

## COMPATIBILITY TESTING OF BENTOMAT® (GASOLINE, DIESEL AND JET FUEL)

Three specimens of Bentomat were permeated with water to determine their initial hydraulic conductivity. After being permeated with water for approximately 1 month, the specimens were permeated with gasoline, diesel fuel and jet fuel respectively. The hydraulic conductivity of the Bentomat was then measured with these fluids as permeants.

Test results indicate that Bentomat is compatible with and will provide an effective hydraulic barrier when permeated with gasoline, diesel fuel and jet fuel. The hydraulic conductivity of Bentomat is shown in graphical form for each permeant described above.

Note: Bentomat® SS as shown in the test report was renamed Bentomat ST®. The products are identical.

**GEOTECHNICAL LABORATORY TEST RESULTS  
COMPATIBILITY TESTING  
BENTOMAT SS**

**PREPARED FOR:**

American Colloid  
1500 W. Shure Drive  
Arlington Heights, IL 60004

**PREPARED BY:**

J&L Testing Company, Inc.  
938 S. Central Avenue  
Canonsburg, PA 15317

ENGINEER ROBERT TROGER  
DATE ASSIGNED \_\_\_\_\_  
DATE DUE \_\_\_\_\_

JOB NO. 9251260  
 JOB NAME AMERICAN COLLOID  
BENTONAT SS  
COMPATIBILITY TESTING

DATE REC. \_\_\_\_\_  
DATE CMP. \_\_\_\_\_  
REC. BY DAG  
PAGE NO. 1 of 1

## SUMMARY OF LABORATORY TEST RESULTS

[illegible]

# SUMMARY OF COMPATIBILITY TEST RESULTS

Client Name: CETCO

JOB NO.: 92S1260

Sample Identification: SAMPLE 1  
BENTOMAT "SS"

Prepared By: DEF

Initial Height (in): 0.258

Initial Diameter (in): 2.800

Initial Dry Density (pcf):

Gradient: 856.00

Pore Fluid: GASOLINE

E.T. days	DATE	TIME	E.T. min	TOTAL FLOW, cc	K cm/sec
0.0	09/08/92	08:25	0	0.0	--
1.3	09/09/92	16:30	1925	3.6	9.2E-10
3.0	09/11/92	08:10	4305	5.3	6.0E-10
7.3	09/15/92	15:30	10505	17.0	7.9E-10
8.1	09/16/92	10:55	11670	19.0	8.0E-10
10.3	09/18/92	15:20	14815	22.7	7.5E-10
13.1	09/21/92	11:25	18900	30.0	7.8E-10
17.1	09/25/92	11:50	24685	38.3	7.6E-10
22.3	09/30/92	16:20	32155	44.1	6.7E-10
24.1	10/02/92	11:45	34760	47.6	6.7E-10
27.3	10/05/92	15:10	39285	56.7	7.1E-10
28.3	10/06/92	16:05	40780	59.2	7.1E-10
30.2	10/08/92	13:45	43520	64.2	7.2E-10
34.3	10/12/92	16:05	49420	74.6	7.4E-10
37.3	10/15/92	16:05	53740	81.5	7.4E-10
38.3	10/16/92	14:35	55090	83.9	7.5E-10
41.1	10/19/92	11:20	59215	90.4	7.5E-10
43.2	10/21/92	14:15	62270	95.1	7.5E-10
45.3	10/23/92	16:36	65291	99.8	7.5E-10
49.0	10/27/92	09:32	70627	108.6	7.5E-10
55.0	11/02/92	09:30	79265	122.0	7.5E-10
57.3	11/04/92	16:10	82545	127.5	7.6E-10
59.0	11/06/92	08:35	84970	131.4	7.6E-10
63.0	11/10/92	08:23	90718	140.5	7.6E-10
71.3	11/18/92	15:08	102643	155.3	7.4E-10
73.3	11/20/92	16:15	105590	159.6	7.4E-10

