

# PVC Bar: Solid Round

PVC BAR: SOLID ROUND

Harvel's quality line of solid bar provides optimum machine stock for everything from thumbscrews to valve components and other items requiring complicated machining techniques.

**Application:** Corrosion resistant solid round bar, sizes 1/4" through 12", for use at temperatures up to and including 140°F. Generally resistant to most acids, bases, salts, aliphatic solutions, oxidants, and halogens. Chemical resistance data is available and should be referenced for proper material selection. Extruded bar exhibits excellent physical properties and flammability characteristics. Provides consistent machining stock for the production of corrosion resistant: valve and valve components, pump components, bushings, spacers, nuts, bolts, and many other custom components and subassemblies for use in corrosive environments.



**CPVC Solid Bar also available!**



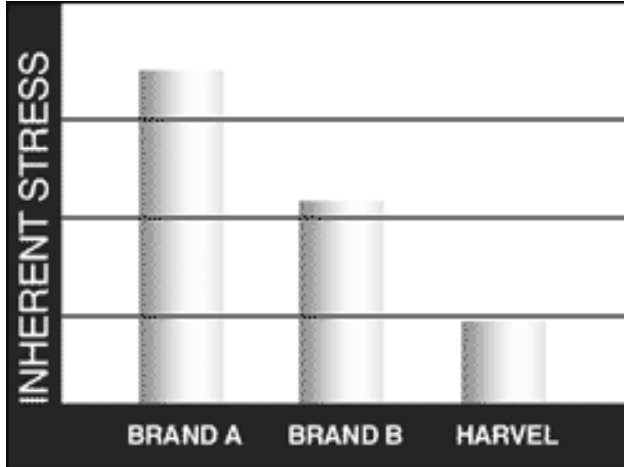
**Sample Specifications:** All PVC stock machining shapes shall be manufactured from a rigid, unfilled, general-purpose-grade Polyvinyl Chloride (PVC) compound with a Cell Classification of 12454, per ASTM D1784. (Callout Designation S-PVC0111 per ASTM D6263). All CPVC stock machining shapes shall be manufactured from a rigid, unfilled, general-purpose-grade Chlorinated Polyvinyl Chloride (CPVC) compound with a Cell Classification of 23437, per ASTM D1784. (Callout Designation S-CPVC0211 per ASTM D6263).

**PVC Materials:** The material used in the manufacture of the solid bar shall be domestically produced rigid, unfilled, general-purpose-grade polyvinyl chloride (PVC) compound, Type I Grade I, with a Cell Classification of 12454 as defined in ASTM D1784 as provided by the PolyOne Corporation. (Callout Designation S-PVC0111 per ASTM D6263). This compound shall be gray in color, and shall be approved by NSF International for use with potable water. This material shall not contain lead stabilizers.

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**PVC Solid Rod Internal Stress Comparison**



Laboratory tests show Harvel PVC solid rod outperforms other brands with significantly lower inherent stress levels.

## Harvel PVC

- Max. Service Temp. 140°F
- Cell Classification 12454 ASTM D1784
- Specific Gravity 1.38 ± 2
- g/cu.cm @73°F ASTM D792
- Tensile Strength @ yield 7,300 psi @ 73°F ASTM D638
- Modulus of Elasticity 410,000 psi @ 73°F ASTM D638
- Flexural Modulus 420,000 psi @ 73°F ASTM D790
- Izod Impact 0.8 ft-lbs / inch ASTM D256 notch @ 73°F
- Coefficient of Linear 2.9 x 10-5 in / in / °F ASTM D696
- Expansion
- Flammability V-O UL-94
- Hardness, Shore D 80 ± 3 ASTM D2240

## Solid Round Bar

Size (in.)	O.D.	Tol. -0; +	Camber & Bow	Nom. Weight (Lbs./ft.)
1/4	0.250	0.008	N/A	0.029
3/8	0.375	0.015	N/A	0.066
1/2	0.500	0.015	1-1/2	0.117
5/8	0.625	0.020	1-1/2	0.183
3/4	0.750	0.022	1-1/2	0.265
7/8	0.875	0.025	1-1/2	0.358
1	1.000	0.030	1-1/2	0.471
1-1/8	1.125	0.035	1-1/4	0.594
1-1/4	1.250	0.035	1-1/4	0.736
1-3/8	1.375	0.040	1-1/4	0.891
1-1/2	1.500	0.040	1-1/4	1.060
1-5/8	1.625	0.045	1-1/4	1.244
1-3/4	1.750	0.050	1	1.440
1-7/8	1.875	0.055	1	1.657
2	2.000	0.060	1	1.890
2-1/8	2.125	0.060	1/2	2.128
2-1/4	2.250	0.068	1/2	2.384
2-3/8	2.375	0.071	1/2	2.658
2-1/2	2.500	0.075	1/2	2.950
2-3/4	2.750	0.080	1/2	3.560
3	3.000	0.090	1/4	4.240
3-1/2	3.500	0.105	1/4	5.770
4	4.000	0.120	1/4	7.550

## Polyvinyl Chloride (PVC)

Various shapes produced from PVC provide excellent machining and fabrication characteristics for components used in corrosive environments. The use of this material can provide a cost savings advantage with well-balanced physical properties for many applications. Harvel's standard PVC machining shapes are dark gray in color, signifying industrial grade product. PVC shapes are suitable for a maximum service temperature use of 140°F. PVC white is also inventoried, and a variety of custom colors are available upon request for specialty projects.