Coating Information

1950's, 1960's, and 1970's vintage steel mains were coated with Coal Tar Enamel.

Tank Inst. ✓
1st Trade ✓
29 H Stuf ✓
Indent ✓

1060 1995 DR
ENAMEL PITT MODIFIED 630# DR

(31) 7

Enamel, Pittsburgh Modified in 630 # drums

O / PURCH

W.L.C. JAN 29 1958

3

1660 1995 DR

ENAMEL PITT MODIFIED 685H DR

(32)

Enamel, Pittsburgh modified in 685# drums

c/ouse

Reactivated 10/15/69

Z.C.K. OCT 16 1969

PITTSBURGH
COKE & CHEMICAL CO.

HOT APPLIED COATINGS

MODIFIED
GRADE

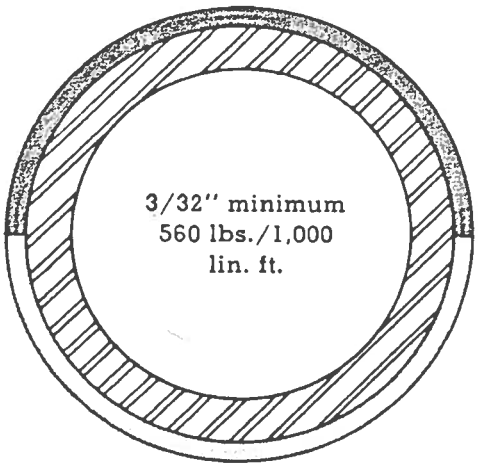
COATING COVERAGE

2" Standard Pipe

THEORETICAL

THEORETICAL

If the coating were spread evenly over the entire surface to a thickness of 3/32", 435 pounds of *Pittsburgh* Modified Grade Enamel would cover 1,000 linear feet of 2" pipe.

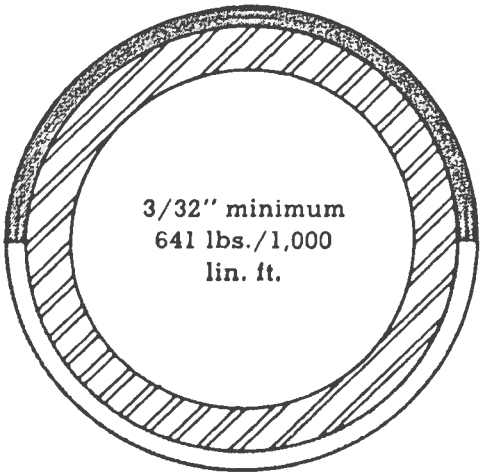


MILL APPLICATION

ACTUAL

In actual practice, the poured coating tends to bulk slightly heavier at the top of the pipe.

Even in mill applications, where thickness can be closely controlled, a tolerance has to be allowed. The actual coverage, therefore, when mill applied should be figured at 560 lbs./1,000 lin. ft. of 2" pipe.



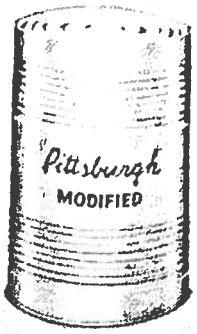
FIELD APPLICATION

Thicknesses cannot be as closely controlled in field applications, so again a tolerance must be allowed. Coverage, therefore, should be figured at 641 lbs./1,000 lin. ft. (allowing 10% safety factor).

Complete coverage tables will be found on pages A-10 and A-11.

Pittsburgh MODIFIED GRADE

This enamel is a good, tough, general-purpose, coal-tar-base coating with a moderate softening point, moderate hardness, quick setting on application, great resistance to abuse and handling. It withstands temperature variations of 0° to 130° F. Though its resistance qualities are similar to those of Standard Enamel, its wider temperature range and semi-plasticity provide certain additional advantages. *Pittsburgh* Modified Enamel lends itself to practically all types of applications in most weather conditions. Pittsburgh Modified enamel is recommended for all-around use in over-the-trench applications.



This material can readily be identified by its yellow colored container.

