

Product Description

- Pressure - Up to 2500 psi (17,2 MPa)
- Resin System - Anhydride Cured Epoxy
- Reinforcement - Premium Fiberglass
- Joining Systems - API 8rd
- Joint Length - 30 Feet (9,1 Meters) Nominal
Random Lengths of 20 to 32 Feet (6,1 to 9,8 Meters)
- Fittings - A variety of filament wound API threaded fittings are available. API design systems require higher rated fittings, refer to the chart on page 28 of the Threaded Line Pipe Installation and Application Practices. Temperature interpolation is not recommended for fittings
- Temperature - Up to 150° F (65.6° C) Maximum
- Sizes - 1½ through 8 inches

High Pressure Design ≥ 500 psi

- API 15HR Designed
- Life Expectancy - 20 years at full rating
- Design Temperature - 150° F (65.6° C)
- Wall Thickness - Nominal
- Hoop Stress - Lower Confidence Limit (LCL) of Long Term Hydrostatic Strength (LTHS) according to ASTM D2992-B
- 100% Factory Hydrotest - All products are tested at a minimum of 1.5 x the series rated pressure of 150° F (65.6° C)

Performance Ratings vs. Temperature

ASTM D 2992-B

		150° F (65.6° C)
• 11.4 Years Life, LTHS		24,043 (165,8)
• 20 Year Life, LTHS	psi (MPa)	23,270 (160,5)
• 20 Year Life, LCL (Lower Confidence Limit)	psi (MPa)	21,400 (147,6)

Benefits

- Corrosion Control
- Reduced Installation Costs
- Improved Flow Efficiency
- Reduced Paraffin & Scale Build-Up
- Reduced Maintenance Cost

Physical Properties

- Density (lbs/cu ft) = 121
- Density (kgs/cu cm) = 1,94 x 10⁻³
- Specific Gravity = 1.94

Thermal Properties

- Coefficient of Thermal Conductivity
0.23 BTU/(ft.hr.° F) 0.14W/(m)(°C)
- Coefficient of Thermal Expansion
12.5 x 10⁻⁶ in/in/°F (22,6 x 10⁻⁶ mm/mm/°C)

Applications

- Flow or Injection Lines
- Transfer or Disposal Lines
- Oil, Gas, Saltwater, CO₂ and H₂S

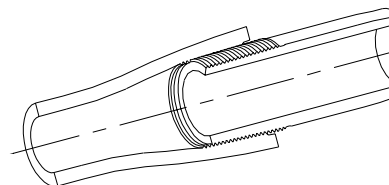
Flow Factors

- Hazen Williams C=150
- Absolute Roughness = 0.00021 in.
(1.7 x 10⁻⁵ ft.)

Nominal Moduli

- Modulus of Elasticity
Hoop - 3.5 PSI x 10⁶ (GPa 24,1)
Axial - 1.5 PSI x 10⁶ (GPa 10,3)
- Poisson's Ratio (Minor) = 0.38

Joining System



API Threads

- Advanced Composite Thread (ACT) - Molded threads using a graphite, ceramic and epoxy composite for high performance applications. (patent no's 4,999,389 & 5,179,140)
- Precision Ground Thread (PGT) - Typical ground threads produced with numerical controlled grinding equipment.
- All 1½" EUE 10rd and 2-3/8" - 4½" EUE 8rd API threads conform to API 5B Table 14 (L4 is minimum) and all 5½" - 9-5/8" OD 8rd casing threads conform to API 5B Table 7 (L4 is minimum)



15HR-0004/ 15LR-0004.1
LICENSEE Q1 RATED



Pipe-Thread Size Inches	PIPE DIMENSIONS (NOMINAL)										Minimum Bending Radius (m)	Maximum Deflection In/jt (cm/jt)	STAR™ RATED PRESSURES*		Ultimate Pressure ASTM D-1599 (MPa)	Maximum Support Span (m)	Collapse Rating (MPa)	Short Term Tensile Rating		Capacity Bbls/1,000 ft (m³/km)	Threaded Adapter Product Code
	Inside Diameter (mm)		Outside Diameter (mm)		Wall Thickness (mm)		Pipe Weight (kg/m)		Connection Diameter (mm)				Static ⁽¹⁾ 150°F (65.6°C) (MPa)	psi				Lbs	(kgs)		
	In	(mm)	In	(mm)	In	(mm)	In	(mm)	In	(mm)											

Series 500 - ACT (All Sizes) or PGT (All Sizes)

