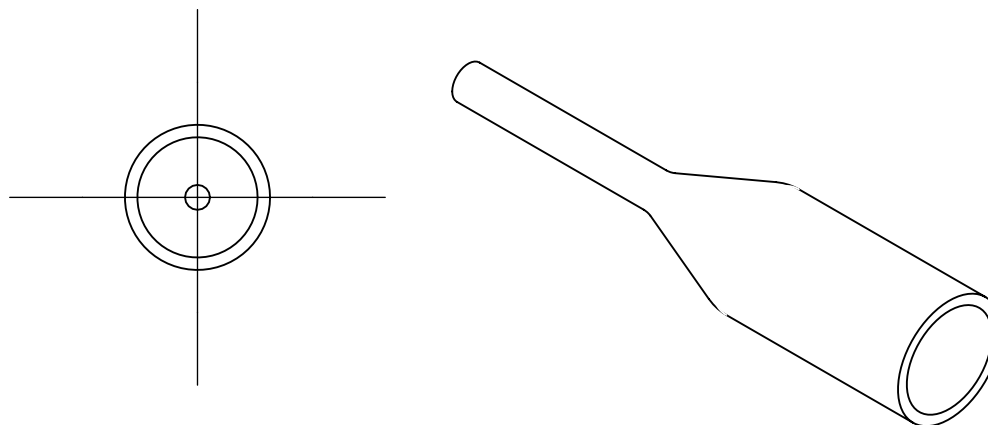


Technical drawing of a tapered pipe. The drawing shows a side view of the pipe with a tapered section. The dimensions are labeled as follows:

- (WT)**: Wall thickness of the pipe.
- (d)**: Inner diameter of the pipe.
- (L)**: Length of the pipe, with a note "(SEE NOTE 9)".
- (D)**: Outer diameter of the pipe.



1. SHRINK RATIO 2:1
2. LONGITUDINAL CHANGE AFTER SHRINKING PER CHART
3. MINIMUM SHRINK TEMPERATURE 212° F (100° C)
4. OPERATING TEMPERATURES -67° F TO 275° F (-55° C TO 135° C)
5. DIELECTRIC STRENGTH >20KV/MM ACCORDING TO ASTM D 150
6. RoHS
7. FLAMMABILITY UL224 600V VW-1 (EXCEPT CLEAR)
8. CONSULT FACTORY OR WEBSITE FOR AVAILABLE LENGTHS

01 2

Material POLYOLEFIN, CROSS LINKED	Units: inches	The copyright of this drawing is reserved by HellermannTyton. It is issued on condition that it is not reproduced, copied, or disclosed to a third party, either wholly or in part, without the consent of HellermannTyton.	Drawn	GRW	12/9/2016	Article/Type-No	TFN21 SERIES	Scale		
			Approved	KAC	12/9/2016	Title	HEAT SHRINK TUBING, 2:1 SHRINK RATIO, NON-ADHESIVE THIN WALL	Project Number		
			HellermannTyton North America Email: corp@htamericas.com Web: www.hellermann.tyton.com			Drawing-No		PRODUCTION : Phase	Format	AH
						16-1991-001-CSU			Sheet	1/3

SW				Revision level			Revision Record		Changed	Date	Approved	Date
				Drawing	State							
				01.2	Design Release			SEE ECN# 016460	JMC	11/16/2022	JPG	11/16/2022

