



Scott Walker, Governor
Dave Ross, Secretary

August 20, 2013

GEORG FISCHER HARVEL LLC
GEORG FISCHER PIPING SYSTEMS LTD.
WILLIAM WEAVER
300 KUEBLER ROAD
EASTON PA 18015

Re: Description: PIPE, FITTINGS AND CEMENT, ALTERNATE PLUMBING SYSTEM
Manufacturer: GEORG FISCHER HARVEL LLC
Product Name: HARVEL LXT SCHEDULE 80 PIPE, FITTINGS AND SOLVENT CEMENT
Model Number(s): **SCHEDULE 80 NOMINAL PIPE SIZES (IN.): 1/2, 3/4, 1, 1^{1/4}, 1^{1/2}, 2, 3, 4, 6 AND 8**
TEE SLIPxSLIPxSLIP FITTINGS (IN.): 1/2, 3/4, 1, 1^{1/4}, 1^{1/2}, 2, 3, 4 AND 6
REDUCING TEE SLIPxSLIPxSLIP FITTINGS (IN.): 1x1x3/4, 1^{1/2}x1^{1/2}x1, 2x2x1, 2x2x1^{1/2}, 3x3x2, 4x4x3, 6x6x3 AND 6x6x4
90 ELL SLIPxSLIP FITTINGS (IN.): 1/2, 3/4, 1, 1^{1/4}, 1^{1/2}, 2, 3, 4 AND 6
90 SWEEP ELL SLIPxSLIP FITTINGS (IN.): 1/2, 3/4, 1, 1^{1/4}, 1^{1/2}, AND 2
45 ELL SLIPxSLIP FITTINGS (IN.): 1/2, 3/4, 1, 1^{1/4}, 1^{1/2}, 2, 3, 4 AND 6
COUPLING SLIPxSLIP FITTINGS (IN.): 1/2, 3/4, 1, 1^{1/4}, 1^{1/2}, 2, 3, 4 AND 6
REDUCER COUPLING SLIPxSLIP FITTINGS (IN.): 3/4x1/2, 1x3/4, 1^{1/4}x1, 1^{1/2}x1, 1^{1/2}x1^{1/4}, 2x1, 2x1^{1/2}, 3x2, 4x2, 4x3 AND 6x4
FEMALE ADAPTER SLIPxFIPT FITTINGS (IN.): 1/2, 3/4, 1, 1^{1/4}, 1^{1/2}, 2 AND 4
MALE ADAPTER MIPTxSLIP FITTINGS (IN.): 1/2, 3/4, 1, 1^{1/4}, 1^{1/2}, 2, 3 AND 4
REDUCER BUSHING SPIGxSLIP FITTINGS (IN.): 3/4x1/2, 1x1/2, 1x3/4, 1^{1/4}x1/2, 1^{1/4}x1, 1^{1/2}x3/4, 1^{1/2}x1, 1^{1/2}x1^{1/4}, 2x1, 2x1^{1/2}, 3x2, 4x3 AND 6x4
REDUCER BUSHING FLUSH STYLE SPIGxSLIP FITTINGS (IN.): 1/2x1/4, 1/2x3/8, 3/4x1/4, 3/4x1/2, 1x3/8, 1x1/2, 1x3/4, 1^{1/2}x3/4 AND 1^{1/2}x1
REDUCING FEMALE ADAPTER SPIGxSR FIPT FITTINGS (IN.): 1/2x1/4, 3/4x1/4 AND 1x1/4
CAP SLIP FITTINGS (IN.): 1/2, 3/4, 1, 1^{1/4}, 1^{1/2}, 2, 3, 4 AND 6
FLANGE VAN STONE STYLE SLIP FITTINGS (IN.): 1/2, 3/4, 1, 1^{1/4}, 1^{1/2}, 2, 3, 4 AND 6
UNION SLIPxSLIP EPDM O-RING SEAL FITTINGS (IN.): 1/2, 3/4, 1, 1^{1/4}, 1^{1/2}, 2, 3 AND 4
UNION SLIPxSLIP VITON O-RING SEAL FITTINGS (IN.): 1/2, 3/4, 1, 1^{1/4}, 1^{1/2}, 2, 3 AND 4
SEE ATTACHEMENT FOR ADDITIONAL FITTINGS COVERED UNDER THIS APPROVAL.

Product File No: 20130287

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 August 2018.

This approval supersedes the approval issued on July 18, 2012 under product file number 20080572.

