# **D2241**IPS PVC PRESSURE PIPE SPECIFICATION DATA



#### ASTM D2241 IPS SPECIFICATION DATA

Diamond IPS pressure-rated PVC pipe is made of compounds conforming to material requirements of ASTM D2241 in accordance with ASTM D1784. Pipe sizes (1  $\frac{1}{2}$ " through 12") are made with an integral bell to utilize the Rieber gasket system for sealing, and meeting specifications defined in ASTM F477 which conforms to the requirements of ASTM D3139.

Diamond IPS pressure-rated PVC pipe meets all the dimensional, chemical, and physical requirements as outlined in ASTM D2241. Potable water pipe carries the mark of NSF, International in accordance with Standard 61. Some factory locations produce IPS pressure pipe bearing the mark of NSF-14.

Each male end shall be beveled to facilitate joining and reference marked to insure proper insertion depth. Diamond furnished lubricant is to be used in the joining process.

### D2241

#### PHYSICAL PROPERTIES OF PVC 12454:

# $\begin{array}{c|c} E \\ \hline D \\ \hline \end{array}$

RIEBER JOINT ILLUSTRATION

Property	ASTM Test	Minimum
Specific Gravity	D792	1.40
Tensile Strength, psi	D638	7,000
Tensile Modulus, psi	D638	400,000
IZOD Impact Strength	D256	.65ft., lb./in.

#### **SHORT FORM Specification for Diamond PVC Water Pipe**

Diamond PVC Water Pipe shall be made of compounds conforming to ASTM D1784 with a cell classification of 12454. Diamond PVC Water Pipe must meet all the dimensional, chemical, and physical requirements as outlined in ASTM D2241 and will be supplied in 20 and 22 foot laying lengths. Joints shall be formed using Rieber Technology. Potable water pipe shall be manufactured from NSF listed ingredients.

#### **ASTM D2241**

#### SPECIFICATION DATA. DIAMOND IPS PRESSURE-RATED PIPE IS SUPPLIED IN 20 AND 22 FOOT LAYING LENGTHS.

Nominal Pipe Size in. (mm)	B Bell Socket Diameter Inches	C Approximate Bell Depth Inches	D Insert Mark 1 Inches *	E Insert Mark 2 Inches *
2" (50)	3-1/8"	4"	2-3/4"	3-3/4"
2.5" (62.5)	4-3/8"	5"	2"	3"
3" (75)	4-7/16"	4-1/2"	3-5/8"	4-5/8"
4" (100)	5-1/2"	4-3/4"	4-1/4"	5-1/4"
6" (150)	8-1/4"	5-1/2"	4-3/4"	5-3/4"
8" (200)	10-1/4"	6"	4-7/8"	5-7/8"
10" (250)	12-7/8"	6-1/2"	5-1/2"	6-1/2"
12" (300)	15-1/8"	7"	5-7/8"	6-7/8"

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<sup>\*</sup>Tolerance of +/- 1/4" allowed

# **D2241**IPS PVC PRESSURE PIPE SPECIFICATION DATA

## ASTM D2241 SPECIFICATION DATA

Nominal Pipe Size in. (mm)	A Outside Diameter Inches	t SDR 13.5 315 psi Inches	t SDR 17 250 psi Inches	t SDR 21 200 psi Inches	t SDR 26 160 psi Inches	t SDR 32.5 125 psi Inches	t SDR 41 100 psi Inches	
MINIMUM WALL THICKNESS = (t)								
1.5" (37.5)	1.900	0.141	0.112	0.090				
2" (50)	2.375	0.176	0.140	0.113	0.091			
2.5" (62.5)	2.875	0.213	0.169	0.137	0.110			
3" (75)	3.500	0.259	0.206	0.167	0.135			
4" (100)	4.500	0.333	0.265	0.214	0.173	0.138	0.110	
6" (150)	6.625	0.491	0.390	0.316	0.255	0.204	0.162	
8" (200)	8.625		0.508	0.410	0.332	0.265	0.210	
10" (250)	10.750		0.632	0.511	0.413	0.331	0.262	
12" (300)	12.750		0.750	0.606	0.490	0.392	0.311	