Type	Shrink Ratio	Nominal Trade Size	Supplied Diameter (D)				Recovered Diameter (d)		Wall Thickness		Longitudinal Change after Shrinkage	Color
		in	in	Tolerance Range	mm	Tolerance Range	in	mm	in	mm		
TFN21 1.2/0.6	2:1	3/64	0.047	.055 - .070	1.20	1.4 - 1.8	≤ .023	≤ 0.6	≥ .016	≥ 0.40	± 3%	Black
TFN21 1.6/0.8	2:1	1/16	0.063	.070 - .087	1.60	1.8 - 2.2	≤ .031	≤ 0.8	≥ .016	≥ 0.42		Black, Blue, Green, Red, White, Yellow
TFN21 1.6/0.8	2:1	1/16	0.063	.070 - .087	1.60	1.8 - 2.2	≤ .031	≤ 0.8	≥ .016	≥ 0.42		Clear
TFN21 2.4/1.2	2:1	3/32	0.094	.114 - .130	2.40	2.9 - 3.3	≤ .047	≤ 1.2	≥ .019	≥ 0.48		Black, Blue, Green, Red, White, Yellow
TFN21 2.4/1.2	2:1	3/32	0.094	.114 - .130	2.40	2.9 - 3.3	≤ .047	≤ 1.2	≥ .019	≥ 0.48		Clear
TFN21 3.2/1.6	2:1	1/8	0.125	.133 - .157	3.20	3.4 - 4.0	≤ .063	≤ 1.6	≥ .019	≥ 0.48		Black, Blue, Green, Red, White, Yellow
TFN21 3.2/1.6	2:1	1/8	0.125	.133 - .157	3.20	3.4 - 4.0	≤ .063	≤ 1.6	≥ .019	≥ 0.48		Clear
TFN21 4.8/2.4	2:1	3/16	0.188	.193 - .216	4.80	4.9 - 5.5	≤ .094	≤ 2.4	≥ .019	≥ 0.48		Black, Blue, Green, Red, White, Yellow
TFN21 4.8/2.4	2:1	3/16	0.188	.193 - .216	4.80	4.9 - 5.5	≤ .094	≤ 2.4	≥ .019	≥ 0.48		Clear
TFN21 6.4/3.2	2:1	1/4	0.250	.256 - .279	6.40	6.5 - 7.1	≤ .125	≤ 3.2	≥ .022	≥ 0.56		Black, Blue, Green, Red, White, Yellow
TFN21 6.4/3.2	2:1	1/4	0.250	.256 - .279	6.40	6.5 - 7.1	≤ .125	≤ 3.2	≥ .022	≥ 0.56		Clear
TFN21 9.5/4.8	2:1	3/8	0.375	.405 - .437	9.50	10.3 - 11.1	≤ .188	≤ 4.8	≥ .024	≥ 0.62		Black, Blue, Green, Red, White, Yellow
TFN21 9.5/4.8	2:1	3/8	0.375	.405 - .437	9.50	10.3 - 11.1	≤ .188	≤ 4.8	≥ .024	≥ 0.62		Clear
TFN21 12.7/6.4	2:1	1/2	0.500	.524 - .555	12.70	13.3 - 14.1	≤ .250	≤ 6.4	≥ .024	≥ 0.62		Black, Blue, Green, Red, White, Yellow
TFN21 12.7/6.4	2:1	1/2	0.500	.524 - .555	12.70	13.3 - 14.1	≤ .250	≤ 6.4	≥ .024	≥ 0.62		Clear
TFN21 16.0/8.0	2:1	5/8	0.630	.641 - .673	16.00	16.3 - 17.1	≤ .315	≤ 8.0	≥ 0.27	≥ 0.68		Black
TFN21 19.1/9.5	2:1	3/4	0.750	.791 - .846	19.10	20.1 - 21.5	≤ .375	≤ 9.5	≥ 0.27	≥ 0.68		Black, Blue, Green, Red, White, Yellow
TFN21 19.1/9.5	2:1	3/4	0.750	.791 - .846	19.10	20.1 - 21.5	≤ .375	≤ 9.5	≥ 0.27	≥ 0.68		Clear
TFN21 25.4/12.7	2:1	1	1.000	1.01 - 1.06	25.40	25.7 - 27.0	≤ .50	≤ 12.7	≥ .035	≥ 0.89		Black, Blue, Green, Red, White, Yellow
TFN21 25.4/12.7	2:1	1	1.000	1.01 - 1.06	25.40	25.7 - 27.0	≤ .50	≤ 12.7	≥ .035	≥ 0.89		Clear
TFN21 31.8/16.0	2:1	1-1/4	1.250	1.29 - 1.35	31.80	32.8 - 34.2	≤ .625	≤ 16	≥ .039	≥ 1.00		Black, Blue, Green, Red, White, Yellow
TFN21 31.8/16.0	2:1	1-1/4	1.250	1.29 - 1.35	31.80	32.8 - 34.2	≤ .625	≤ 16	≥ .039	≥ 1.00		Clear
TFN21 38.1/19.1	2:1	1-1/2	1.500	1.59 - 1.71	38.10	40.5 - 43.5	≤ .752	≤ 19.1	≥ .039	≥ 1.00		Black, Blue, Green, Red, White, Yellow
TFN21 38.1/19.1	2:1	1-1/2	1.500	1.59 - 1.71	38.10	40.5 - 43.5	≤ .752	≤ 19.1	≥ .039	≥ 1.00		Clear
TFN21 50.8/25.4	2:1	2	2.000	2.01 - 2.13	50.80	51.0 - 54.0	≤ 1.00	≤ 25.4	≥ .043	≥ 1.10	-2 ~ -5%	Black, Blue, Green, Red, White, Yellow
TFN21 50.8/25.4	2:1	2	2.000	2.01 - 2.13	50.80	51.0 - 54.0	≤ 1.00	≤ 25.4	≥ .043	≥ 1.10		Clear
TFN21 76.2/38.1	2:1	3	3.000	3.19 - 3.31	76.20	81.0 - 84.0	≤ 1.50	≤ 38.1	≥ .047	≥ 1.20		Black
TFN21 102.0/50.8	2:1	4	4.000	4.03 - 4.13	102.00	102.5 - 105.0	≤ 2.00	≤ 50.8	≥ .053	≥ 1.35		Black

