

Tubing Selection Guide

PRODUCT			Polyolefin	Fluoropolymer	Elastomer	Operating Temperature °C / [°F]	Min. shrink temperature (°C)	Min. full recovery temperature (°C)	Shrink ratio	
Single Wall	Very flexible	Versafit	•			-55 to 135 [-67 to 275]	70	90	2:1	
		CGPE-105	•			-70 to 105 [-94 to 221]	85	110	2:1	
	Flexible	CGPT	•			-40 to 135 [-40 to 275]	80	120	2:1	
		DCPT	•			-55 to 135 [-67 to 275]	95	120	2:1	
		RNF-100	•			-55 to 135 [-67 to 275]	95	121	2:1	
		RNF-3000	•			-55 to 135 [-67 to 275]	80	120	3:1	
		RP-4800	•			-55 to 135 [-67 to 275]	95	121	4:1	
		Semirigid	CRN	•			-55 to 135 [-67 to 275]	110	135	2:1
			RT-3	•			-55 to 135 [-67 to 275]	110	135	2.5:1
		Dual wall [adhesive-and encapsulant-lined]	Semiflexible	ATUM	•			-55 to 110 [-67 to 230]	80	110
DWP-125	•					-40 to 110 [-40 to 230]	80	125	3:1	
Flexible	HTAT		•			-55 to 125 [-67 to 257]	80	110	4:1	
	PTCM		•			-40 to 85 [-40 to 185]	60	80	6:1	
	RPPM		•			-40 to 85 [-40 to 185]	60	80	4:1	
	TAT-125		•			-55 to 110 [-67 to 230]	95	121	2:1	
	Semirigid		ES1000	•			-40 to 130 [-40 to 266]	110	135	4:1
			ES2000	•			-40 to 130 [-40 to 266]	110	135	4:1
	FL2500		•			-40 to 135 [-40 to 275]	110	135	4:1	
	SCL		•			-55 to 110 [-67 to 230]	125	135	3:1	
SCT	•			-40 to 150 [-40 to 302]	110	135	4:1			
Heavy Duty	BSTS/BSTS-FR	•			-55 to 90 [-67 to 194]	90	121	3:1		
	HF	•			-55 to 90 [-67 to 194]	80	121	3:1		
	HRHF/HRNF/HRSR	•			-55 to 90 [-67 to 194]	80	121	5.6:1		
	RHW	•			-55 to 110 [-67 to 230]	110	125	3:1		
	RMW	•			-55 to 110 [-67 to 230]	110	125	3:1		
	SST/SST-FR	•			-55 to 90 [-67 to 194]	90	121	3:1		
Special Purpose	Elastomers	DR-25		•		-75 to 150 [-103 to 302]	150	175	2:1	
		HRHT								
	Fluoropolymers	NT			•		-55 to 90 [-67 to 194]	90	135	1.8:1
		NT-MIL			•		-70 to 121 [-94 to 250]	90	135	1.8:1
		NTRF			•		-70 to 121 [-94 to 250]	90	135	2:1
		RW-200			•		-40 to 200 [-40 to 392]	100	175	2:1
		RW-200-E			•		-55 to 200 [-67 to 392]	100	175	2:1
		SFR			•		-75 to 180 [-103 to 356]	135	175	1.75:1
		SRFR			•		-75 to 200 [-103 to 392]	135	175	1.5:1
		URHT								
		RNF-150		•			-55 to 150 [-67 to 302]	110	150	2:1
		RT-375		•			-55 to 150 [-67 to 302]	125	150	2:1
	RT555		•			-65 to 200 [-85 to 392]	150	220	2:1	
	Caps	RT-770					-55 to 125 [-67 to 257]	135	150	2:1
		RT-780					-55 to 175 [-67 to 347]	180	200	2:1
		RT-790					-55 to 200 [-67 to 392]	235	250	2:1
		RW-175		•			-55 to 175 [-67 to 347]	155	175	2:1
		TFE and TFE-R		•			-67 to 250 [-89 to 482]	330	340	1.8:1/ 3.2:1
		ES Caps		•			-40 to 105 [-40 to 221]	100	135	4:1
		PD Caps		•			-55 to 110 [-67 to 230]	125	135	3:1
TC Caps			•			-55 to 135 [-67 to 275]	110	135	2.5:1	

*For specific MIL-Spec information for each product, refer to individual product pages or the Tubing Cross-Reference Guide on page 3-8.