GASOLINE  
INTRODUCED

# SUMMARY OF COMPATIBILITY TEST RESULTS

Client Name: CETCO

JOB NO.: 92S1260

Sample Identification:

SAMPLE 1

Prepared By : DEF

BENTOMAT "SS"

Initial Height (in):

0.258

Initial Diameter (in):

2.800

Initial Dry Density (pcf):

Gradient : 856.00

Pore Fluid : GASOLINE

E.T. days	DATE	TIME	E.T. min	TOTAL FLOW, cc	K cm/sec	
0.0	09/08/92	08:25	0	0.0	--	
1.3	09/09/92	16:30	1925	3.6	9.2E-10	
3.0	09/11/92	08:10	4305	5.3	6.0E-10	
7.3	09/15/92	15:30	10505	17.0	7.9E-10	
8.1	09/16/92	10:55	11670	19.0	8.0E-10	
10.3	09/18/92	15:20	14815	22.7	7.5E-10	
13.1	09/21/92	11:25	18900	30.0	7.8E-10	
17.1	09/25/92	11:50	24685	38.3	7.6E-10	
22.3	09/30/92	16:20	32155	44.1	6.7E-10	
24.1	10/02/92	11:45	34760	47.6	6.7E-10	
27.3	10/05/92	15:10	39285	56.7	7.1E-10	
28.3	10/06/92	16:05	40780	59.2	7.1E-10	
30.2	10/08/92	13:45	43520	64.2	7.2E-10	GASOLINE INTRODUCED
34.3	10/12/92	16:05	49420	74.6	7.4E-10	
37.3	10/15/92	16:05	53740	81.5	7.4E-10	
38.3	10/16/92	14:35	55090	83.9	7.5E-10	
41.1	10/19/92	11:20	59215	90.4	7.5E-10	
43.2	10/21/92	14:15	62270	95.1	7.5E-10	
45.3	10/23/92	16:36	65291	99.8	7.5E-10	
49.0	10/27/92	09:32	70627	108.6	7.5E-10	
55.0	11/02/92	09:30	79265	122.0	7.5E-10	
57.3	11/04/92	16:10	82545	127.5	7.6E-10	
59.0	11/06/92	08:35	84970	131.4	7.6E-10	
63.0	11/10/92	08:23	90718	140.5	7.6E-10	
71.3	11/18/92	15:08	102643	155.3	7.4E-10	
73.3	11/20/92	16:15	105590	159.6	7.4E-10	

# SUMMARY OF COMPATIBILITY TEST RESULTS

Client Name: CETCO

JOB NO.: 92S1260

Sample Identification: SAMPLE 2  
BENTOMAT "SS"

Prepared By: DEF

Initial Height (in): 0.285

Initial Diameter (in): 2.800

Initial Dry Density (pcf):

Gradient: 775.00

Pore Fluid: DIESEL

E.T. days	DATE	TIME	E.T. min	TOTAL FLOW, cc	K cm/sec
0.0	09/08/92	08:30	0	0.0	--
1.3	09/09/92	16:30	1920	2.0	5.6E-10
3.0	09/11/92	08:10	4300	4.2	5.3E-10
7.3	09/15/92	15:30	10500	9.7	5.0E-10
8.0	09/16/92	08:25	11515	10.6	5.0E-10
10.3	09/18/92	15:20	14810	13.3	4.9E-10
13.1	09/21/92	11:25	18895	16.6	4.8E-10
17.1	09/25/92	11:50	24680	21.1	4.6E-10
22.3	09/30/92	16:20	32150	23.9	4.0E-10
24.1	10/02/92	11:45	34755	26.2	4.1E-10
27.3	10/05/92	15:10	39280	30.2	4.2E-10
28.3	10/06/92	16:00	40770	31.5	4.2E-10
30.2	10/08/92	13:45	43515	33.9	4.2E-10
34.3	10/12/92	16:05	49415	39.0	4.3E-10
37.3	10/15/92	16:00	53730	42.6	4.3E-10
38.3	10/16/92	14:35	55085	43.8	4.3E-10
41.1	10/19/92	11:20	59210	47.3	4.3E-10
43.2	10/21/92	14:10	62260	50.5	4.4E-10
45.3	10/23/92	15:05	65195	53.8	4.5E-10
49.0	10/27/92	09:30	70620	58.8	4.5E-10
55.0	11/02/92	09:30	79260	62.4	4.3E-10
57.3	11/04/92	16:15	82545	64.9	4.3E-10
59.0	11/06/92	08:35	84965	65.1	4.1E-10
63.0	11/10/92	08:23	90713	75.2	4.5E-10
71.3	11/18/92	15:08	102638	80.3	4.2E-10
73.3	11/20/92	16:15	105585	90.7	4.7E-10