Material POLYOLEFIN, CROSS LINKED	Units: inches	The copyright of this drawing is reserved by HellermannTyton. It is issued on condition that it is not reproduced, copied, or disclosed to a third party, either wholly or in part, without the consent of HellermannTyton.	Drawn	GRW	12/9/2016	Article/Type-No TFN21 SERIES		Scale 5:1	
			Approved	KAC	12/9/2016	Title HEAT SHRINK TUBING, 2:1 SHRINK RATIO, NON-ADHESIVE THIN WALL		Project Number PRP 16-1991	
	HellermannTyton North America Email: corp@htamericas.com Web: www.hellermann.tyton.com					Drawing-No	PRODUCTION : Phase	Format AH	
						16-1991-001-CSU		Sheet 2/3	

SW		Revision level					Revision Record		Changed	Date	Approved	Date
		Drawing	State		Part							
		01.2	Design Release			SEE ECN# 016460		JMC	11/16/2022	JPG	11/16/2022	

Type	Shrink Ratio	Nominal Trade Size	Supplied Diameter (D)				Recovered Diameter (d)		Wall Thickness		Longitudinal Change after Shrinkage	Color
		in	in	Tolerance Range	mm	Tolerance Range	in	mm	in	mm		
TFN21-ST 1.6/0.8	2:1	1/16	0.063	.070 - .087	1.60	1.8 - 2.2	≤ .031	≤ 0.8	≥ .016	≥ 0.42	± 3%	Black, Blue, Green, Red, White, Yellow
TFN21-ST 1.6/0.8	2:1	1/16	0.063	.070 - .087	1.60	1.8 - 2.2	≤ .031	≤ 0.8	≥ .016	≥ 0.42		Clear
TFN21-ST 2.4/1.2	2:1	3/32	0.094	.114 - .130	2.40	2.9 - 3.3	≤ .047	≤ 1.2	≥ .019	≥ 0.48		Black, Blue, Green, Red, White, Yellow
TFN21-ST 2.4/1.2	2:1	3/32	0.094	.114 - .130	2.40	2.9 - 3.3	≤ .047	≤ 1.2	≥ .019	≥ 0.48		Clear
TFN21-ST 3.2/1.6	2:1	1/8	0.125	.133 - .157	3.20	3.4 - 4.0	≤ .063	≤ 1.6	≥ .019	≥ 0.48		Black, Blue, Green, Red, White, Yellow
TFN21-ST 3.2/1.6	2:1	1/8	0.125	.133 - .157	3.20	3.4 - 4.0	≤ .063	≤ 1.6	≥ .019	≥ 0.48		Clear
TFN21-ST 4.8/2.4	2:1	3/16	0.188	.193 - .216	4.80	4.9 - 5.5	≤ .094	≤ 2.4	≥ .019	≥ 0.48		Black, Blue, Green, Red, White, Yellow
TFN21-ST 4.8/2.4	2:1	3/16	0.188	.193 - .216	4.80	4.9 - 5.5	≤ .094	≤ 2.4	≥ .019	≥ 0.48		Clear
TFN21-ST 6.4/3.2	2:1	1/4	0.250	.256 - .279	6.40	6.5 - 7.1	≤ .125	≤ 3.2	≥ .022	≥ 0.56		Black, Blue, Green, Red, White, Yellow
TFN21-ST 6.4/3.2	2:1	1/4	0.250	.256 - .279	6.40	6.5 - 7.1	≤ .125	≤ 3.2	≥ .022	≥ 0.56		Clear
TFN21-ST 9.5/4.8	2:1	3/8	0.375	.405 - .437	9.50	10.3 - 11.1	≤ .188	≤ 4.8	≥ .024	≥ 0.62		Black, Blue, Green, Red, White, Yellow
TFN21-ST 9.5/4.8	2:1	3/8	0.375	.405 - .437	9.50	10.3 - 11.1	≤ .188	≤ 4.8	≥ .024	≥ 0.62		Clear