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

- This product may be installed for the following water use(s):
 - a. Water service pipe
 - b. Cold water distribution piping Above ground
 - c. Cold water distribution piping Underground

- This product must be installed in accordance with the manufacturer's printed instructions, product approval, and plan approval. If there is a conflict between the manufacturer's instructions and the product approval and/or plan approval, the product approval and/or plan approval will take precedence.
- Pipe sizing for this product must comply with Tables HLXT-1 or 2 entitled Maximum Allowable Load for Harvel LXT PVC, Sch. 80; (C=150). Table notes: WSFU means water supply fixture units, GPM means gallons per minute, FM means predominately flushometer type water closets or siphon jet urinals, FT means predominately flush tank type water closets or wash down urinals, and NP means not permitted.

TABLE HLXT-1
 Maximum Allowable Load for Harvel LXT PVC, Sch. 80; (C=150)

Pressure Loss Due to Friction (in lbs. per 100 ft. of Length)	Pipe Diameter (in Inches)									
	1/2		3/4		1			1-1/4		
	WSFU		WSFU		WSFU			WSFU		
	GPM	FT	GPM	FT	GPM	FM	FT	GPM	FM	FT
0.5	0.5	0.5	1.5	1.5	3.0	-	3.0	6.5	-	8.0
1	1.0	1.0	2.0	2.0	4.5	-	5.0	10.0	4.0	13.0
2	1.0	1.0	3.0	3.0	6.5	-	8.0	14.5	4.5	20.5
3	1.5	1.5	4.0	4.0	8.0	-	10.0	18.0	6.0	26.5
4	2.0	2.0	5.0	6.0	9.5	-	12.5	21.0	7.0	32.0
5	2.0	2.0	5.5	6.5	11.0	4.0	15.0	23.0	7.5	37.0
6	2.5	2.5	6.0	7.0	12.0	4.0	16.5	26.0	9.0	45.0
7	2.5	2.5	6.5	8.0	13.0	4.5	18.0	28.0	11.0	50.0
8	3.0	3.0	7.0	9.0	14.0	4.5	20.0	30.0	14.5	57.0
9	3.0	3.0	7.5	9.5	15.0	5.0	21.5	NP		
10	3.5	3.5	8.0	10.0	16.0	5.0	23.0			
11	3.5	3.5	8.5	10.5	16.5	5.5	24.0			
12	3.5	3.5	9.0	11.5	17.0	5.5	25.0			
13	4.0	4.0	9.0	11.5	NP					
14	4.0	4.0	9.5	12.5						
15	4.0	4.0	10.0	13.0						
16	4.5	5.0	10.0	13.5						
17	4.5	5.0	NP							
18	4.5	5.0								
19	5.0	6.0								
20	NP									

- Pipe sizing for this product must comply with Tables HLXT-1 or 2 entitled Maximum Allowable Load for Harvel LXT PVC, Sch. 80; (C=150). Table notes: WSFU means water supply fixture units, GPM means gallons per minute, FM means predominately flushometer type water closets or siphon jet urinals, FT means predominately flush tank type water closets or wash down urinals, and NP means not permitted.
- This product must be installed in accordance with Harvel's installation instructions printed in the Harvel LXT HPB-114, Revised 5/15/02, product brochure.
- The piping must be labeled with HARVEL LXT, pipe size in inches, SCH 80, and Trace number (i.e.: 6 2303 1).
- The fittings must be labeled with Spears, NSF pw PVC1, pipe size in inches, SCH 80, and part number.

TABLE HLXT-2
 Maximum Allowable Load for Harvel LXT PVC, Sch. 80; (C=150)

Pressure Loss Due to Friction (in lbs. per 100 ft. of Length)	Pipe Diameter (in Inches)								
	1-1/2			2			3		
	WSFU			WSFU			WSFU		
	GPM	FM	FT	GPM	FM	FT	GPM	FM	FT
0.5	10.5	4.0	14.0	20.5	6.5	31.0	60.0	75.0	175
1	15.0	5.0	21.5	30.0	13.5	55.0	87.0	180.0	310
2	22.0	7.0	35.0	44.0	36.0	106.0	127.0	406.0	511
3	27.0	10.0	47.0	55.0	62.0	150.0	159.0	615.0	688
4	32.0	16.0	60.0	64.0	86.0	195.0	160.0	627.0	697
5	36.0	22.0	73.0	71.0	114.0	233.0	NP		
6	40.0	30.0	86.0	NP					
7	42.0	34.0	102.0						
8	NP								

	4			6		
	WSFU			WSFU		
	GPM	FM	FT	GPM	FM	FT
0.5	125	393	500	369	2444	2444
1	183	800	829	537	4176	4176
2	266	1490	1490	636	5935	5965
3	280	1626	1626	NP		
4	NP					

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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