

# Polyurethane tubing



## US98A, UE95A Series



### Product feature

1. Plastic polyurethane material conforms to the ROHS environment protection requirement.
2. High elasticity: small bend radius enables PU tubing to pass through the tight space.
3. Anti-knot: better anti-knot effect than other plastic tubing.
4. Excellent flexibility: it can bear repeated expansion.
5. Anti-abrasion: long working life and suitable for the environment in which it is easy to be worn.
6. Low permeability of gas: relieve the problems of leakage and pollution.
7. Good anti-solubility: no solvent leaks, therefore it will not pollute the environment.
8. Low compression: maintain excellent physical character.
9. Wide resistance: it has certain resistance to chemicals, water, fuel, oil and bacterium.

### Specification(Standard pressure type)

Type [Note1]	Tubing OD (mm)	Tubing ID (mm)	Wall Thickness (mm)	Package Length(m)	Working Pressure at 23°C(MPa)[Note2]	Burst pressure at 23°C(MPa)	Bend radius (mm)	Weight per 100M(kg)	Temperature (°C)
US98A032020□□	3.2	2.0	0.60	100/200	1.0	3.0	8	0.60	-20~70
US98A040025□□	4.0	2.5	0.75	100/200	1.0	3.0	10	0.94	
US98A060040□□	6.0	4.0	1.00	100/200	1.0	3.0	15	1.93	
US98A080050□□	8.0	5.0	1.50	100	1.0	3.0	20	3.66	
US98A100065□□	10.0	6.5	1.75	100	1.0	3.0	25	5.44	
US98A120080□□	12.0	8.0	2.00	100	1.0	3.0	35	7.56	
US98A160110□□	16.0	11.0	2.50	100	1.0	3.0	80	10.03	
UE95A032020□□	3.2	2.0	0.60	20/100/200	1.0	2.5	8	0.60	-40~70
UE95A040025□□	4.0	2.5	0.75	20/100/200	1.0	2.5	8	0.94	
UE95A060040□□	6.0	4.0	1.00	20/100/200	1.0	2.5	12	1.91	
UE95A080050□□	8.0	5.0	1.50	20/100	1.0	2.5	17	3.58	
UE95A100065□□	10.0	6.5	1.75	20/100	1.0	2.5	20	5.32	
UE95A120080□□	12.0	8.0	2.00	20/100	1.0	2.5	30	7.27	

[Note1] The first square of "□□" in the type column is for ordering code "unit" and the second is for "color".

[Note2] Working pressure:3 to 1 safety factor.

### Specification(Lower pressure type)

Type [Note1]	Tubing OD (mm)	Tubing ID (mm)	Wall Thickness (mm)	Package Length(m)	Working Pressure at 23°C(MPa)[Note2]	Burst pressure at 23°C(MPa)	Bend radius (mm)	Weight per 100M(kg)	Temperature (°C)
US98A080055□□	8.0	5.5	1.25	100	0.8	2.0	20	3.25	-20~70
US98A080060□□	8.0	6.0	1.00	100	0.4	1.5	25	2.70	
US98A100080□□	10.0	8.0	1.00	100	0.4	1.5	40	3.47	
US98A120100□□	12.0	10.0	1.00	100	0.4	1.5	60	4.24	
US98A160120□□	16.0	12.0	2.00	100	0.4	2.0	80	8.32	
UE95A080055□□	8.0	5.5	1.25	20/100	0.8	1.5	17	3.18	-40~70

[Note1] The first square of "□□" in the type column is for ordering code "unit" and the second is for "color".

[Note2] Working pressure:3 to 1 safety factor.