3	3 1/2	3.00	(76,2)	3.14	(79,8)	0.07	(1,8)	0.97	(1,4)	3.67	(93,2)	157	(47,9)	33	(83,8)	500	(3,4)	1500	(10,3)	10	(3,1)	34	(0,2)	1900	(862)	8.70	(4,5)	35NT
4	4 1/2	3.91	(99,3)	4.07	(103,4)	0.08	(2,0)	1.33	(2,0)	4.67	(118,6)	204	(62,2)	26	(66,0)	500	(3,4)	1300	(9,0)	11	(3,4)	23	(0,2)	2800	(1270)	14.80	(7,7)	45NT
6	6 5/8	5.85	(148,6)	6.08	(154,4)	0.12	(2,9)	2.36	(3,5)	6.57	(166,9)	304	(92,7)	17	(43,2)	500	(3,4)	1300	(9,0)	13	(4,0)	20	(0,1)	6100	(2767)	33.20	(17,3)	65NV
8	8 5/8	7.50	(190,5)	7.79	(197,9)	0.15	(3,7)	3.94	(5,9)	8.57	(217,7)	390	(118,9)	13	(33,0)	500	(3,4)	1200	(8,3)	15	(4,6)	19	(0,1)	9900	(4491)	54.60	(28,5)	85NU

Series 750 - ACT (All Sizes) or PGT (All Sizes)

2 1/2	2 7/8	2.43	(61,7)	2.58	(65,5)	0.08	(1,9)	0.76	(1,1)	3.02	(76,7)	129	(39,3)	40	(101,6)	750	(5,2)	1900	(13,1)	9	(2,8)	76	(0,5)	1700	(771)	5.70	(3,0)	27NT
3	3 1/2	3.00	(76,2)	3.18	(80,8)	0.09	(2,3)	1.20	(1,8)	3.67	(93,2)	159	(48,5)	33	(83,8)	750	(5,2)	1900	(13,1)	10	(3,1)	70	(0,5)	2500	(1134)	8.70	(4,5)	35NT
4	4 1/2	3.91	(99,3)	4.15	(105,4)	0.12	(3,0)	1.90	(2,8)	4.67	(118,6)	208	(63,4)	25	(63,5)	750	(5,2)	1900	(13,1)	12	(3,7)	75	(0,5)	4300	(1950)	14.80	(7,7)	45NT
6	6 5/8	5.85	(148,6)	6.19	(157,2)	0.17	(4,3)	3.23	(4,8)	6.57	(166,9)	310	(94,5)	17	(43,2)	750	(5,2)	1800	(12,4)	14	(4,3)	64	(0,4)	9100	(4128)	33.20	(17,3)	65NV
8	8 5/8	7.50	(190,5)	7.93	(201,4)	0.22	(5,5)	5.63	(8,4)	8.57	(217,7)	397	(121,0)	13	(33,0)	750	(5,2)	1800	(12,4)	16	(4,9)	61	(0,4)	14800	(6713)	54.60	(28,5)	85NU

Series 1000 - ACT (All Sizes) or PGT (All Sizes except 8")

2	2 3/8	2.00	(50,8)	2.16	(54,9)	0.08	(2,0)	0.62	(,9)	2.52	(64,0)	108	(32,9)	48	(121,9)	1000	(6,9)	2500	(17,2)	9	(2,8)	161	(1,1)	1500	(680)	3.90	(2,0)	23NS
2 1/2	2 7/8	2.43	(61,7)	2.63	(66,8)	0.10	(2,5)	0.95	(1,4)	3.02	(76,7)	132	(40,2)	39	(99,1)	1000	(6,9)	2600	(17,9)	10	(3,1)	175	(1,2)	2300	(1043)	5.70	(3,0)	27NT
3	3 1/2	3.00	(76,2)	3.24	(82,3)	0.12	(3,0)	1.43	(2,1)	3.67	(93,2)	162	(49,4)	32	(81,3)	1000	(6,9)	2500	(17,2)	11	(3,4)	161	(1,1)	3300	(1497)	8.70	(4,5)	35NT
4	4 1/2	3.91	(99,3)	4.22	(107,2)	0.16	(3,9)	2.22	(3,3)	4.67	(118,6)	211	(64,3)	25	(63,5)	1000	(6,9)	2500	(17,2)	13	(4,0)	157	(1,1)	5600	(2540)	14.80	(7,7)	45NT
6	6 5/8	5.85	(148,6)	6.29	(159,8)	0.22	(5,6)	4.15	(6,2)	6.57	(166,9)	315	(96,0)	17	(43,2)	1000	(6,9)	2400	(16,5)	15	(4,6)	135	(0,9)	11900	(5398)	33.20	(17,3)	65NS
8	8 5/8	7.50	(190,5)	8.08	(205,2)	0.29	(7,4)	6.81	(10,1)	8.57	(217,7)	404	(123,1)	13	(33,0)	1000	(6,9)	2400	(16,5)	17	(5,2)	146	(1,0)	20100	(9117)	54.60	(28,5)	N/A

