

4" Proctor Mold Calibration Worksheet

Equipment ID: _____ Date: _____
Manufacturer: _____ Performed By: _____
Model #: _____ Last Calibration: _____
Serial #: _____ Next Calibration Due: _____
Storage Location: _____

Calibration Item: Verify critical dimensions and volume of proctor molds
Calibration Procedure: In-House Procedure for Verifying Proctor Molds
Calibration Equipment: Caliper readable to 0.001 in. (0.01 mm) or better
Caliper ID: _____
Scale readable to 0.002 lb. (1 g) or better
Scale ID: _____
Thermometer readable to 1 °F (0.5 °C) or better
Thermometer ID: _____
Straightedge
Straightedge ID: _____
Glass plate
Feeler gauge 0.005 in. (0.10 mm)
Vaseline or grease

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<input type="checkbox"/> 4 inch (100 mm)	Measurement	Tolerance	Pass / Fail
Inside diameter of mold		4.000 ± 0.016 in. (101.60 ± 0.40 mm)	<input type="checkbox"/> Pass <input type="checkbox"/> Fail
Height of mold		4.584 ± 0.018 in. (116.40 ± 0.50 mm)	<input type="checkbox"/> Pass <input type="checkbox"/> Fail
Height of collar		2.375 ± 0.050 in. (60.33 ± 1.27 mm)	<input type="checkbox"/> Pass <input type="checkbox"/> Fail
Is the base plane?	<input type="checkbox"/> Yes <input type="checkbox"/> No	0.005 inch (0.10 mm)	<input type="checkbox"/> Pass <input type="checkbox"/> Fail

Mass of mold assembly and glass plate	(a)		$w = b - a$ $d - \text{see Table 3}$ $V = \frac{w}{d}$
Mass of mold assembly, glass plate and water	(b)		
Mass of water	(w)		
Temperature of water			
Density of water	(d)		
Volume of mold	w/d	0.0333 ± 0.0005 ft ³ (0.000943 ± 0.000014 m ³)	<input type="checkbox"/> Pass <input type="checkbox"/> Fail

Table 3—Density of Water

Temperature			
°C	°F	kg/m ³	lb/ft ³
15.6	60	999.01	62.366
18.3	65	998.54	62.336
21.1	70	997.97	62.301
(23.0)	(73.4)	(997.54)	(62.274)
23.9	75	997.32	62.261
26.7	80	996.59	62.216
29.4	85	995.83	62.166

Pass / Fail _____

Initial By _____