**Sizes 9/3 through 70/21 only. †Clear is not flame-retardant.

Tubing Selection Guide (Continued)

Size range (inside diameter as supplied)	Colored	Clear	Flame- retardant	UL 224	CSA	VW-1 (UL/CSA)	MIL Spec*	USP Class VI	ABS	UL D486**	DESCRIPTION
3/64" to 4"	•		•	•	•	•	•				Highly flame-retardant, multi-spec polyolefin
3/64" to 2"	•	•									Brightly colored, general purpose polyolefin
1.6 mm to 38 mm	•	•	•	•	•						General purpose, flame-retardant polyolefin†
3 mm to 38 mm	•		•	•	•						Green and yellow striped polyolefin
3/64" to 5"	•	•	•	•	•		•				High-performance flexible polyolefin†
1.5 mm to 39 mm	•	•	•	•	•		•				3:1 shrink ratio general-purpose polyolefin†
3/4" to 4 1/2"	•		•	•			•				4:1 shrink ratio polyolefin
3/64" to 3/4"	•	•	•	•	•		•				Flame-retardant polyolefin†
.240" to .485"	•		•	•	•						Semirigid polyolefin for terminal insulation
3 mm to 40 mm	•	•	•	•			•				3:1 and 4:1 shrink ratio adhesive-lined polyolefin†
4 mm to 52 mm	•		•	•							
1/8" to 1"	•		•	•	•						3:1 shrink ratio adhesive-lined polyolefin
4 mm to 48 mm	•		•								High-temperature adhesive-lined polyolefin 9 mm
	•										Very high shrink ratio, dual wall, flexible polyolefin tubing
4 mm to 16 mm	•	•									Dual wall, moisture-proof polyolefin
1/8" to 1 1/2"	•	•	•	•			•				2:1 adhesive-lined polyolefin†
.225" to .700"		•		•							Clear high-shrink-ratio adhesive-lined polyolefin
.225" to .700"	•		•	•							Flame-retardant adhesive-lined polyolefin
.300" to .700"	•		•								Fully flame-retardant, adhesive-lined polyolefin
1/8" to 1"	•			•			•				3:1 shrink ratio encapsulant-lined polyolefin
.300" to .700"	•		•								High-temperature adhesive-lined polyolefin
.3" to 4.5"	•	•	•						•		Rugged, general purpose, thick-wall polyolefin†
.4" to 2.7"	•		•						•		Highly flexible, thick-wall polyolefin
.6" to 4"	•		•						•		High-shrink-ratio repair sleeve
9 mm to 180 mm	•									•	Heavy wall adhesive-lined polyolefin
10 mm to 180 mm	•										Medium wall polyolefin
.3" to 4.5"	•		•				•		•		Self-sealing, dual wall polyolefin
1/8" to 3"	•		•				•				Diesel-resistant elastomer
1/8" to 4"	•		•								Flexible general-purpose modified elastomer
1/8" to 4"	•		•				•				Flexible rugged modified elastomer
1/8" to 3"	•		•				•				Very flexible rugged neoprene
1/8" to 2"	•		•				•				High-temperature flexible elastomer
1/8" to 2"	•		•				•				High-temperature flexible elastomer
1/4" to 2"	•		•				•				Very flexible silicone
2.9 mm to 51 mm	•		•	•		•					Very flexible silicone rubber
3/64" to 1"	•		•	•		•	•				High-performance flexible fluoropolymer
3/64" to 1 1/2"	•	•	•	•	•	•	•				Clear high-performance flexible fluoropolymer
1/8" to 2"	•		•	•	•	•	•				Fluid- and chemical-resistant fluoropolymer
3/64" to 1 1/2"	•	•	•	•	•	•	•				High-performance fluoropolymer
0.8 mm to 11.9 mm/		•	•				•				High-temperature PTFE® fluoropolymer resin
2 mm to 32 mm											
1/8" to 2"			•								NBCCS tubing rated to 125°C
1/8" to 2"			•								NBCCS tubing rated to 175°C
1/8" to 2"			•								NBCCS tubing rated to 200°C
1/16" to 1"	•	•						•			Autoclavable semirigid fluoropolymer
.225" to .427"	•	•	•	•							High-ratio, adhesive-lined caps†
1/8" to 1/2"	•			•							Semirigid encapsulant-lined polyolefin caps
1/16" to 1/4"	•		•	•							Semirigid flame-retardant polyolefin caps