### Ordering code

US98A 060 040 100M BU					
① Model	② Tubing OD	③ Tubing ID	④ Material length	⑤ Standard color [Note1]	
US98A: Ester Base, Shore A98±2	032 : Φ3.2mm 040 : Φ4.0mm 060 : Φ6.0mm	020 : Φ2.0mm 025 : Φ2.5mm 040 : Φ4.0mm	065 : Φ6.5mm 080 : Φ8.0mm 100 : Φ10.0mm 110 : Φ11.0mm 120 : Φ12.0mm	100M : 100 m/coil 200M : 200 m/coil	BU: Blue BK: Black GE: Orange C: Clear WH: White CB: Clear Blue R: Red Y: Yellow GA: Gray GN: Green BR: Brown CR: Clear Red CG: Clear Green CY: Clear Yellow CE: Clear Orange
	080 : Φ8.0mm 100 : Φ10.0mm 120 : Φ12.0mm 160 : Φ16.0mm	050 : Φ5.0mm 055 : Φ5.5mm 060 : Φ6.0mm		100M : 100 m/coil	
UE95A: Ether Base, Shore A95±2	032 : Φ3.2mm 040 : Φ4.0mm 060 : Φ6.0mm	020 : Φ2.0mm 025 : Φ2.5mm	055 : Φ5.5mm 065 : Φ6.5mm 080 : Φ8.0mm	20M : 20 m/coil 100M : 100 m/coil 200M : 200 m/coil	
	080 : Φ8.0mm 100 : Φ10.0mm 120 : Φ12.0mm	040 : Φ4.0mm 050 : Φ5.0mm		20M : 20 m/coil 100M : 100 m/coil	

[Note1] Lower pressure type have nine standard colors: Blue\ Black\ Orange\ Clear\ White\ Clear Blue\ Red\ Yellow\ Gray.



# Polyurethane tubing



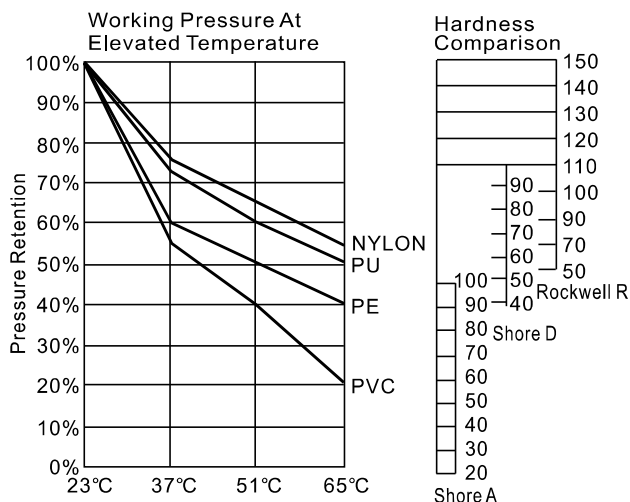
## UCS Series



### Product feature

1. Plastic polyurethane material conforms to the ROHS environment protection requirement.
2. High elasticity: small bend radius enables PU tubing to pass through the tight space.
3. Anti-knot: better anti-knot effect than other plastic tubing.
4. Excellent flexibility: it can bear repeated expansion.
5. Anti-abrasion: long working life and suitable for the environment in which it is easy to be worn.
6. Low permeability of gas: relieve the problems of leakage and pollution.
7. Good anti-solubility: no solvent leaks, therefore it will not pollute the environment.
8. Low compression: maintain excellent physical character.
9. Wide resistance: it has certain resistance to chemicals, water, fuel, oil and bacterium.

### Technical chart



### Specification(Standard pressure type)

Type [Note1]	Tubing OD(mm)	Tubing ID(mm)	Working Pressure at 23°C(MPa)[Note2]	Burst pressure at 23°C(MPa)	Bend radius(mm)	Length(m) [Note3]	Temp. (°C)
UCS060040□030□□	6.0	4.0	1.0	3.0	38	3	-20~70
UCS060040□060□□	6.0	4.0	1.0	3.0	38	6	
UCS060040□090□□	6.0	4.0	1.0	3.0	38	9	
UCS060040□120□□	6.0	4.0	1.0	3.0	38	12	
UCS060040□150□□	6.0	4.0	1.0	3.0	38	15	
UCS080050□060□□	8.0	5.0	1.0	3.0	38	6	
UCS080050□090□□	8.0	5.0	1.0	3.0	38	9	
UCS080050□120□□	8.0	5.0	1.0	3.0	38	12	
UCS080050□150□□	8.0	5.0	1.0	3.0	38	15	
UCS100065□060□□	10.0	6.5	1.0	3.0	50	6	
UCS100065□090□□	10.0	6.5	1.0	3.0	50	9	
UCS100065□120□□	10.0	6.5	1.0	3.0	50	12	
UCS100065□150□□	10.0	6.5	1.0	3.0	50	15	
UCS120080□060□□	12.0	8.0	1.0	3.0	60	6	
UCS120080□090□□	12.0	8.0	1.0	3.0	60	9	
UCS120080□120□□	12.0	8.0	1.0	3.0	60	12	
UCS120080□150□□	12.0	8.0	1.0	3.0	60	15	