Series 1250 - ACT (All Sizes) or PGT (2", 2 1/2", 3" and 4")

1 1/2	1.90	1.50	(38,1)	1.66	(42,2)	0.08	(2,0)	0.44	(,7)	2.04	(51,8)	83	(25,3)	62	(157,5)	1250	(8,6)	3300	(22,8)	8	(2,5)	368	(2,5)	1100	(499)	2.20	(1,1)	19NR
2	2 3/8	2.00	(50,8)	2.21	(56,1)	0.11	(2,7)	0.78	(1,2)	2.52	(64,0)	111	(33,8)	47	(119,4)	1250	(8,6)	3200	(22,1)	9	(2,8)	352	(2,4)	2000	(907)	3.90	(2,0)	23NS
2 1/2	2 7/8	2.43	(61,7)	2.68	(68,1)	0.13	(3,2)	1.14	(1,7)	3.02	(76,7)	134	(40,8)	39	(99,1)	1250	(8,6)	3200	(22,1)	10	(3,1)	332	(2,3)	2800	(1270)	5.70	(3,0)	27NT
3	3 1/2	3.00	(76,2)	3.30	(83,8)	0.15	(3,8)	1.68	(2,5)	3.67	(93,2)	165	(50,3)	32	(81,3)	1250	(8,6)	3100	(21,4)	11	(3,4)	306	(2,1)	4200	(1905)	8.70	(4,5)	35NT
4	4 1/2	3.91	(99,3)	4.29	(109,0)	0.19	(4,8)	2.58	(3,8)	4.67	(118,6)	215	(65,5)	24	(61,0)	1250	(8,6)	3000	(20,7)	13	(4,0)	282	(1,9)	6900	(3130)	14.80	(7,7)	45NT
6	6 5/8	5.85	(148,6)	6.40	(162,6)	0.28	(7,0)	5.18	(7,7)	6.57	(166,9)	320	(97,5)	16	(40,6)	1250	(8,6)	2900	(20,0)	16	(4,9)	256	(1,8)	15000	(6804)	33.20	(17,3)	N/A
8	8 5/8	7.50	(190,5)	8.22	(208,8)	0.36	(9,1)	8.82	(13,1)	8.57	(217,7)	411	(125,3)	13	(33,0)	1250	(8,6)	3000	(20,7)	18	(5,5)	272	(1,9)	25200	(11431)	54.60	(28,5)	N/A

Series 1500 - ACT (All Sizes) or PGT (2", 2 1/2", 3" and 4")

1 1/2	1.90	1.50	(38,1)	1.69	(42,9)	0.10	(2,4)	0.57	(,8)	2.04	(51,8)	85	(25,9)	61	(154,9)	1500	(10,3)	3900	(26,9)	8	(2,5)	599	(4,1)	1300	(590)	2.20	(1,1)	19NR
2	2 3/8	2.00	(50,8)	2.25	(57,2)	0.13	(3,2)	0.95	(1,4)	2.52	(64,0)	113	(34,4)	46	(116,8)	1500	(10,3)	3800	(26,2)	10	(3,1)	577	(4,0)	2400	(1089)	3.90	(2,0)	23NS
2 1/2	2 7/8	2.43	(61,7)	2.72	(69,1)	0.15	(3,7)	1.18	(1,8)	3.02	(76,7)	136	(41,5)	38	(96,5)	1500	(10,3)	3700	(25,5)	11	(3,4)	506	(3,5)	3300	(1497)	5.70	(3,0)	27NT
3	3 1/2	3.00	(76,2)	3.36	(85,3)	0.18	(4,6)	1.96	(2,9)	3.67	(93,2)	168	(51,2)	31	(78,7)	1500	(10,3)	3700	(25,5)	12	(3,7)	514	(3,5)	5100	(2313)	8.70	(4,5)	35NT
4	4 1/2	3.91	(99,3)	4.36	(110,7)	0.23	(5,7)	2.91	(4,3)	4.67	(118,6)	218	(66,4)	24	(61,0)	1500	(10,3)	3500	(24,1)	14	(4,3)	456	(3,1)	8300	(3765)	14.80	(7,7)	45NS
6	6 5/8	5.85	(148,6)	6.53	(165,9)	0.34	(8,6)	5.91	(8,8)	6.57	(166,9)	327	(99,7)	16	(40,6)	1500	(10,3)	3600	(24,8)	17	(5,2)	470	(3,2)	18700	(8482)	33.20	(17,3)	N/A
8	8 5/8	7.50	(190,5)	8.36	(212,3)	0.43	(10,9)	10.15	(15,1)	8.57	(217,7)	418	(127,4)	12	(30,5)	1500	(10,3)	3500	(24,1)	19	(5,9)	452	(3,1)	30300	(13744)	54.60	(28,5)	N/A

