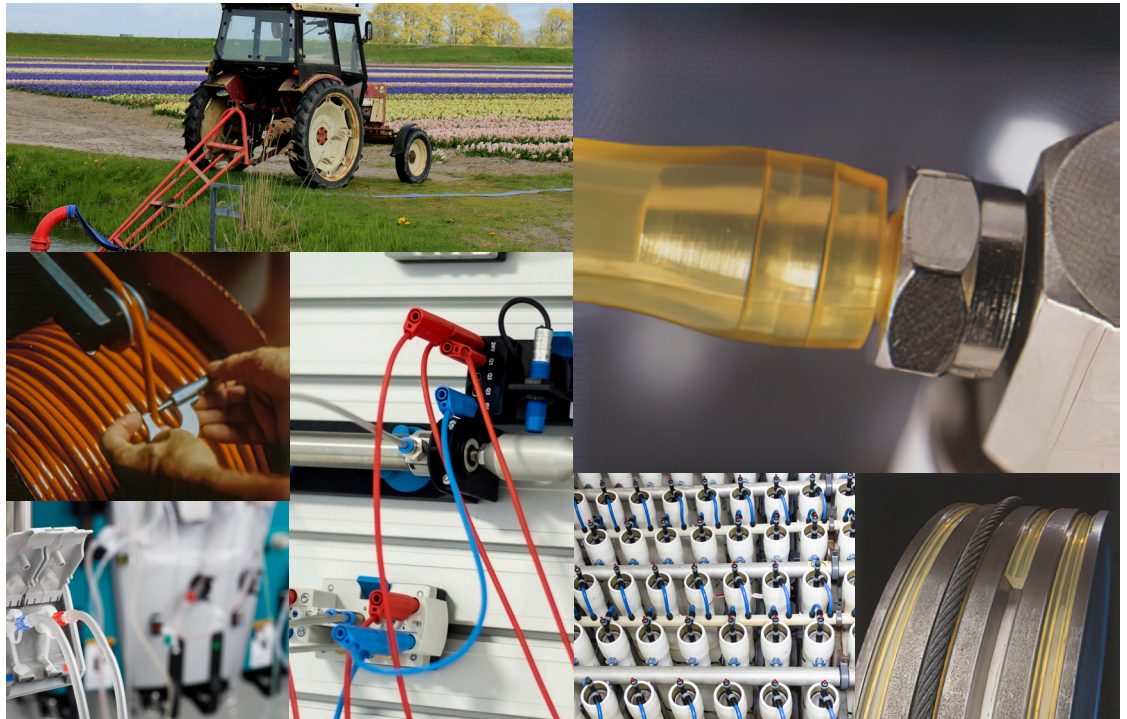


## Coretec™ Urethane Tubing, Cord & Profiles Application Guide



### SWM Superior Performance Coretec™ Urethane Tubing, Cords & Profiles

Why do design engineers around the world specify urethane tubing, cord and profiles instead of vinyl? The same properties that make SWM Argotec™ Thermoplastic Polyurethane (TPU) film and sheet perform so well versus vinyl make our Coretec™ TPU tubing, cord and profiles just as successful in the most demanding, “can’t fail” applications. Benefits of Coretec products include:

- Applications can be heat sealed, fabricated & bonded by all conventional methods for processing polyurethane
- Consistently superior performance characteristics
- Contains no PVC, halogens or phthalates
- No plasticizers to migrate & cause embrittlement

Coretec urethane tube and profiles exhibit strength, durability and chemical resistance that are compatible with a wide range of applications such as:

- Aerospace & automotive
- Agriculture & food processing
- Consumer products
- Electronics
- Industrial pneumatics
- Instrumentation
- Medical
- Process & water filtration

# Coretec Urethane Tubing, Cord & Profiles

## Features & Benefits

As a class of materials, polyurethanes occupy a unique position among polymers, sharing the best properties of rubbers and plastics, but without their inherent weaknesses.