TFN21-ST 12.7/6.4	2:1	1/2	0.500	.524 - .555	12.70	13.3 - 14.1	≤ .250	≤ 6.4	≥ .024	≥ 0.62		Black, Blue, Green, Red, White, Yellow
TFN21-ST 12.7/6.4	2:1	1/2	0.500	.524 - .555	12.70	13.3 - 14.1	≤ .250	≤ 6.4	≥ .024	≥ 0.62		Clear
TFN21-ST 16.0/8.0	2:1	5/8	0.630	.641 - .673	16.00	16.3 - 17.1	≤ .315	≤ 8.0	≥ 0.27	≥ 0.68		Black
TFN21-ST 19.1/9.5	2:1	3/4	0.750	.791 - .846	19.10	20.1 - 21.5	≤ .375	≤ 9.5	≥ 0.27	≥ 0.68		Black, Blue, Green, Red, White, Yellow
TFN21-ST 19.1/9.5	2:1	3/4	0.750	.791 - .846	19.10	20.1 - 21.5	≤ .375	≤ 9.5	≥ 0.27	≥ 0.68		Clear
TFN21-ST 25.4/12.7	2:1	1	1.000	1.01 - 1.06	25.40	25.7 - 27.0	≤ .50	≤ 12.7	≥ .035	≥ 0.89		Black, Blue, Green, Red, White, Yellow
TFN21-ST 25.4/12.7	2:1	1	1.000	1.01 - 1.06	25.40	25.7 - 27.0	≤ .50	≤ 12.7	≥ .035	≥ 0.89		Clear
TFN21-ST 31.8/16.0	2:1	1-1/4	1.250	1.29 - 1.35	31.80	32.8 - 34.2	≤ .625	≤ 16	≥ .039	≥ 1.00		Black, Blue, Green, Red, White, Yellow
TFN21-ST 31.8/16.0	2:1	1-1/4	1.250	1.29 - 1.35	31.80	32.8 - 34.2	≤ .625	≤ 16	≥ .039	≥ 1.00		Clear
TFN21-ST 38.1/19.1	2:1	1-1/2	1.500	1.59 - 1.71	38.10	40.5 - 43.5	≤ .752	≤ 19.1	≥ .039	≥ 1.00	Black, Blue, Green, Red, White, Yellow	
TFN21-ST 38.1/19.1	2:1	1-1/2	1.500	1.59 - 1.71	38.10	40.5 - 43.5	≤ .752	≤ 19.1	≥ .039	≥ 1.00	Clear	
TFN21-ST 50.8/25.4	2:1	2	2.000	2.01 - 2.13	50.80	51.0 - 54.0	≤ 1.00	≤ 25.4	≥ .043	≥ 1.10	-2 ~ -5%	Black, Blue, Green, Red, White, Yellow
TFN21-ST 50.8/25.4	2:1	2	2.000	2.01 - 2.13	50.80	51.0 - 54.0	≤ 1.00	≤ 25.4	≥ .043	≥ 1.10		Clear
TFN21-ST 76.2/38.1	2:1	3	3.000	3.19 - 3.31	76.20	81.0 - 84.0	≤ 1.50	≤ 38.1	≥ .047	≥ 1.20		Black
TFN21-ST 102.0/50.8	2:1	4	4.000	4.03 - 4.13	102.00	102.5 - 105.0	≤ 2.00	≤ 50.8	≥ .053	≥ 1.35		Black

Material POLYOLEFIN, CROSS LINKED	Units: inches	The copyright of this drawing is reserved by HellermannTyton. It is issued on condition that it is not reproduced, copied, or disclosed to a third party, either wholly or in part, without the consent of HellermannTyton.	Drawn	GRW	12/9/2016	Article/Type-No	TFN21 SERIES		Scale	5:1
			Approved	KAC	12/9/2016	Title	HEAT SHRINK TUBING, 2:1 SHRINK RATIO, NON-ADHESIVE THIN WALL		Project Number PRP 16-1991	
	HellermannTyton North America Email: corp@htamericas.com Web: www.hellermann.tyton.com					Drawing-No	PRODUCTION : Phase	Format	AH	
						16-1991-001-CSU		Sheet	3/3	