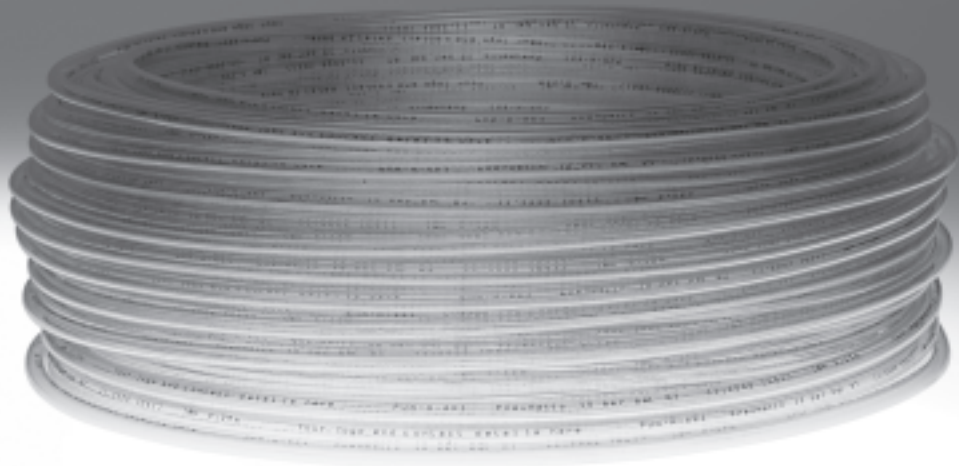



## Plastic tubing, standard O.D., NPT

**FESTO**



## Plastic tubing, standard O.D., NPT

Product range overview

Version	Type	Outside diameter [inch]	Colour									Operating medium	
			Silver	Blue	Black	Yellow	Green	Red	Brown	White	Natural	Compressed air	Vacuum
	<b>PEN</b> Polyethylene	5/32, 3/16, 1/4, 5/16, 3/8, 1/2, 5/8	■	■	■	■	■	■	■	■	■	■	■
	<b>PLN</b> Polyethylene	5/32, 3/16, 1/4, 5/16, 3/8, 1/2, 5/8	■	■	■	■	■	■	■	■	■	■	■
	<b>PUN-H</b> Polyurethane	1/8, 5/32, 3/16, 1/4, 5/16, 3/8, 1/2, 5/8	■	■	■	■	■	■	■	■	■	■	■

# Plastic tubing, standard O.D., NPT

Product range overview

Type	Approved for use in the food industry to 2002/72/EC	FDA approved for use in the food industry	Halogen-free	Contact with electric cables	PWIS-free to FN 942 010	Suitable for use with energy chains	Resistance				Flexibility	Shore hardness	→ Page/Internet
							Chemicals	Microbes	UV radiation	Hydrolysis			
PEN	-	-	■	■	■	■	++	++	++ <sup>1)</sup>	+++	++	D 52	6
PLN	■	-	■	■	■	-	++	++	++ <sup>1)</sup>	+++	+	-	8
PUN-H	■	■	■	■	■	■	+	++	++ <sup>1)</sup>	++	+++	D 52	10

+++ Highly suitable  
++ Suitable

+ Limited suitability (upon request)  
- Unsuitable

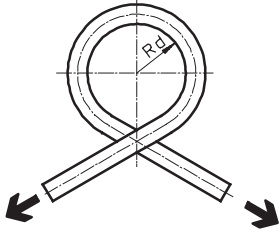
1) Applies to black colour

# Plastic tubing, standard O.D., NPT

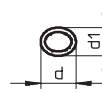
Technical data

## Method of measurement

Bending radius relevant for flow rate  $R_d$



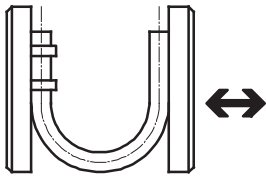
The tubing is bent in the direction of its curvature until a flattening corresponding to 5% of the tubing O.D. occurs.  $R_d$  is then calculated mathematically. The flow rate is not reduced until  $R_d$  is reached.



Cross section flattened by bending the tubing.

$d$  = Non-deformed tubing O.D.  
 $d_1$  = Deformed tubing O.D.