Series 1750 - ACT (All Sizes) or PGT (2", 2 1/2", 3" and 4")

1 1/2	1.90	1.50	(38,1)	1.72	(43,7)	0.11	(2,8)	0.57	(,9)	2.04	(51,8)	86	(26,2)	60	(152,4)	1750	(12,1)	4400	(30,3)	9	(2,8)	904	(6,2)	1600	(726)	2.20	(1,1)	19NR
2	2 3/8	2.00	(50,8)	2.29	(58,2)	0.15	(3,7)	0.96	(1,4)	2.52	(64,0)	115	(35,1)	45	(114,3)	1750	(12,1)	4400	(30,3)	10	(3,1)	875	(6,0)	2800	(1270)	3.90	(2,0)	23NS
2 1/2	2 7/8	2.43	(61,7)	2.77	(70,4)	0.17	(4,3)	1.37	(2,0)	3.02	(76,7)	139	(42,4)	37	(94,0)	1750	(12,1)	4300	(29,6)	11	(3,4)	792	(5,5)	3900	(1769)	5.70	(3,0)	27NS
3	3 1/2	3.00	(76,2)	3.41	(86,6)	0.21	(5,2)	2.22	(3,3)	3.67	(93,2)	171	(52,1)	30	(76,2)	1750	(12,1)	4200	(29,0)	12	(3,7)	741	(5,1)	5800	(2631)	8.70	(4,5)	35NS
4	4 1/2	3.91	(99,3)	4.46	(113,2)	0.27	(6,9)	3.57	(5,3)	4.67	(118,6)	223	(68,0)	23	(58,4)	1750	(12,1)	4200	(29,0)	14	(4,3)	784	(5,4)	10100	(4581)	14.80	(7,7)	45NR

Pipe-Thread Size Inches	PIPE DIMENSIONS (NOMINAL)										Minimum Bending Radius (m)	Maximum Deflection In/jt (cm/jt)	STAR™ RATED PRESSURES*		Ultimate Pressure ASTM D-1599 (MPa)	Maximum Support Span (m)	Collapse Rating (MPa)	Short Term Tensile Rating (Lbs (kgs))	Capacity Bbls/1,000 ft (m³/km)	Threaded Adapter Product Code
	Inside Diameter (mm)		Outside Diameter (mm)		Wall Thickness (mm)		Pipe Weight (Lbs/ft (kg/m))		Connection Diameter (mm)				Static ⁽¹⁾ 150°F (65.6°C) (psi (MPa))	psi (MPa)						
	In	(mm)	In	(mm)	In	(mm)	Lbs/ft	(kg/m)	In	(mm)										

Series 2000 - ACT (All Sizes) or PGT (2", 2 1/2", 3" and 4")