### Specification(Lower pressure type)

Type [Note1]	Tubing OD(mm)	Tubing ID(mm)	Working Pressure at 23°C(MPa)[Note2]	Burst pressure at 23°C(MPa)	Bend radius(mm)	Length(m) [Note3]	Temp. (°C)
UCS080055□060□□	8.0	5.5	0.8	2.0	38	6	-20~70
UCS080055□090□□	8.0	5.5	0.8	2.0	38	9	
UCS080055□120□□	8.0	5.5	0.8	2.0	38	12	
UCS080055□150□□	8.0	5.5	0.8	2.0	38	15	

[Note1] "□" in the type column is for "color", and "□□" is for "coupling type" and "coupling mode".

[Note2] Working pressure: 3 to 1 safety factor.

[Note3] Material length: length of operating status=(0.8~0.9)xMaterial length.

### Ordering code

UCS 080 050 BU 090M A 1

① Model	② Tubing OD	③ Tubing ID	④ Standard color [Note1]	⑤ Material length	⑥ Coupling type	⑦ Coupling form
UCS: Ester Base	060 : Φ6.0mm	040 : Φ4.0mm	BU: Blue BK: Black GE: Orange C: Clear WH: White CB: Clear Blue R: Red Y: Yellow GN: Green BR: Brown CR: Clear Red CG: Clear Green CY: Clear Yellow CE: Clear Orange	030M : 3m	A: one end is 30cm and the other end is 10cm	1: Without coupling
	080 : Φ8.0mm	050 : Φ5.0mm		060M : 6m	B: Both of the tubings of the couplings are 10cm	2: With female-male coupling
	100 : Φ10.0mm	055 : Φ5.5mm		090M : 9m	C: Both of the tubings of the couplings are 0cm	3: With male-male coupling
	120 : Φ12.0mm	065 : Φ6.5mm		120M : 12m		
		080 : Φ8.0mm		150M : 15m		

[Note1] Lower pressure type has nine standard colors: Blue\ Black\ Orange\ Clear\ White\ Clear Blue\ Red\ Yellow\ Gray.

### Pipe end coupling

Name	Male quick coupling	Female quick coupling	Male quick coupling	Female quick coupling	Male quick coupling	Female quick coupling	Male quick coupling	Female quick coupling
Ordering code	GX-400-10PP	GX-230-10SP	GX-400-20PP	GX-230-20SP	GX-400-30PP	GX-230-30SP	GX-400-40PP	GX-230-40SP
Photo								
Type	Φ6×Φ4 quick coupling		Φ8×Φ5 quick coupling		Φ10×Φ6.5 quick coupling		Φ12×Φ8 quick coupling	



# Nylon tubing

## PA12、PA6 Series



### Product feature

1. PA12、PA6 Nylon tubing has excellence capability to be used high temperature conditions widely.
2. Many kinds of colors to be chosen.
3. Steady size, Little osmotic rate.
4. Be used widely for it's aging resistant, good anti-oil, and high temperature resistant capability.

### Specification

Type [Note1]	Tubing OD (mm)	Tubing ID (mm)	Wall Thickness (mm)	Package Length(m)	Working Pressure at 23°C(MPa) [Note2]	Burst pressure at 23°C(MPa)	Bend radius (mm)	Weight per 100M(kg)	Temperature (°C)
PA6040025□□	4.0	2.5	0.75	200	3.5	11.0	30	0.90	-10~70
PA6060040□□	6.0	4.0	1.00	100	3.0	10.0	45	1.80	
PA6080060□□	8.0	6.0	1.00	100	2.0	7.0	65	2.50	
PA6100075□□	10.0	7.5	1.25	100	2.0	7.0	75	3.90	
PA6120090□□	12.0	9.0	1.50	100	2.0	7.0	100	5.70	
PA12040025□□	4.0	2.5	0.75	200	2.5	7.5	25	0.80	-40~70
PA12060040□□	6.0	4.0	1.00	100	2.0	7.0	35	1.60	
PA12080060□□	8.0	6.0	1.00	100	1.5	5.0	55	2.30	
PA12100075□□	10.0	7.5	1.25	100	1.5	5.0	75	3.50	
PA12120090□□	12.0	9.0	1.50	100	1.5	5.0	75	5.10	

[Note1] The first square of "□" in the type column is for ordering code "unit" and the second is for "color".