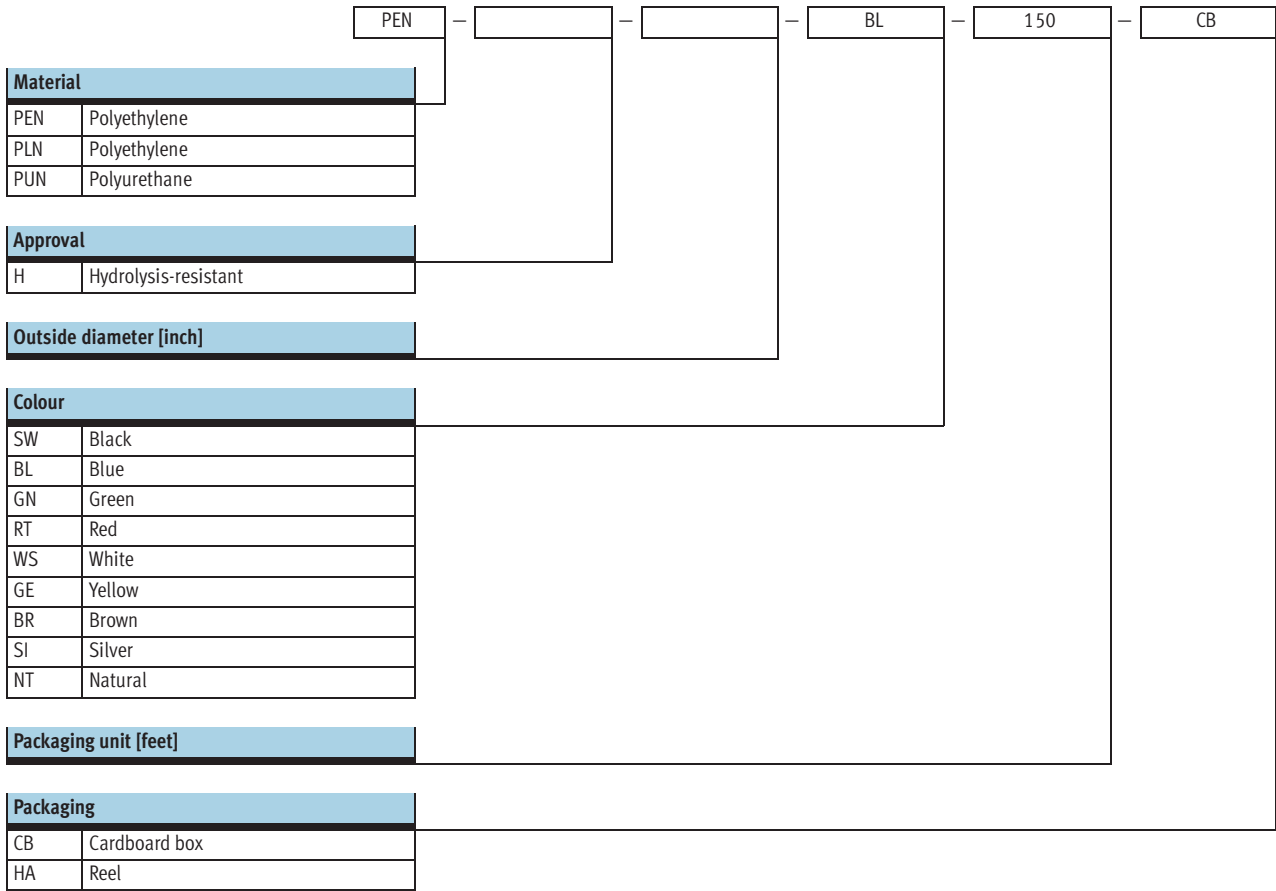
## Minimum bending radius $R_{min}$



The tubing fixed to the base plate is bent until the deformation results in a kink. The measured value is the minimum bending radius  $R_{min}$ . This  $R_{min}$  results in significant reductions in flow rate.

# Plastic tubing, standard O.D., NPT

Type codes





# Plastic tubing PEN, standard O.D., NPT

Technical data

## Plastic tubing PEN

Compressed air tubing made of polyethylene is distinguished by great resistance to chemicals and hydrolysis. It is resistant to most cleaning agents and lubricants.