1 1/2	1.90	1.50	(38,1)	1.75	(44,5)	0.13	(3,2)	0.70	(1,0)	2.04	(51,8)	88	(26,8)	59	(149,9)	2000	(13,8)	5000	(34,5)	9	(2,8)	1290	(8,9)	1800	(816)	2.20	(1,1)	19NR
2	2 3/8	2.00	(50,8)	2.33	(59,2)	0.17	(4,2)	1.13	(1,7)	2.52	(64,0)	117	(35,7)	44	(111,8)	2000	(13,8)	5000	(34,5)	10	(3,1)	1254	(8,6)	3200	(1452)	3.90	(2,0)	23NS
2 1/2	2 7/8	2.43	(61,7)	2.82	(71,6)	0.20	(5,0)	1.58	(2,3)	3.02	(76,7)	141	(43,0)	37	(94,0)	2000	(13,8)	4800	(33,1)	11	(3,4)	1161	(8,0)	4600	(2087)	5.70	(3,0)	27NR
3	3 1/2	3.00	(76,2)	3.47	(88,1)	0.24	(6,0)	2.47	(3,7)	3.67	(93,2)	174	(53,0)	30	(76,2)	2000	(13,8)	4700	(32,4)	13	(4,0)	1086	(7,5)	6800	(3084)	8.70	(4,5)	35NS
4	4 1/2	3.91	(99,3)	4.54	(115,3)	0.32	(8,0)	3.89	(5,8)	4.67	(118,6)	227	(69,2)	23	(58,4)	2000	(13,8)	4800	(33,1)	15	(4,6)	1174	(8,1)	11800	(5352)	14.80	(7,7)	45NR

Series 2250 - ACT (All Sizes) or PGT (2", 2 1/2", and 3")

1 1/2	1.90	1.50	(38,1)	1.78	(45,2)	0.14	(3,6)	0.71	(1,1)	2.04	(51,8)	89	(27,1)	58	(147,3)	2250	(15,5)	5500	(37,9)	9	(2,8)	1763	(12,2)	2000	(907)	2.20	(1,1)	19NQ
2	2 3/8	2.00	(50,8)	2.37	(60,2)	0.19	(4,7)	1.30	(1,9)	2.52	(64,0)	119	(36,3)	44	(111,8)	2250	(15,5)	5500	(37,9)	11	(3,4)	1720	(11,9)	3600	(1633)	3.90	(2,0)	23NQ
2 1/2	2 7/8	2.43	(61,7)	2.87	(72,9)	0.22	(5,6)	1.80	(2,7)	3.02	(76,7)	144	(43,9)	36	(91,4)	2250	(15,5)	5400	(37,2)	12	(3,7)	1621	(11,2)	5200	(2359)	5.70	(3,0)	27NQ
3	3 1/2	3.00	(76,2)	3.53	(89,7)	0.27	(6,7)	2.74	(4,1)	3.67	(93,2)	177	(53,9)	29	(73,7)	2250	(15,5)	5300	(36,5)	13	(4,0)	1515	(10,4)	7700	(3493)	8.70	(4,5)	35NR
4	4 1/2	3.91	(99,3)	4.61	(117,1)	0.35	(8,9)	4.55	(6,8)	4.67	(118,6)	231	(70,4)	23	(58,4)	2250	(15,5)	5300	(36,5)	15	(4,6)	1571	(10,8)	13300	(6033)	14.80	(7,7)	N/A

Series 2500 - ACT (All Sizes) or PGT (2", 2 1/2", and 3")

1 1/2	1.90	1.50	(38,1)	1.81	(46,0)	0.16	(3,9)	0.84	(1,2)	2.04	(51,8)	91	(27,7)	57	(144,8)	2500	(17,2)	6100	(42,1)	9	(2,8)	2328	(16,1)	2300	(1043)	2.20	(1,1)	19NQ
2	2 3/8	2.00	(50,8)	2.41	(61,2)	0.21	(5,2)	1.49	(2,2)	2.52	(64,0)	121	(36,9)	43	(109,2)	2500	(17,2)	6000	(41,4)	11	(3,4)	2277	(15,7)	4000	(1814)	3.90	(2,0)	23NP
2 1/2	2 7/8	2.43	(61,7)	2.92	(74,2)	0.25	(6,2)	2.01	(3,0)	3.02	(76,7)	146	(44,5)	36	(91,4)	2500	(17,2)	6000	(41,4)	12	(3,7)	2177	(15,0)	5800	(2631)	5.70	(3,0)	27NQ
3	3 1/2	3.00	(76,2)	3.61	(91,7)	0.31	(7,7)	3.03	(4,5)	3.67	(93,2)	181	(55,2)	29	(73,7)	2500	(17,2)	6000	(41,4)	13	(4,0)	2227	(15,4)	9000	(4082)	8.70	(4,5)	35NQ
4	4 1/2	3.75	(95,3)	4.51	(114,6)	0.38	(9,7)	4.90	(7,3)	4.67	(118,6)	226	(68,9)	23	(58,4)	2500	(17,2)	6000	(41,4)	15	(4,6)	2207	(15,2)	14000	(6350)	13.70	(7,1)	N/A

