



July 13, 2016

CT PIPING SOLUTIONS INCORPORATED
DONNA STOUGHTON
PO BOX 516
TITUSVILLE PA 16354

PESTAN N.A.
MARKO RADOVANOVIC
461 ESTRALITA DRIVE
VISTA CA 92084

Re: Description: PIPES AND FITTINGS, POLYPROPYLENE
Manufacturer: PESTAN N.A.
Product Name: (trans id 2710998) PESTAN POLYPROPYLENE PIPE AND FITTINGS
Model Number(s): SEE ATTACHED
Product File No: 20160154

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 alternate approval to s. SPS 384.40 based on the Wisconsin Statutes and the Wisconsin Administrative Code. This approval is valid until the end of July 2021.

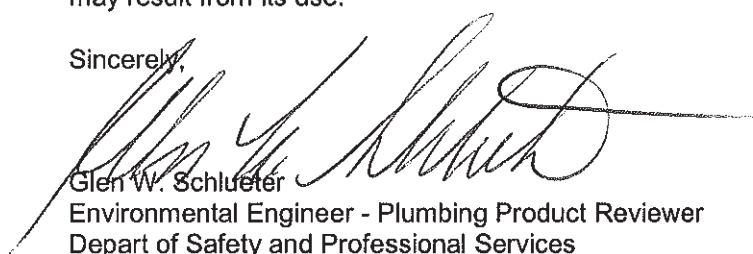
This alternate approval is contingent upon compliance with the following stipulation(s):

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

- This piping system may be used for the following:
 1. Water distribution piping.
 2. Water services and private water mains.
- This piping system shall be installed in strict accordance with the manufacturer's published instructions and chs. SPS 382 and 384 Wis. Adm. Code. If there is a conflict, chs. SPS 382 and 384 Wis. Adm. Code shall take precedence.
- This piping system shall be sized in accordance with the attached tables.
- This piping system shall be sized such that the water velocity does not exceed 8 feet per second (8 fps).

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
Environmental Engineer - Plumbing Product Reviewer
Department of Safety and Professional Services
Division of Industry Services
Bureau of Technical Services
(608) 267-1401 Phone
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**MAXIMUM ALLOWABLE LOAD FOR PESTANs POLYPROPYLENE PP-R(CT) PIPE
(C=150), SDR7.4**

Pressure Loss Due to Friction (in psi per 100 ft of length)	1/2" (20 mm)			3/4" (25 mm)		
	GPM	WSFU		GPM	WSFU	
		FM	FT		FM	FT
0.5	0.9		1	1.5		1.5
1	1.2		1.5	2.2		2
2	1.8		2	3.2		3
3	2.2		2	4.0		4
4	2.6		2.5	4.7		5.5
5	3.0		3	5.3		6.5
6	3.3		3.5	5.9		7
7	3.5		3.5	6.4		8
8	3.8		4	6.9		9
9	4.1		4	7.3		9.5
10	4.3		4.5	7.7		9.5
11	4.5		5	8.1		10
12	4.7		5.5	8.5		11
13	4.9		6	8.9		12
14	5.1		6	9.3		12
15	5.3		6.5	9.6		13
16	5.5		6.5			
17	5.7		6.5			
18	5.9		7			
19	6.1		7			
20	6.2		7			
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NOTE: WSFU means water supply fixture units.
 GPM means gallons per minute.
 FM means predominately flushometer type water closets or syphon jet urinals.

**MAXIMUM ALLOWABLE LOAD FOR PESTANs POLYPROPYLENE PP-R(CT) PIPE
(C=150), SDR9**

Pressure Loss Due to Friction (in psi per 100 ft of length)	1" (32 mm)			1 1/4" (40 mm)			1 1/2" (50 mm)			2" (63 mm)		
	GPM	WSFU		GPM	WSFU		GPM	WSFU		GPM	WSFU	
		FM	FT		FM	FT		FM	FT		FM	FT
0.5	3.4		3.5	6.4		7.8	11.3	4	15.5	21.6	7	34
1	5.1		6	9.2		12	16.7	5.5	24.6	30.7	14.5	56.8
2	7.4		9.4	13.5	4.5	19.2	24.3	8	40.8	44.5	38.2	108.3
3	9.2		12	16.8	5.5	24.7	30.3	14	55.8	55.5	64	152.5
4	10.8	4	14.7	19.5	6.5	29.2	35.3	21	71	65.1	90	200
5	12.2	4.5	17	22.1	7.5	35.3	39.7	30	85.7	73.4	122	242
6	13.5	5	19.2	24.3	8	40.8	43.9	37	106.3			
7	14.6	5	21	26.4	9.5	46						
8	15.7	5	22.8	28.4	12	51						
9	16.8	5.5	24.7									
10	17.8	6	26.3									
11	18.7	6	27.8									
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Pressure Loss Due to Friction (in psi per 100 ft of length)	2 1/2" (75 mm)			3" (90 mm)			4" (125 mm)			6" (160 mm)		
	GPM	WSFU		GPM	WSFU		GPM	WSFU		GPM	WSFU	
		FM	FT		FM	FT		FM	FT		FM	FT
0.5	33.2	18	64	54	60	145	128	412.5	516.7	256	1398	1398
1	48.9	46.5	124	78.5	141	267.5	187	829	852.9	361	2370.4	2370.4
2	71.0	112	230	114.6	331	448	274	1564.8	1564.8			
3	88.1	184.5	315.5	142.6	507	598						
4	103.2	262	391									
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NOTE: WSFU means water supply fixture units.
 GPM means gallons per minute.
 FM means predominately flushometer type water closets or syphon jet urinals.