 - Ambient temperature  
-22 ... +140 °F

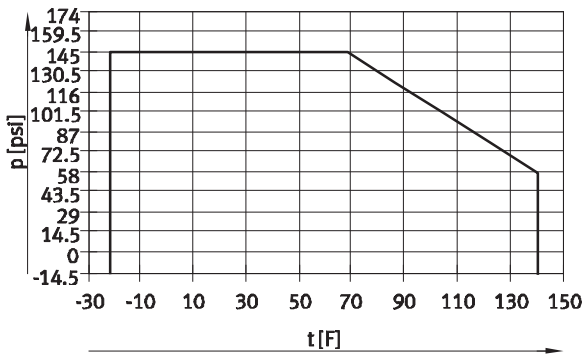
 - Temperature-dependent operating pressure  
-14.4 ... +145 psi

Material:  
PE

Note on materials:  
Free of copper and PTFE  
RoHS-compliant



### Operating pressure p as a function of temperature t



### Possible fittings



Push-in fitting QS-U,  
Quick Star  
→ Internet: qs\*-u



Push-in fitting QB-U,  
Quick Basic  
→ Internet: qb\*-u

### Dimensions and ordering data

Outside diameter [inch]	Min. bending radius [ft]	Bending radius relevant for flow rate [ft]	Weight [oz/ft]	Colour	Part No.	Type	PU <sup>1)</sup> [ft]
5/32	0.032	0.065	0.067	Black	569881	PEN-5/32-SW-150-CB	150
				Blue	569889	PEN-5/32-BL-150-CB	150
3/16	0.039	0.075	0.100	Black	569882	PEN-3/16-SW-150-CB	150
				Blue	569890	PEN-3/16-BL-150-CB	150
1/4	0.041	0.085	0.186	Black	569883	PEN-1/4-SW-150-CB	150
				Blue	569891	PEN-1/4-BL-150-CB	150
5/16	0.073	0.114	0.250	Black	569884	PEN-5/16-SW-150-CB	150
				Blue	569892	PEN-5/16-BL-150-CB	150
3/8	0.088	0.131	0.376	Black	569885	PEN-3/8-SW-150-CB	150
				Blue	569893	PEN-3/8-BL-150-CB	150
1/2	0.108	0.196	0.848	Black	569886	PEN-1/2-SW-150-CB	150
				Blue	569894	PEN-1/2-BL-150-CB	150
5/8	0.196	0.410	1.158	Black	569887	PEN-5/8-SW-150-CB	150
				Blue	569895	PEN-5/8-BL-150-CB	150

1) Packaging unit

# Plastic tubing PEN, standard O.D., NPT

Ordering data – Modular product

Ordering table (minimum order quantity 10,000 ft, rounding-off value 50 ft)										
Size	5/32	3/16	1/4	5/16	3/8	1/2	5/8	Condi- tions	Code	Enter code
<b>[M]</b> Module No.	<b>567448</b>									
Function	Polyethylene tubing, standard O.D., economical								<b>PEN</b>	<b>PEN</b>
Tubing O.D. [inch]	5/32	–	–	–	–	–	–	–	-5/32	
	–	3/16	–	–	–	–	–	–	-3/16	
	–	–	1/4	–	–	–	–	–	-1/4	
	–	–	–	5/16	–	–	–	–	-5/16	
	–	–	–	–	3/8	–	–	–	-3/8	
	–	–	–	–	–	1/2	–	–	-1/2	
	–	–	–	–	–	–	5/8	–	-5/8	
	–	–	–	–	–	–	–	–	–	
Colour	Silver								-SI	
	Blue								-BL	
	Black								-SW	
	Yellow								-GE	
	Green								-GN	
	Red								-RT	
	Brown								-BR	
	White								-WS	
Natural								-NT		
<b>[O]</b> Inscription text (on request)	Standard									
	Customer-specific tubing inscription								<b>[1]</b>	-TXT
<b>[M]</b> Packaging unit [ft]	150									-150
	500									-500
	1,000						–	–		-1000
	1,500				–	–	–	–		-1500
Packaging	Cardboard box								<b>[2]</b>	-CB
	Reel								<b>[3]</b>	-HA

**[1] TXT** Only on request  
**[2] CB** Only with packaging unit 150

**[3] HA** Not with packaging unit 150

Transfer order code


**567448** **PEN** - [ ] - [ ] - [ ] - [ ]


# Plastic tubing PLN, standard O.D., NPT

Technical data

## Plastic tubing PLN

Compressed air tubing made of polyethylene is distinguished by great resistance to chemicals and hydrolysis. It is resistant to most cleaning agents and lubricants.