N/A - Not Available (Repair Joint Required)

Joining System Information (Metric Conversions are in Parenthesis)

Pipe Size-Inches Joining System		1 1/2	2	2 1/2	3	4	6	8
Thread Size (3)		1.90" EUE 10rd	2 3/8" EUE 8rd	2 7/8" EUE 8rd	3 1/2" EUE 8rd	4 1/2" EUE 8rd	6 5/8" OD 8rd	8 5/8" OD 8rd
• Pin Upset O.D	In (mm)	2.15 (54,6)	2.60 (66,0)	3.10 (78,7)	3.75 (95,3)	4.75 (120,7)	6.65 (168,9)	8.65 (219,7)
• Thread Length	In (mm)	2.36 (59,9)	2.94 (74,7)	3.25 (82,6)	3.50 (88,9)	3.88 (98,6)	4.25 (108,0)	4.85 (123,2)
• Make Up Length Loss	In (mm)	2.06 (52,4)	2.56 (65,1)	2.88 (73,0)	3.13 (79,4)	3.50 (88,9)	3.88 (98,4)	4.50 (114,3)

Corresponding Numbered Notes:

- 1. STATIC PRESSURE RATING (API 15HR)** - Based on minimum wall thickness dimensions and API 15HR Edition 3, for a 20 year life expectancy. Since some of the long term test data is incomplete for some of these products, not all are available with an API Monogram. Monogramable products are designed by check marks. Fiber Glass Systems Standard Design products are not monogrammed.
- 2. ULTIMATES** - The typical mode of failure for pressure is weep and for tensile it is an across the joint pipe body shear.
- 3. API CONNECTIONS** - All products are produced integral joint unless indicated (TC) Threaded and Coupled. All 1 1/2" EUE 10rd and 2 3/8" - 4 1/2" EUE 8rd API threads conform to API 5B Table 14 (L4 is minimum) and all 5 1/2" - 9 5/8" OD 8rd casing thread conform to API 5B Table 7 (L4 is minimum).
- 4. CYCLIC** - Consult a Fiber Glass Systems technical services personnel in applications where pressure fluctuations of more than 20 percent of the steady pressure rating are anticipated.

LIMITED WARRANTY

Seller warrants that PRODUCTS manufactured by Seller when properly installed, used, and maintained shall be free from defects in material and workmanship. Seller's responsibility under this warranty shall be limited to replacing or repairing PRODUCTS, at Seller's option, the PRODUCTS that prove defective in material or workmanship within one (1) year from the date of installation, provided that Buyer gives Seller prompt notice of any defect or failure and satisfactory proof thereof. Any defective product must be returned to Seller's factory, or any other repair facility designated by Seller. Seller will deliver replacement of defective PRODUCTS to Buyer freight prepaid to the destination provided for in the original order. PRODUCTS returned to Seller for which Seller provides replacement under this warranty shall become the property of the Seller.

This limited warranty does not apply to failure of PRODUCTS caused by abrasive materials, exposure to aggressive fluids, improper application, mishandling, or abuse.

In the event PRODUCTS are altered or repaired by the Buyer and/or end user without prior written approval of the Seller, all warranties are void. Equipment and accessories not manufactured by the seller warranted only to the extent of and by the original manufacturer's warranty. A new warranty period shall not be established for repaired or replaced materials, PRODUCTS, or supplies. Such items shall remain under warranty only for the remainder of the warranty period on original materials, PRODUCTS, or supplies.

The foregoing warranties are in lieu of all other warranties, whether oral, written, express, implied or statutory. Implied warranties of fitness and merchantability shall not apply. Seller's warranty obligations and Buyer's remedies thereunder (except as to title) are solely and exclusively as stated herein. In no case will Seller be liable for consequential damages, labor performed in connection with removal and replacement of the PRODUCTS, loss of production or any other loss incurred because of interruption of service.

IMPORTANT NOTICE

This literature is intended as a guide only. All values listed in this product specification are nominal. Unsatisfactory product results may occur due to environmental fluctuations, variations in operating procedures, or interpolation of data. We suggest that personnel using this data have specialized training and experience in the application of these products and their normal installation and operating conditions. Your intended application of these products should be verified for propriety by your engineers. We expressly disclaim responsibility for any consequential or incidental damages resulting from the installation or use of these products since we do not determine the degree of care utilized during the product installation or service. We reserve the right to revise this data, as necessary, without notice. We welcome comments regarding this product literature.

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