**MAXIMUM ALLOWABLE LOAD FOR PESTANs POLYPROPYLENE PP-R(CT) PIPE
(C=150), SDR9 CON'T**

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Pressure Loss Due to Friction (in psi per 100 ft of length)	8" (200 mm)			10" (250 mm)		
	GPM	WSFU		GPM	WSFU	
		FM	FT		FM	FT
0.5	440	3193.5	3193.5	790	10000	10000
1	651	6000	6000	1170	20804	20804
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NOTE: WSFU means water supply fixture units.
 GPM means gallons per minute.
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**MAXIMUM ALLOWABLE LOAD FOR PESTANs POLYPROPYLENE PP-R(CT) PIPE
(C=150), SDR11**

Pressure Loss Due to Friction (in psi per 100 ft of length)	1" (32 mm)			1 1/4" (40 mm)			1 1/2" (50 mm)			2" (63 mm)		
	GPM	WSFU		GPM	WSFU		GPM	WSFU		GPM	WSFU	
		FM	FT		FM	FT		FM	FT		FM	FT
0.5	4.1		4	7.3		9.5	13.2	4.5	19	24.2	8	40
1	6.0		7	10.6	4	14	19.2	6.5	29	35.2	20	70
2	8.7		11	15.4	5	22.5	27.9	11	50	51.2	50	133
3	10.8	4	14.5	19.2	6.5	28	34.7	20	69	63.8	86	194
4	12.6	4.5	17.5	22.5	7.5	36	40.5	30	88	74.5	126	248
5	14.2	5	20	25.3	8.5	43	45.7	40	114			
6	15.7	5	23.5	28.0	11	50	50.5	50	130			
7	17.1	5.5	25	30.4	14	56						
8	18.4	6	27.5									
9	19.6	6.5	29									
10	20.7	7	32									
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Pressure Loss Due to Friction (in psi per 100 ft of length)	2 1/2" (75 mm)			3" (90 mm)			4" (125 mm)			6" (160 mm)		
	GPM	WSFU		GPM	WSFU		GPM	WSFU		GPM	WSFU	
		FM	FT		FM	FT		FM	FT		FM	FT
0.5	38.6	27	82	62.3	81	186	147.9	539	627	283.1	1649	1649
1	56.2	66	156	90.6	194	328	215.1	1055	1055	411.8	2872	1649
2	81.8	155	284	131.8	436	538	312.8	1924	1924			
3	101.8	255	384	164.1	655	718						
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**MAXIMUM ALLOWABLE LOAD FOR PESTANs POLYPROPYLENE PP-R(CT) PIPE
(C=150), SDR11 CON'T**

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Pressure Loss Due to Friction (in psi per 100 ft of length)	8" (200 mm)			10" (250 mm)		
	GPM	WSFU		GPM	WSFU	
		FM	FT		FM	FT
0.5	510.1	3840	3840	919.0	16000	16000
1	742.0	9890	9890	1336.7	24000	24000
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**MAXIMUM ALLOWABLE LOAD FOR PESTANs POLYPROPYLENE PP-R(CT) PIPE
(C=150), SDR17.6**

Pressure Loss Due to Friction (in psi per 100 ft of length)	4" (125 mm)			6" (160 mm)			8" (200 mm)			10" (250 mm)			12" (315 mm)		
	GPM	WSFU		GPM	WSFU		GPM	WSFU		GPM	WSFU		GPM	WSFU	
		FM	FT		FM	FT		FM	FT		FM	FT		FM	FT
0.5	183.3	800	831	350.8	2278	2278	631.2	5620	5620	1136.8	20153	20153	2085.7	31000	31000
1	266.1	1492	1492	509.3	3828	3828	915.2	16000	16000						
2	386.8	2609	2609												
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