 Ambient temperature  
-22 ... +176 °F

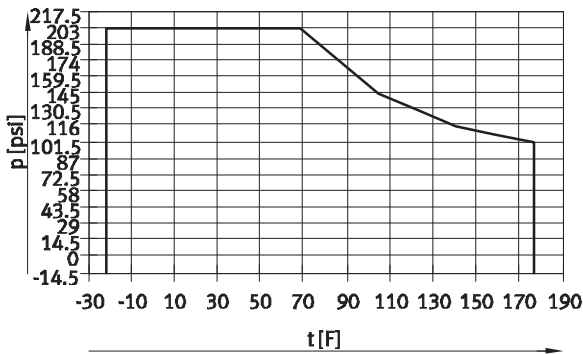
 Temperature-dependent operating pressure  
-14.4 ... +203 psi

Material:  
PE

Note on materials:  
Free of copper and PTFE  
RoHS-compliant



### Operating pressure p as a function of temperature t



### Possible fittings



Push-in fitting QS-U,  
Quick Star  
→ Internet: qs\*-u



Push-in fitting QB-U,  
Quick Basic  
→ Internet: qb\*-u

### Dimensions and ordering data

Outside diameter [inch]	Min. bending radius [ft]	Bending radius relevant for flow rate [ft]	Weight [oz/ft]	Colour	Part No.	Type	PU <sup>1)</sup> [ft]
5/32	0.039	0.082	0.065	Natural	569897	PLN-5/32-NT-150-CB	150
				Black	569905	PLN-5/32-SW-150-CB	150
				Blue	569913	PLN-5/32-BL-150-CB	150
3/16	0.036	0.095	0.107	Natural	569898	PLN-3/16-NT-150-CB	150
				Black	569906	PLN-3/16-SW-150-CB	150
				Blue	569914	PLN-3/16-BL-150-CB	150
1/4	0.039	0.105	0.180	Natural	569899	PLN-1/4-NT-150-CB	150
				Black	569907	PLN-1/4-SW-150-CB	150
				Blue	569915	PLN-1/4-BL-150-CB	150
5/16	0.082	0.164	0.231	Natural	569900	PLN-5/16-NT-150-CB	150
				Black	569908	PLN-5/16-SW-150-CB	150
				Blue	569916	PLN-5/16-BL-150-CB	150
3/8	0.115	0.187	0.403	Natural	569901	PLN-3/8-NT-150-CB	150
				Black	569909	PLN-3/8-SW-150-CB	150
				Blue	569917	PLN-3/8-BL-150-CB	150
1/2	0.138	0.213	0.580	Natural	569902	PLN-1/2-NT-150-CB	150
				Black	569910	PLN-1/2-SW-150-CB	150
				Blue	569918	PLN-1/2-BL-150-CB	150
5/8	0.197	0.311	0.881	Natural	569903	PLN-5/8-NT-150-CB	150
				Black	569911	PLN-5/8-SW-150-CB	150
				Blue	569919	PLN-5/8-BL-150-CB	150

