



**Summary of Substantive Changes  
between the 2009a and the 2011 editions of  
ASTM C564, “Rubber Gaskets for Cast Iron Soil Pipe and Fittings”**

**Presented to the IAPMO Standards Review Committee on March 12, 2012**

**General:** Additional testing for currently listed products that use hubless pipe gaskets might be required as a result of the changes to this Standard. In particular:

- a procedure for testing and calculating the compression set of hubless pipe gaskets was added.
- the ozone concentration used in testing the ozone resistance of hubless pipe gaskets was lowered from 1.5 ppm to 1 ppm.

Section 9, Test Methods:

Table 1, Physical Requirements of Gaskets: The following footnote regarding ozone resistance was added to the table: [Ozone Resistance on 70 hardness Hubless Pipe Gaskets shall be tested at 1/1,000,000 \(1PPM\).](#)

Section 9.4, Compression Set:

Section 9.4.1: The following test was added for hubless pipe gaskets;

[When testing hubless pipe gaskets, the specimens shall be 1-in. disks cut from prepared samples .075 to .090-in. thick and not to exceed seven \(7\) plies. The thickness of the disk shall be measured in accordance with Test Methods D395, section 13.1. Since all specimens from hubless pipe gaskets are curved, not flat, it is important to measure the thickness in the center of the disk with the specimen laying in a concave manner. Measure the thickness of each ply and add the measured thickness of each ply \(not to exceed seven plies\) to determine the original plied up thickness \(to\). The plied up target thickness should be approximately .50 in. Take the original plied up thickness \(to\) and multiply it by .75 to determine the thickness of the spacer bar to be used \(tn\). Assemble the plied up specimens in the test fixture \(Test Methods D395, Fig. 3\) with the proper thickness spacer bars and place in oven for 22 h at 158 +/- 2°F \(70 +/- 1°C\). At the end of the test period take the device from the oven and remove the test specimens immediately and allow to cool in accordance with Test Methods D395, section 13.4. After the cooling period measure the final thickness at the center of the plied up test specimen placed in a concave position on the dial micrometer to determine the final thickness \(ti\). Calculate the compression set expressed as a percentage of the original deflection as follows:](#)

$$CB = [(to-ti)/(to-tn)] \times 100$$

[CB = compression set value test method B](#)

[to = original plied up thickness](#)

[ti = final plied up thickness](#)

[tn = thickness of spacer bar used](#)

Section 9.7, Ozone Resistance:

Section 9.7.1: The following text was added:

[When testing gaskets used in hubless pipe couplings, the ozone concentration shall be 100/100 000 000 \(1PPM\) of air by volume.](#)