DIESEL  
INTRODUCED

# SUMMARY OF COMPATIBILITY TEST RESULTS

Client Name: CETCO

Sample Identification:

SAMPLE 2

BENTOMAT "SS"

JOB NO.: 92S1260

Prepared By : DEF

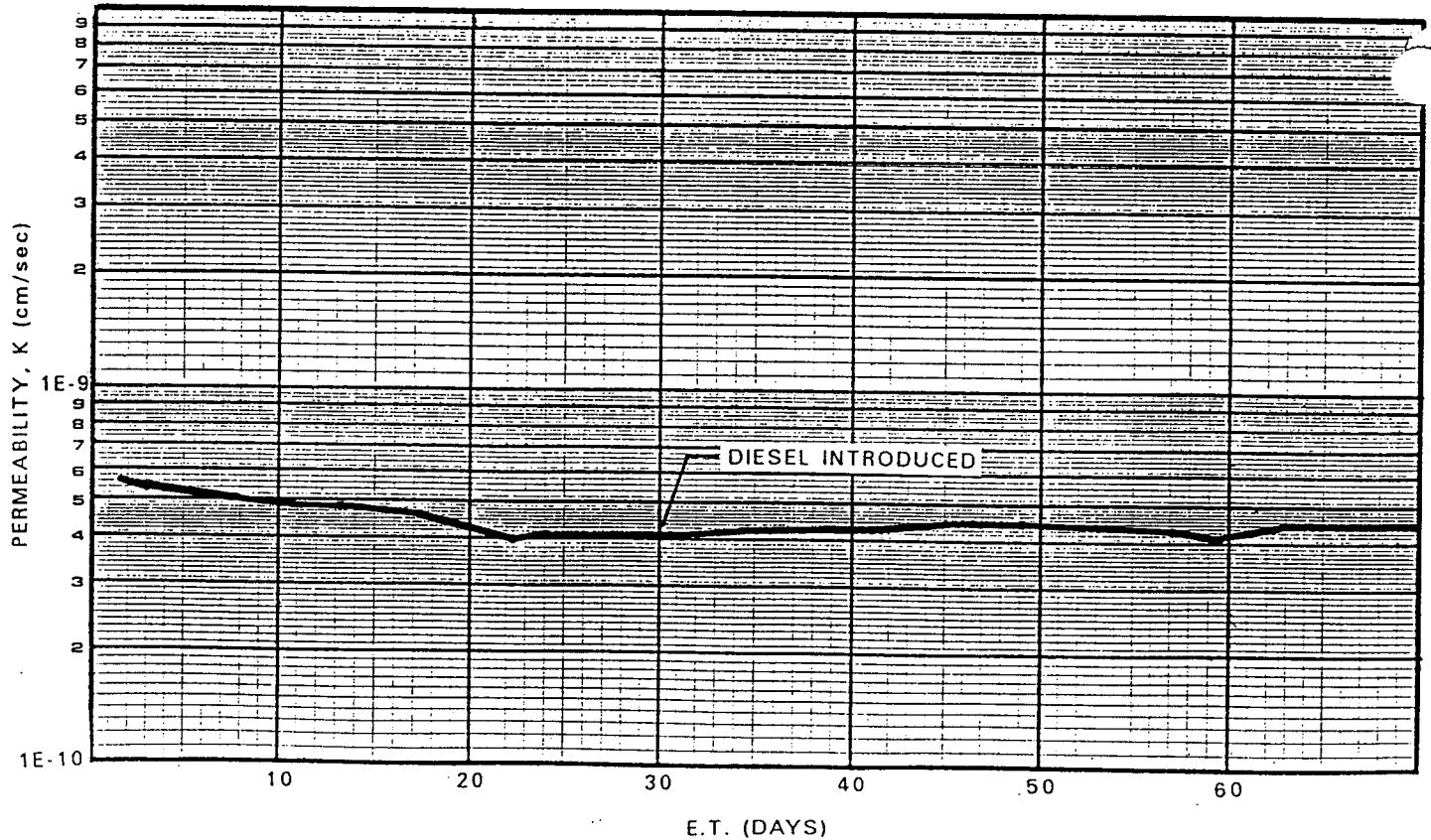
Initial Height (in): 0.285

Initial Diameter (in): 2.800

Initial Dry Density (pcf):

Gradient : 775.00

Pore Fluid : DIESEL



# SUMMARY OF COMPATIBILITY TEST RESULTS

Client Name:	CETCO	JOB NO.:	92S1260
Sample Identification:	SAMPLE 3	Prepared By :	DEF
	BENTOMAT "SS"		
Initial Height (in):	0.270		
Initial Diameter (in):	2.800		
Initial Dry Density (pcf):		Gradient :	818.00

Pore Fluid : JET FUEL

E.T. days	DATE	TIME	E.T. min	TOTAL FLOW, cc	K cm/sec
0.0	09/08/92	08:32	0	0.0	--
1.3	09/09/92	16:30	1918	19.7	5.3E-09
3.0	09/11/92	08:10	4298	25.3	3.0E-09
7.3	09/15/92	15:30	10498	36.9	1.8E-09
8.0	09/16/92	08:25	11513	38.7	1.7E-09
10.3	09/18/92	15:20	14808	42.5	1.5E-09
13.1	09/21/92	11:25	18893	44.5	1.2E-09
17.1	09/25/92	11:50	24678	55.5	1.2E-09
22.3	09/30/92	16:20	32148	61.2	9.8E-10