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Tubing Selection Guide (Continued)

PRODUCT			Polyolefin	Fluoropolymer	Elastomer	Operating Temperature °C / [°F]		Min. shrink temperature (°C)	Min. full recovery temperature (°C)	Shrink ratio
Special Purpose	Conduit	HCTE				-55 to 200	[-67 to 392]	N/A	N/A	N/A
(Continued)	Kits	RayBlock 85	•			-40 to 85	[-40 to 185]	80	110	4:1
		RayBlock 105	•			-40 to 105	[-40 to 221]	80	110	4:1
		Tubing Kits and Mini-Spools	•			Various; see page 139-140		See page 139-140	See page 139-140	2:1 up to 4:1
	Low Toxicity	XFFR	•			-55 to 105	[-67 to 221]	70	121	3:1
		ZH-100	•			-30 to 105	[-22 to 221]	80	120	2:1
		ZHTM	•			-30 to 105	[-22 to 221]	80	121	2:1
	Edging Matl	Rayrim	•			-55 to 80	[-67 to 176]	120	150	N/A
	Fiber & Fabric	HFT5000				-40 to 125	[-40 to 257]	80	110	2:1
	Braids	Versaflex				-50 to 150	[-58 to 302]	N/A	N/A	N/A

*For specific MIL-Spec information for each product, refer to individual product pages or the Tubing Cross-Reference Guide on page 3-8.

**Sizes 9/3 through 70/21 only. †Clear is not flame-retardant.

Tubing Selection Guide (Continued)

Size range (inside diameter as supplied)	Colored	Clear	Flame- retardant	UL 224	CSA	VW-1 (UL/CSA)	MIL Spec*	USP Class VI	ABS	UL D486**	DESCRIPTION
.187" to 2"	•		•								Modified ETFE, helically convoluted tubing
12 mm to 32 mm	•		•								Heat-shrinkable water blocking system
12 mm to 32 mm	•		•								Heat-shrinkable water blocking system
See page 139-140	•	•	•	•	•	•	•				Smaller packaging options for single wall and adhesive-lined tubing
.4" to 3"	•		•						•		Halogen-free, flame-retardant polyolefin
1/8" to 2"	•		•								Thin-wall, low-fire-hazard polyolefin
3 mm to 40 mm	•		•								Low toxicity, flexible polyolefin
0.8 mm to 4.5 mm	•										Protective self-adhering edging material
12 mm to 80 mm	•										Heat-shrinkable, fabric tubing
3 mm to 50 mm	•										Expandable, braided polyester sleeving

