



October 1, 2013

LUBRIZOL ADVANCED MATERIALS INC.  
TEMP RITE  
JOHN PRITCHARD  
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MT. PROSPECT IL 60056

LUBRIZOL ADVANCED MATERIALS INC.  
TEMP RITE  
DONALD TOWNLEY  
9911 BRECKVILLE RD.  
CLEVELAND OH 44141

Re: Description: CPVC PIPE SIZING METHOD, ALTERNATE PLUMBING SYSTEM  
Manufacturer: LUBRIZOL ADVANCED MATERIALS INC.  
Product Name: FLOWGUARD GOLD PIPE AND FITTINGS  
Model Number(s): 1/2", 1", 1 1/4", 1 1/2" AND 2"  
Product File No: 20130281

The specifications and/or plans for this plumbing product have been reviewed and determined to be in compliance with chapters SPS 382 through 384, Wisconsin Administrative Code, and Chapters 145 and 160, Wisconsin Statutes.

The Department hereby issues an approval based on the Wisconsin Statutes and the Wisconsin Administrative Code. This approval is valid until the end of October 2018.

This approval supersedes the approval issued on December 10, 2008 under product file number 20080559.

This approval is contingent upon compliance with the following stipulation(s):

- These pipe products must conform to ASTM Standard D2846 and/or CSA Standard B137.6.  
The fittings used with these pipe products must conform to ASTM F437 and/or ASTM F438 and/or ASTM F439
- These pipe products must be labeled with the following minimum information at intervals not to exceed 5.0 ft.:
  1. The manufacturer's name or registered trademark;
  2. The standard designation (i.e. ASTM 2846 and/or CSA B137.6);
  3. The seal or mark of the certifying agency, for potable water applications the designation "pw" must also appear along with the seal or mark of the certifying agency;
  4. The material designation (i.e. CPVC 4120);
  5. The pressure rating at 180 degrees Fahrenheit; and
  6. The nominal pipe size.

The fittings used with these pipe products must be labeled with the following minimum information:

- a. The manufacturer's name or registered trademark;
- b. The seal or mark of the certifying agency, for potable water applications the designation "pw" must also appear along with the seal or mark of the certifying agency;
- c. The standard designation (i.e. ASTM 2846 and/or CSA B137.6); and
- d. The material designation (i.e. CPVC 4120).

- These pipe products may be installed for the following water uses:
  1. Water distribution piping within dialysis systems, only.
- The water velocity through these piping products may not exceed 10 feet per second (fps).
- Approval is issued for these piping products because the design of these piping products meet with the intent of s. SPS 382.40 (7) (e) of the Wis. Adm. Code that limits the maximum velocity of water within the water distribution system to 8.0 feet per second (fps). The intent of the code is met because these piping products are stable at an increased velocity of 10.0 fps.
- The calculated load on any portion of a water distribution system constructed of these piping products may not exceed the limits specified in Table 1 of 1 displayed on page 2 of 3 of this letter.