1) Packaging unit



# Plastic tubing PLN, standard O.D., NPT

Ordering data – Modular product

Ordering table (minimum order quantity 10,000 ft, rounding-off value 50 ft)											
Size	5/32	3/16	1/4	5/16	3/8	1/2	5/8	Condi- tions	Code	Enter code	
<b>M</b> Module No.	<b>567449</b>										
Function	Polyethylene tubing, standard O.D., resistant to cleaning agents (approved for use in the food industry)								<b>PLN</b>	PLN	
Tubing O.D. [inch]	5/32	–	–	–	–	–	–		-5/32		
	–	3/16	–	–	–	–	–		-3/16		
	–	–	1/4	–	–	–	–		-1/4		
	–	–	–	5/16	–	–	–		-5/16		
	–	–	–	–	3/8	–	–		-3/8		
	–	–	–	–	–	1/2	–		-1/2		
	–	–	–	–	–	–	5/8		-5/8		
	–	–	–	–	–	–	–				
Colour	Silver									-SI	
	Blue									-BL	
	Black									-SW	
	Yellow									-GE	
	Green									-GN	
	Red									-RT	
	Brown									-BR	
	White									-WS	
	Natural									-NT	
<b>O</b> Inscription text (on request)	Standard										
	Customer-specific tubing inscription							<b>1</b>		-TXT	
<b>M</b> Packaging unit [ft]	150									-150	
	500									-500	
	1,000						–	–		-1000	
	1,500				–	–	–	–		-1500	
	Packaging	Cardboard box							<b>2</b>		-CB
Reel							<b>3</b>		-HA		

**1** TXT Only on request  
**2** CB Only with packaging unit 150

**3** HA Not with packaging unit 150

Transfer order code


567449	PLN	–		–		–		–	
--------	-----	---	--	---	--	---	--	---	--


# Plastic tubing PUN-H, standard O.D., hydrolysis-resistant, NPT

Technical data

**Plastic tubing PUN-H**

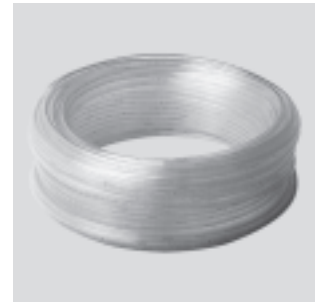
Approved for use in the food industry.

 - Ambient temperature  
-31 ... +145 °F

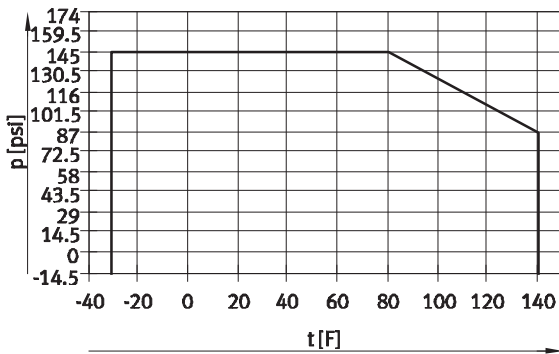
 - Temperature-dependent operating pressure  
-14.4 ... +145 psi

Material:  
TPE-U (PU)

Note on materials:  
Free of copper and PTFE  
RoHS-compliant



**Operating pressure p as a function of temperature t**



**Possible fittings**



Push-in fitting QS-U,  
Quick Star  
→ Internet: qs\*-u



Push-in fitting QB-U,  
Quick Basic  
→ Internet: qb\*-u

Dimensions and ordering data							
Outside diameter	Min. bending radius	Bending radius relevant for flow rate	Weight	Colour	Part No.	Type	PU <sup>1)</sup>
[inch]	[ft]	[ft]	[oz/ft]				[ft]
1/8	0.020	0.039	0.060	Silver	567937	PUN-H-1/8-SI-150-CB	150
				Blue	567945	PUN-H-1/8-BL-150-CB	150
				Black	567953	PUN-H-1/8-SW-150-CB	150
				Natural	567961	PUN-H-1/8-NT-150-CB	150
				Yellow	567969	PUN-H-1/8-GE-150-CB	150
				Green	567977	PUN-H-1/8-GN-150-CB	150
				Red	567985	PUN-H-1/8-RT-150-CB	150
				Brown	567993	PUN-H-1/8-BR-150-CB	150
				White	568001	PUN-H-1/8-WE-150-CB	150
				3/32	0.020	0.052	0.090
Silver	568009	PUN-H-3/32-SI-500-HA	500				
Blue	567946	PUN-H-3/32-BL-150-CB	150				
Blue	568013	PUN-H-3/32-BL-500-HA	500				
Black	567954	PUN-H-3/32-SW-150-CB	150				
Black	568017	PUN-H-3/32-SW-500-HA	500				
Natural	567962	PUN-H-3/32-NT-150-CB	150				
Yellow	567970	PUN-H-3/32-GE-150-CB	150				
Green	567978	PUN-H-3/32-GN-150-CB	150				
Red	567986	PUN-H-3/32-RT-150-CB	150				
Brown	567994	PUN-H-3/32-BR-150-CB	150				
White	568002	PUN-H-3/32-WE-150-CB	150				