#### **ASTM D2241**

#### **ASTM D2241 LOADING CHART**

Nominal Pipe Size in. (mm)	Outside Diameter	Joints Per Bundle	Feet Per Bundle 20' laying lengths	*Feet Per Truckload 20' laying lengths	Feet Per Bundle 22' laying lengths	*Feet Per Truckload 22' laying lengths		
SDR-41 PRESSURE RATING 100 PSI								
4" (100)	4.500	63	1,260	20,160	1,386	22,176		
6" (150)	6.625	35\40	560/640/700/800	8,400	770\880	9,240		
8" (200)	8.625	20\24	300/360/400/480	4,840	440\528	5,324		
10" (250)	10.750	12\15	240/300	3,240	264\330	3,564		
12" (300)	12.750	9\12	120/160/180/240	1,960	198\264	2,156		
		SD	R-32.5 PRESSURE RATING	125 PSI				
4" (100)	4.500	63	1,260	20,160	1,386	22,176		
6" (150)	6.625	35\40	560/640/700/800	8,400	770\880	9,240		
8" (200)	8.625	20\24	300/360/400/480	4,840	440\528	5,324		
10" (250)	10.750	12\15	240/300	3,240	264\330	3,564		
12" (300)	12.750	9\12	120/160/180/240	1,960	198\264	2,156		
		SI	DR-26 PRESSURE RATING 1	60 PSI				
2" (50)	2.375	215			4,730	75,680		
2.5" (62.5)	2.875	131			2,882	46,112		
3" (75)	3.500	88\95			1,936\2,090	32,208		
4" (100)	4.500	63	1,260	20,160	1,386	22,176		
6" (150)	6.625	35\40	560/640/700/800	8,400	770\880	9,240		
8" (200)	8.625	20\24	300/360/400/480	4,840	440\528	5,324		
10" (250)	10.750	12\15	240/300	3,240	264\330	3,564		
12" (300)	12.750	9\12	120/160/180/240	1,960	198\264	2,156		

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## ASTM D2241 LOADING CHART

Nominal Pipe Size in. (mm)	Outside Diameter	Joints Per Bundle	Feet Per Bundle 20' laying lengths	*Feet Per Truckload 20' laying lengths	Feet Per Bundle 22' laying lengths	*Feet Per Truckload 22' laying lengths
		SC	R-21 PRESSURE RATING 2	00 PSI		
1-1/2" (37.5)	1.900	215			4,730	75,680
2" (50)	2.375	215			4,730	75,680
2-1/2" (62.5)	2.875	131			2,882	46,112
3" (75)	3.500	88\95			1,936/2,090	32,208
4" (100)	4.500	63	1,260	20,160	1,386	22,176
6" (150)	6.625	35\40	560/640/700/800	8,400	770\880	9,240
8" (200)	8.625	20\24	300/360/400/480	4,840	440\528	5,324
10" (250)	10.750	12\15	240/300	3,240	264\330	3,564
12" (300)	12.750	9\12	120/160/180/240	1,960	198\264	2,156
		SC	DR-17 PRESSURE RATING 2	50 PSI		
2" (50)	2.375	215			4,730	75,680
2-1/2" (62.5)	2.875	131			2,882	46,112
3" (75)	3.500	88\95			1,936\2,090	32,208
4" (100)	4.500	63	1,260	20,160	1,386	22,176
6" (150)	6.625	35\40	560/640/700/800	8,400	770\880	9,240
8" (200)	8.625	20\24	300/360/400/480	4,840	440\528	5,324
10" (250)	10.750	12\15	240/300	3,240	264\330	3,564
12" (300)	12.750	9\12	120/160/180/240	1,960	198\264	2,156
		SDI	R-13.5 PRESSURE RATING	315 PSI		
2" (50)	2.375	215			4,730	75,680
2-1/2" (62.5)	2.875	131			2,882	46,112
3" (75)	3.500	88\95			1,936\2,090	32,208
4" (100)	4.500	63	1,260	20,160	1,386	22,176
6" (150)	6.625	35\40	560/640/700/800	8,400	770\880	9,240

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