Specification Cross-Reference Guide

Product Type	UL	CSA	AMS-DTL-23053*		MIL-PRF-46846		TE	Page No.
	File	File	Sheet	Class	Type	Class	Specification	
ATUM	E85381**		/4	3			RW-2063 & RK-6024	3-11
BSTS							RW-2017	3-13
BSTS-FR			/15	1 & 2***			RW-2017	3-13
CGPE-105							CGPE-105 SCD	3-15
CGPT	E35586	LR31929					RW-2059	3-17
CRN Type 1 (colors)	E35586	LR31929†	/6	1			RT-360, Type 1	3-19
CRN Type 2 (clear)			/6	2			RT-360, Type 2	3-19
DCPT	E35586	LR31929					RW-2056	3-21
DR-25			/16				RT-1116	3-23
DWP-125	E35586	LR31929					DWP-125 SCD	3-25
ES1000	E85381						RT-1113	3-27
ES2000	E85381						RT-1112	3-29
ES Caps	E85381						RW-3006	3-31
FL2500							FL2500 SCD	3-33
HCTE							RT-1162	3-35
HF			/15	1***			RW-2023	3-37
HFT5000	E199379						RW-2060	3-39
HRHF							RW-2013	3-41
HRNF							RW-2013	3-41
HRSR							RW-2013	3-41
HRHT							HRHT SCD	3-43
HTAT							RW-2052	3-45
NT							RT-510	3-47
NT-MIL			/1	1 & 2			RW-3030	3-49
NTFR							RT-511	3-51
PD Caps	E85381						PD Caps SCD	3-53
PTCM							RK-6768	3-55
RayBlock 85							RW-2101	3-57
RayBlock 105							RW-2102	3-59
Rayrim Edging Material							RK-6182	3-61
RaySpool								3-63
RHW	E91151***						RHW SCD	3-66
RMW							RMW SCD	3-68
RNF-100 Type 1 (colors)	E35586	LR31929	/5	1			RT-350, Type 1	3-70
RNF-100 Type 2 (clear)			/5	2			RT-350, Type 2	3-70
RNF-150	E35586 VW-1		/18	2			RT-370	3-72
RNF-3000	E35586	LR31929					RW-2053	3-74
RP-4800	E35586		/5	1††			RT-1122	3-76
RPPM							RK-6214	3-78
RT-3	E35586	LR31929†					RT-360†††	3-80
RT-375	E35586 VW-1	LR31929 VW-1	/18	2			RT-375	3-82
RT555	E85381						RT-555	3-84
RT-770								3-86
RT-780								3-88
RT-790								3-90
RW-175	E35586 VW-1	LR31929 VW-1	/8				RW-3029	3-92
RW-200			/13				RT-1146	3-94
RW-200-E							RK-6014/1	3-94
SCL	E85381		/4	1			RT-1301	3-96
SCT							SCT SCD	3-98
SFR			/10		II	1	RT-1140	3-100
SRFR	E85381 VW-1						RW-2057	3-102
SST							RW-2011	3-104
SST-FR			/15	1 & 2			RW-2011	3-104
TAT-125 Type 1 (colors)	E85381		/4	2			RW-3032	3-106

Specification Cross-Reference Guide (Continued)

Product Type	UL File	CSA File	AMS-DTL-23053* Sheet	AMS-DTL-23053* Class	MIL-PRF-46846 Type	MIL-PRF-46846 Class	TE Specification	Page No.
TAT-125 Type 2 (clear)							RW-3032	3-106
TC Caps	E85381						TC Caps SCD	3-108
TFE/TFE-R Tubing Kits							RW-2054, RW-2055	3-110
URHT						II	URHT SCD	3-114
Versafit	E35586 VW-1	LR31929 VW-1	/5	1 & 3			RW-3009	3-116
Versaflex							RK-6772	3-118
Versaflex-FR	E306976							3-118
XFFR							RW-2016	3-120
ZH-100							RW-2031	3-122
ZHTM							RW-2058	3-124

*Formerly MIL-I-23053 and MIL-DTL-23053 **Black only, except sizes 3/1 and 4/1. ***Sizes 9/3 through 70/21 only.
 †Black only †† Overexpanded †††With exception to dimensions and longitudinal change.

Tubing Categories

	Type	Product Name		
Single Wall	Very Flexible	Versafit		
	Flexible	CGPE-105 CGPT	DCPT RNF-100	RNF-3000 RP-4800
	Semirigid	CRN	RT-3	
Dual Wall	Semi-flexible	ATUM	DWP-125	HTAT
	Flexible	PTCM	RPPM	TAT-125
	Semirigid	ES1000 ES2000	FL2500 SCL	SCT
Heavy Duty		BSTS/BSTS-FR HF	HRHT HRHF/HRNF/HRSR RMW	RHW SST/SST-FR URHT
Special Purpose	Elastomers	DR-25 DR-25TH NT NT-MIL	NTFR RW-200 RW-200-E	SFR SRFR UPB
	Fluoropolymers	RNF-150 RT-375 RT555	RT-770 RT-780 RT-790	RW-175 RY-780 TFE and TFE-R
	Caps	ES Caps PD Caps	TC Caps	
	Conduit	HCTB	Maulflex	
	Kits	RayBlock 85 RayBlock 105	RaySpool Tubing Kits and Mini-Spools	
	Low toxicity	XFFR	ZH-100	ZHTM
	Edging material	Rayrim		
	Fiber and fabric	HFT5000		
	Braid	Versaflex		