1) Packaging unit

# Plastic tubing PUN-H, standard O.D., hydrolysis-resistant, NPT

Technical data

Dimensions and ordering data							
Outside diameter	Min. bending radius	Bending radius relevant for flow rate	Weight	Colour	Part No.	Type	PU <sup>1)</sup>
[inch]	[ft]	[ft]	[oz/ft]				[ft]
3/16	0.025	0.069	0.130	Silver	567939	PUN-H-3/16-SI-150-CB	150
				Blue	567947	PUN-H-3/16-BL-150-CB	150
				Black	567955	PUN-H-3/16-SW-150-CB	150
				Natural	567963	PUN-H-3/16-NT-150-CB	150
				Yellow	567971	PUN-H-3/16-GE-150-CB	150
				Green	567979	PUN-H-3/16-GN-150-CB	150
				Red	567987	PUN-H-3/16-RT-150-CB	150
				Brown	567995	PUN-H-3/16-BR-150-CB	150
				White	568003	PUN-H-3/16-WE-150-CB	150
1/4	0.032	0.085	0.230	Silver	567940	PUN-H-1/4-SI-150-CB	150
				Silver	568010	PUN-H-1/4-SI-500-HA	500
				Blue	567948	PUN-H-1/4-BL-150-CB	150
				Blue	568014	PUN-H-1/4-BL-500-HA	500
				Blue	568021	PUN-H-1/4-BL-1000-HA	1000
				Black	567956	PUN-H-1/4-SW-150-CB	150
				Black	568018	PUN-H-1/4-SW-500-HA	500
				Black	568023	PUN-H-1/4-SW-1000-HA	1000
				Natural	567964	PUN-H-1/4-NT-150-CB	150
				Yellow	567972	PUN-H-1/4-GE-150-CB	150
				Green	567980	PUN-H-1/4-GN-150-CB	150
				Red	567988	PUN-H-1/4-RT-150-CB	150
				Brown	567996	PUN-H-1/4-BR-150-CB	150
				White	568804	PUN-H-1/4-WE-150-CB	150
				5/16	0.065	0.121	0.310
Silver	568011	PUN-H-5/16-SI-500-HA	500				
Blue	567949	PUN-H-5/16-BL-150-CB	150				
Blue	568015	PUN-H-5/16-BL-500-HA	500				
Blue	568022	PUN-H-5/16-BL-1000-HA	1000				
Black	567957	PUN-H-5/16-SW-150-CB	150				
Black	568019	PUN-H-5/16-SW-500-HA	500				
Black	568024	PUN-H-5/16-SW-1000-HA	1000				
Natural	567965	PUN-H-5/16-NT-150-CB	150				
Yellow	567973	PUN-H-5/16-GE-150-CB	150				
Green	567981	PUN-H-5/16-GN-150-CB	150				
Red	567989	PUN-H-5/16-RT-150-CB	150				
Brown	567997	PUN-H-5/16-BR-150-CB	150				
White	568005	PUN-H-5/16-WE-150-CB	150				