[Note2] Working pressure:3 to 1 safety factor.

### Relationship of operation pressure and temperature

Temperature	PA6 the percentage of work pressure reached at different temperatures					PA12 the percentage of work pressure reached at different temperatures				
	20°C	40°C	60°C	80°C	100°C	20°C	30°C	50°C	60°C	80°C
Percentage	100%	74%	57%	47%	40%	100%	83%	75%	64%	47%

### Ordering code

PA12 060 040 100M BU				
① Model	② Tubing OD	③ Tubing ID	④ Material length	⑤ Standard color
PA6 : Nylon 6 PA12 : Nylon 12	040 : Φ4.0mm 060 : Φ6.0mm 080 : Φ8.0mm 100 : Φ10.0mm 120 : Φ12.0mm	025 : Φ2.5mm 040 : Φ4.0mm 060 : Φ6.0mm 075 : Φ7.5mm 090 : Φ9.0mm	200M : 200 m/coil(4X2.5) 100M : 100 m/coil(Others)	BU : Blue BK : Black GE : Orange N : True color WH : White GN : Green R : Red Y : Yellow

# Flame resistant tubing



## UN54D Series

### Product feature

1. Monolayer tubing with flame resistant.
2. Excel in elasticity: can pass compactness space with lesser bend radius.
3. Excellent water-resistant and flexibility.
4. Super doughy wearable and higher intensity of stretch.



### Specification

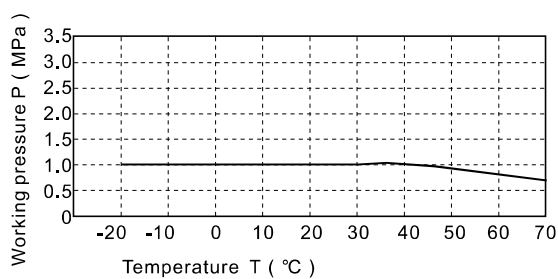
Type [Note1]	Tubing OD (mm)	Tubing ID (mm)	Wall Thickness (mm)	Package Length(m)	Working Pressure at 23°C(MPa)	Burst pressure at 23°C	Bend radius (mm)	Weight per 100M(kg)	Temperature (°C)
UN54D□060040□□	6.0	4.0	1.00	100	1.0	4.0	12	1.93	-20~70
UN54D□080050□□	8.0	5.0	1.50	100	1.0	4.0	18	3.66	
UN54D□100065□□	10.0	6.5	1.75	100	1.0	4.0	20	5.44	
UN54D□120080□□	12.0	8.0	2.00	100	1.0	4.0	20	7.56	

[Note1] "□□" in the type column is for "color"

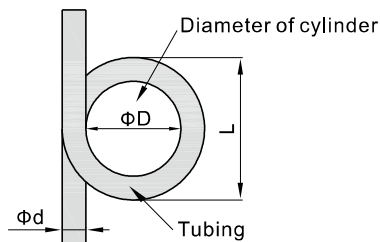
### Ordering code

UN54D 120 080 100M Y				
① Model	② Tubing OD	③ Tubing ID	④ Material length	⑤ Standard color
UN54D : Flame resistant tubing54D±3	060 : Φ6.0mm 080 : Φ8.0mm 100 : Φ10.0mm 120 : Φ12.0mm	040 : Φ4.0mm 050 : Φ5.0mm 065 : Φ6.5mm 080 : Φ8.0mm	100M : 100 m/coil	BU: Blue BK: Black GN: Green WH: White R: Red Y: Yellow

### Relationship of operation pressure and temperature



### Mini bend radius



The least bend radius ( JIS method )

JIS method ( Base on JIS B8381 standard )

When the tubing circle the cylinder tightly and the distortion rate is 25%, the cylinder radius is the least bend radius.

Testing condition : 20°C , 65%RH

$$N = \{1 - (L - D) / 2d\} \times 100$$

N=Distortion rate ( % ) , less than 25% of standard value.

d=Tubing diameter ( mm )

L=Measure value ( mm )

D=Diameter of cylinder ( mm )

