontal test can be performed to meet classification.

## Degree of protection - "IP" Codes Information

Example:

**IP 55**



| I.P. Protection Classification                                     |  |   |
|--|--|---|
| Degrees of contact prevention and guarding against foreign objects |  |   |
| 1st I.P. Digit   | Designation                                | Explanation   |
| 0  | No protection                              | No protection of personnel from direct contact with active or moving parts. No protection from access of solid foreign object.  |
| 1  | Protection against large foreign bodies    | Protection of personnel from accidental large area direct contact with active or internal moving parts (hand contact etc.) but no guard against intentional access to such parts. Protection from access of solid foreign object larger than 12 mm in diameter. |
| 2  | Protection against medium foreign bodies   | Protection of personnel from finger contact with active or internal moving parts. Protection from access of solid foreign object larger than 12 mm in diameter.   |
| 3  | Protection against small foreign bodies    | Protection of personnel from touching active or internal moving parts with tools, wires or similar foreign objects thicker than 2.5 mm. Protection from access of solid foreign matter larger than 2.5 mm in diameter.  |
| 4  | Protection against granular foreign bodies | Protection of personnel from touching active or internal moving parts with tools, wires or similar foreign objects thicker than 1 mm.   |
| 5  | Protection from deposit of dust            | Total protection of personnel from touching voltage carrying or internal moving parts. Protection from harmful deposit of dust. Access of dust is not completely prevented.   |
| 6  | Protection from access of dust             | Total protection of personnel from touching voltage carrying or internal moving parts. Protection from access of dust.  |

| I.P. Protection Classification |  |  |
|--------------------------------|--|--|
| Degrees of water protection    |  |  |
| 2nd I.P. Digit                 | Designation                                      | Explanation  |
| 0                              | No protection                                    | No special protection  |
| 1                              | Protection against water dripping vertically     | Water drops falling vertically must not have any harmful effect.   |
| 2                              | Protection against water dripping off vertically | Water drops falling at any angle up to 15° from the vertical must not have any harmful effect.   |
| 3                              | Protection against spray water                   | Water drops falling at any angle up to 15° from the vertical must not have any harmful effect.   |
| 4                              | Protection against splash water                  | Water splashing against the object from all directions must not have any harmful effect.   |
| 5                              | Protection against jet water                     | A jet of water nozzled from all directions must not have any harmful effect.   |
| 6                              | Protection against flooding                      | Water from temporary flooding, such as heavy seas, must not enter in any harmful quantity.   |
| 7                              | Protection in dipped state                       | If the object is dipped into water under the defined conditions of pressure and time, water must not enter it in any harmful quantity. |
| 8                              | Protection in submerged state                    | If the object is submerged in water, water must not enter in any harmful quantity.   |