24.1	10/02/92	11:45	34753	66.0	9.7E-10
27.3	10/05/92	15:10	39278	74.5	9.7E-10
28.3	10/06/92	16:00	40768	78.2	9.8E-10
30.2	10/08/92	13:45	43513	83.3	9.8E-10
34.3	10/12/92	16:05	49413	94.1	9.8E-10
37.1	10/15/92	11:55	53483	101.7	9.8E-10
38.3	10/16/92	14:35	55083	102.4	9.5E-10
41.1	10/19/92	11:20	59208	109.2	9.5E-10
43.2	10/21/92	14:10	62258	123.2	1.0E-09
45.3	10/23/92	15:05	65193	130.2	1.0E-09
49.0	10/27/92	09:31	70619	150.2	1.1E-09
55.0	11/02/92	09:30	79258	158.6	1.0E-09
57.3	11/04/92	16:10	82538	169.7	1.1E-09
59.0	11/06/92	08:35	84963	175.3	1.1E-09
63.0	11/10/92	08:23	90711	180.0	1.0E-09
71.3	11/18/92	15:08	102636	195.9	9.8E-10
73.3	11/20/92	16:15	105583	205.2	1.0E-09

JET FUEL  
INTRODUCED



# SUMMARY OF COMPATIBILITY TEST RESULTS

Client Name: CETCO

Sample Identification:

SAMPLE 3

BENTOMAT "SS"

JOB NO.:

92S1260

Prepared By :

DEF

Initial Height (in):

0.270

Initial Diameter (in):

2.800

Initial Dry Density (pcf):

Gradient :

818.00

Pore Fluid : JET FUEL