1) Packaging unit

## Plastic tubing PUN-H, standard O.D., hydrolysis-resistant, NPT

Technical data

Dimensions and ordering data							
Outside diameter	Min. bending radius	Bending radius relevant for flow rate	Weight	Colour	Part No.	Type	PU <sup>1)</sup>
[inch]	[ft]	[ft]	[oz/ft]				[ft]
3/8	0.081	0.171	0.480	Silver	567942	PUN-H-3/8-SI-150-CB	150
				Silver	568012	PUN-H-3/8-SI-500-HA	500
				Blue	567950	PUN-H-3/8-BL-150-CB	150
				Blue	568016	PUN-H-3/8-BL-500-HA	500
				Black	567958	PUN-H-3/8-SW-150-CB	150
				Black	568020	PUN-H-3/8-SW-500-HA	500
				Natural	567966	PUN-H-3/8-NT-150-CB	150
				Yellow	567974	PUN-H-3/8-GE-150-CB	150
				Green	567982	PUN-H-3/8-GN-150-CB	150
				Red	567990	PUN-H-3/8-RT-150-CB	150
				Brown	567998	PUN-H-3/8-BR-150-CB	150
				White	568006	PUN-H-3/8-WE-150-CB	150
				1/2	0.075	0.204	0.880
Blue	567951	PUN-H-1/2-BL-150-CB	150				
Black	567959	PUN-H-1/2-SW-150-CB	150				
Natural	567967	PUN-H-1/2-NT-150-CB	150				
Yellow	567975	PUN-H-1/2-GE-150-CB	150				
Green	567983	PUN-H-1/2-GN-150-CB	150				
Red	567991	PUN-H-1/2-RT-150-CB	150				
Brown	567999	PUN-H-1/2-BR-150-CB	150				
White	568007	PUN-H-1/2-WE-150-CB	150				
5/8	0.125	0.288	1.380				
				Blue	567952	PUN-H-5/8-BL-150-CB	150
				Black	567960	PUN-H-5/8-SW-150-CB	150
				Natural	567968	PUN-H-5/8-NT-150-CB	150
				Yellow	567976	PUN-H-5/8-GE-150-CB	150
				Green	567984	PUN-H-5/8-GN-150-CB	150
				Red	567992	PUN-H-5/8-RT-150-CB	150
				Brown	568000	PUN-H-5/8-BR-150-CB	150
				White	568008	PUN-H-5/8-WE-150-CB	150

1) Packaging unit

# Plastic tubing PUN, standard O.D., NPT

**FESTO**

Ordering data – Modular product

Ordering table (minimum order quantity 10,000 ft, rounding-off value 50 ft)											
Size	1/8	5/32	3/16	1/4	5/16	3/8	1/2	5/8	Condi- tions	Code	Enter code
<b>[M]</b> Module No.	<b>567446</b>										
Function	Polyurethane tubing, standard O.D.									<b>PUN</b>	PUN
Alternative material characteristic	Hydrolysis-resistant									<b>-H</b>	
<b>[M]</b> Tubing O.D. [inch]	1/8	5/32	3/16	1/4	5/16	3/8	1/2	5/8			
	–	–	–	–	–	–	–	–		<b>-1/8</b>	
	–	–	–	–	–	–	–	–		<b>-5/32</b>	
	–	–	–	–	–	–	–	–		<b>-3/16</b>	
	–	–	–	–	–	–	–	–		<b>-1/4</b>	
	–	–	–	–	–	–	–	–		<b>-5/16</b>	
	–	–	–	–	–	–	–	–		<b>-3/8</b>	
	–	–	–	–	–	–	–	–		<b>-1/2</b>	
	–	–	–	–	–	–	–	–		<b>-5/8</b>	
Colour	Silver									<b>-SI</b>	
	Blue									<b>-BL</b>	
	Black									<b>-SW</b>	
	Yellow									<b>-GE</b>	
	Green									<b>-GN</b>	
	Red									<b>-RT</b>	
	Brown									<b>-BR</b>	
	White									<b>-WS</b>	
	Natural									<b>[4]</b> <b>-NT</b>	
<b>[O]</b> Inscription text (on request)	Standard										
	Customer-specific tubing inscription									<b>[1]</b>	<b>-TXT</b>
<b>[M]</b> Packaging unit [ft]	150										<b>-150</b>
	500										<b>-500</b>
	1,000									–	<b>-1000</b>
	1,500									–	<b>-1500</b>
Packaging	Cardboard box									<b>[2]</b>	<b>-CB</b>
	Reel									<b>[3]</b>	<b>-HA</b>

**[1] TXT** Only on request  
**[2] CB** Only with packaging unit 150

**[3] HA** Not with packaging unit 150  
**[4] NT** Only with alternative material characteristic H

Transfer order code

567446	PUN	–		–		–		–		–	
--------	-----	---	--	---	--	---	--	---	--	---	--