TESTS*	LIMITS Min.	LIMITS Max.
1. Specific Gravity—77° F., A.S.T.M. D-71-27	1.40	1.50
2. Softening Point °F., A.S.T.M. D-36-26	190	200
3. Penetration, A.S.T.M. D-5-25		
100 gr., 5 sec., 77° F.	2	6
50 gr., 5 sec., 115° F.	10	20
4. Filler, Ash (%), A.S.T.M. D-271-37	20	25
5. Sag Test—2/32" to 3/32" Coating on 12"x12" plate, 5 hrs. @ 140° F.		1/32"
6. Cold Test—On Sag Test Plate above, 5 hrs. @ 0° F.	No Cracking or Disbonding	
7. Stripping Test, 80° to 140° F.	No Peel	
8. Electrical Resistance Test	No break-through (2/32" Coating, 10,000 volts, low amperage)	

*For explanation of tests, see Appendix A.

PACKAGING

Pittsburgh Modified Enamel is shipped in easily identified, yellow color-coded, 55-gallon drums.

Approximate Quantity Table
MODIFIED ENAMEL and PRIMER
(Based on 3/32" Coating Thickness)*

MILL APPLICATION

Nominal Pipe Diam.	Enamel	Primer	Enamel
	Theoretical Requirements (lbs./1,000')	Practical Quan. (gal./1,000')	Practical Quan. (lbs./1,000')
3/4"	192	0.4	247
1	241	0.5	310
1 1/4	304	0.6	385
1 1/2	348	0.7	447
2	435	0.8	560
2 1/2	527	1.0	678
3	641	1.2	824
4	825	1.5	1060
6	1214	2.2	1561
8	1581	2.9	2032
10	1970	3.6	2533
12	2337	4.2	3004
14	2565	4.6	3298
15	2749	5.0	3534
16	2932	5.3	3770
17	3116	5.6	4006
18	3298	5.9	4241
20	3665	6.6	4712
22	4032	7.2	5184
24	4398	7.9	5655
26	4765	8.6	6126
28	5131	9.2	6597
30	5498	9.9	7069
32	5865	10.5	7540
34	6231	11.2	8011
36	6597	11.8	8482

*To estimate 2/32" coating thickness, reduce above quantities of enamel by 33 1/3%.

APPLICATION TEMPERATURES*

Metal Temperature* (°F)	3/32" Coating Thickness	
	Temp. Flow on Metal (°F)	Kettle Temp. (°F)
Below 50	390	425
50 - 60	380	415
60 - 80	365	390
80 - 100	355	375
100 - 120	340	360

*Based on average field conditions of atmosphere, metal temperature, etc.

Approximate Quantity Table
MODIFIED ENAMEL and PRIMER
(Based on 3/32" Coating Thickness)*
FIELD APPLICATION

Primer Practical Quantities		Enamel Practical Quantities	
(gal./1,000')	(gal./mile)	(lbs./1,000')	(lbs./mile)
0.4	1.9	283	1496
0.5	2.3	354	1869
0.6	2.9	447	2360
0.7	3.3	512	2703
0.8	4.1	641	3384
1.0	5.0	775	4092
1.2	6.1	943	4979
1.5	7.8	1213	6405
2.2	10.5	1787	9435
2.9	15	2326	12281
3.6	19	2898	15301
4.2	22	3438	18153
4.6	25	3775	19932
5.0	26	4045	21358
5.3	28	4315	22783
5.6	30	4584	24203
5.9	32	4853	25624
6.6	35	5393	28475
7.2	38	5933	31326
7.9	42	6471	34167
8.6	45	7011	37018
9.2	49	7550	39864
9.9	52	8090	42715
10.5	56	8629	45561
11.2	59	9168	48407
11.8	63	9708	51258

*To estimate 2/32" coating thickness, reduce above quantities of enamel by 33⅓%.

APPLICATION TEMPERATURES*

Metal Temperature* (°F)	3/32" Coating Thickness	
	Temp. Flow on Metal (°F)	Kettle Temp. (°F)
Below 50	390	425
50 - 60	380	415
60 - 80	365	390
80 - 100	355	375
100 - 120	340	360

*Based on average field conditions of atmosphere, metal temperature, etc.