**Table 1 of 1**

Pressure Loss Per 100 ft. of Length	Pipe Diameter (in.)								
	1/2			3/4			1		
	GPM	FM	FT	GPM	FM	FT	GPM	FM	FT
0.5	0.5	0	0.5	1.5	0	1.5	3.0	0	3.0
1.0	0.5	0	0.5	2.0	0	2.0	4.0	0	4.0
2.0	1.0	0	1.0	3.0	0	3.0	6.0	0	7.0
3.0	1.5	0	1.5	4.0	0	4.0	8.0	0	10.0
4.0	1.5	0	1.5	4.5	0	5.0	9.0	0	11.5
5.0	2.0	0	2.0	5.0	0	6.0	10.5	4.0	14.0
6.0	2.0	0	2.0	6.0	0	7.0	11.5	4.0	15.5
7.0	2.0	0	2.0	6.5	0	8.0	12.5	4.5	17.5
8.0	2.5	0	2.5	7.0	0	9.0	13.5	4.5	19.0
9.0	2.5	0	2.5	7.0	0	9.0	14.5	4.5	20.5
10.0	2.5	0	2.5	7.5	0	9.5	15.0	5.0	21.5
11.0	3.0	0	3.0	8.0	0	10.0	16.0	5.0	23.0
13.0	3.0	0	3.0	9.0	0	11.5	17.5	5.5	25.5
14.0	3.0	0	3.0	9.5	0	12.5	18.0	6.0	26.5
15.0	3.5	0	3.5	9.5	0	12.5	19.0	6.0	28.0
16.0	3.5	0	3.5	10.0	4.0	13.0	19.5	6.5	29.0
17.0	3.5	0	3.5	10.5	4.0	14.0	20.5	6.5	31.0
18.0	4.0	0	4.0	10.5	4.0	14.0		NP	
19.0	4.0	0	4.0	11.0	4.0	15.0			
20.0	4.0	0	4.0	11.5	4.0	15.5			
21.0	4.0	0	4.0	11.5	4.0	15.5			
22.0	4.0	0	4.0	12.0	4.0	16.5			
23.0	4.5	0	5.0	12.0	4.0	16.5			
24.0	4.5	0	5.0	12.5	4.5	17.5			
25.0	4.5	0	5.0		NP				
26.0	4.5	0	5.0						
27.0	4.5	0	5.0						
28.0	5.0	0	6.0						
29.0	5.0	0	6.0						
30.0	5.0	0	6.0						
31.0	5.0	0	6.0						
32.0	5.0	0	6.0						
33.0	5.5	0	6.5						

**Table 1 of 1 (continued)**

Pressure Loss Per 100 ft. of Length	Pipe Diameter (in.)								
	1 1/4 WSFU			1 1/2 WSFU			2 WSFU		
	GPM	FM	FT	GPM	FM	FT	GPM	FM	FT
0.5	5.0	0	6.0	8.0	0	10.0	16.0	5.0	23.0
1.0	7.5	0	9.5	11.5	4.0	15.5	23.0	7.5	37.0
2.0	10.5	4.0	14.0	16.5	5.5	24.0	34.0	18.5	66.0
3.0	13.5	4.5	19.0	21.0	7.0	32.0	42.0	33.0	100.0
4.0	15.5	5.0	22.5	24.0	8.0	40.0	50.0	48.0	128.0
5.0	17.5	5.5	25.5	27.0	10.0	47.0	56.0	65.0	155.0
6.0	19.5	6.5	29.0	30.0	13.5	55.0	62.0	80.0	185.0
7.0	21.5	7.0	33.0	33.0	17.5	63.0	67.0	96.0	210.0
8.0	23.0	7.5	37.0	35.0	20.0	70.0	72.0	116.0	235.0
9.0	24.0	8.0	40.0	38.0	26.0	80.0	74.0	124.0	245.0
10.0	26.0	9.0	45.0	40.0	30.0	86.0		NP	
11.0	27.0	10.0	47.0	42.0	33.0	100.0			
12.0	28.0	11.0	50.0	43.0	35.0	104.0			
13.0	30.0	13.5	55.0		NP				
14.0	30.0	14.5	57.0						
15.0		NP							

**GPM** = gallons per minute

**WSFU** = water supply fixture units

**FM** = predominately flushometer type water closets or siphon jet urinals

**FT** = predominately flush tank type water closets or washdown urinals

**NP** = not permitted, velocity exceeds 10 feet per second

**Note 1:** round the calculated pressure loss due to friction to the next higher number shown.

**Note 2:** s. SPS 382.40(7)(f) and 382.40(7)(g) specifies the minimum sizes for water distribution piping.

The department is in no way endorsing this product or any advertising, and is not responsible for any situation which may result from its use.

Sincerely,

Glen W. Schlueter  
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