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# Evaluation of the Permatank® Interstitial Monitor for Detection of Liquid Leaks

## Test Report

PREPARED FOR:  
**Steel Tank Institute**

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## PERMATANK INTERSTITIAL MONITOR

### Test Procedure

1. The vacuum shall be a minimum of 14" of Hg at the start.
2. The test period for each tank shall be that stated in Table 1.
3. Vacuum decreases of less than 5" of Hg during test period indicate that the tank is tight. Record vacuum change, if any, in the space provided on installation checklist.
4. A vacuum decrease of more than 5" of Hg during test period requires further investigation.
5. If further investigation is required, the tank manufacturer shall be contacted. After investigation is complete this test shall be repeated.
6. This test procedure meets the EPA requirements for tightness testing of operating underground storage tanks containing product.

**NOTE: These test times are only valid for tanks with a 2 inch diameter interstice riser. Tanks with a 3 inch diameter interstice riser or unknown diameter must use the chart in the "Permatank Interstice Test Procedure 3 inch riser.pdf" KWA certification.**

Table 1. Calculated Test Time for Permatank

Tank Size		Interstitial Volume (gal)	Multiplier	Time for Decrease of 5" Hg (hr) Leak Rate = 0.10 gal/hr			Time for Decrease of 5" Hg (hr) Leak Rate = 0.05 gal/hr		
Diameter (in)	Volume (gal)			Water	Gasoline	Diesel	Water	Gasoline	Diesel
48	550	3.0	0.59	7.2	0.6	7.4	14.3	1.2	14.7
48	1000	3.8	0.77	9.3	0.8	9.6	18.5	1.6	19.1
64	1000	4.1	0.82	10.0	0.8	10.3	19.9	1.7	20.5
64	1500	4.9	0.98	11.9	1.0	12.2	23.7	2.1	24.4
64	2000	5.6	1.12	13.5	1.1	14.0	27.1	2.3	27.9
64	3000	7.1	1.42	17.2	1.4	17.7	34.3	3.0	35.3
64	4000	8.6	1.72	20.8	1.7	21.5	41.6	3.6	42.8
72	6000	11.2	2.24	27.1	2.2	28.0	54.1	4.7	55.7
84	4000	8.3	1.66	20.0	1.7	20.7	40.1	3.5	41.2
Reference	5	5.0	1.00	12.1	1.0	12.5	24.2	2.1	24.9
96	4000	9.4	1.88	22.7	1.9	23.5	45.4	3.9	46.7
96	5000	9.4	1.89	22.9	1.9	23.6	45.7	4.0	47.0
96	6000	10.4	2.08	25.1	2.1	25.9	50.2	4.4	51.7
96	8000	12.4	2.47	29.9	2.5	30.9	59.9	5.2	61.6
96	10000	14.4	2.89	34.9	2.9	36.1	69.9	6.1	71.9
72	10000	16.3	3.25	39.4	3.3	40.7	78.7	6.8	81.0
96	12000	16.4	3.27	39.6	3.3	40.9	79.2	6.9	81.5
126	10000	14.2	2.83	34.3	2.8	35.4	68.6	6.0	70.6
126	12000	11.7	2.35	28.4	2.3	29.3	56.8	4.9	58.4
126	15000	14.0	2.80	33.9	2.8	35.0	67.9	5.9	69.8
96	15000	16.4	3.29	39.8	3.3	41.1	79.5	6.9	81.8
126	20000	21.6	4.33	52.3	4.3	54.1	104.7	9.1	107.7