They exhibit the elongation and recovery characteristics of rubbers and the chemical resistance properties associated with plastic, plus:

- Excellent flex life & kink resistance
- Exceptional burst strength
- Exceptional chemical resistance
- Outstanding temperature resistance
- Outstanding toughness
- Superb elastic recovery
- Unmatched abrasion resistance

## Applications of the Urethane Tubing, Cord & Profiles

Coretec urethane products are the choice of design engineers for many diverse applications:



### Aerospace & Automotive

Used in applications with exceptional chemical resistance particularly to fuel, oil & grease.



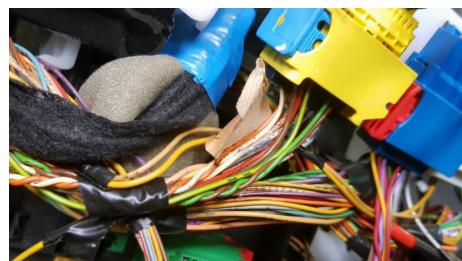
### Agriculture & Food Processing

Solutions, including bulk hose and custom assemblies, tubing for irrigation & protection for equipment.



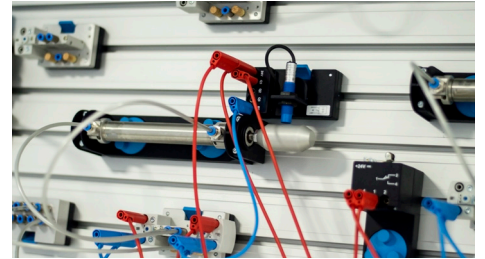
### Consumer Products

Applications that require outstanding tear strength, twice that of vinyl.



### Electronics

Materials withstand continuous exposure to high temperatures without deterioration.



### Industrial Pneumatics

Working pressures for Coretec tubing are roughly twice that of vinyl, an important factor for pneumatic systems.



### Instrumentation

Available in multiple material options & can withstand millions of flexes without significant loss of properties.



### Medical

Can be used in a variety medical devices such as capillary tubing in chromatography units.



### Process & Water Filtration

Permits use in demanding applications carrying slurries, pastes & other erosive substances.



# Typical Coretec Urethane Tubing, Cord & Profiles Properties

## Two grades of Coretec urethane tubing fulfill most uses

### Coretec SS-1485

An aromatic polyester urethane tubing with excellent physical properties and resistance to fuels, chemicals and high temperatures.

### Coretec ST-1880

A UV-stabilized aromatic polyether TPU with superb low-temperature characteristics and excellent hydrolytic stability.

### Coretec Urethane Tubing

Also available in FDA, NSF and USP-VI grades, as well as fire-retardant grades.

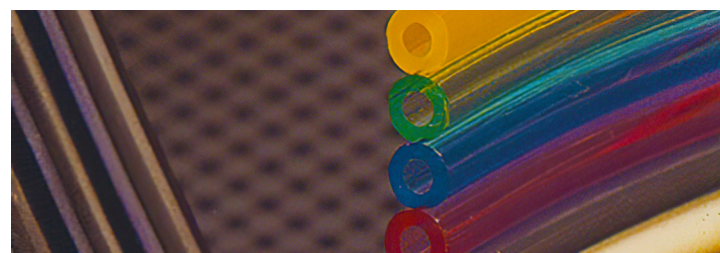
Sizes			Coretec SS-1485			Coretec ST-1850		
ID in (mm)	OD in (mm)	Wall in (mm)	Working Pressure lbf/in <sup>2</sup> (KPa)	Burst Pressure lbf/in <sup>2</sup> (KPa)	Kink Angle	Working Pressure lbf/in <sup>2</sup> (KPa)	Burst Pressure lbf/in <sup>2</sup> (KPa)	Kink Angle
1/16" (1.59)	1/8" (3.18)	1/32" (0.79)	120 (827)	550 (3792)	No Kink	120 (827)	330 (2275)	40°
1/8" (3.18)	1/4" (6.35)	1/16" (1.59)	95 (655)	300 (2068)	66°	100 (689)	330 (2275)	65°
3/16" (4.76)	1/4" (6.35)	1/32" (0.79)	40 (276)	135 (931)	98°	50 (345)	140 (965)	80°
3/16" (4.76)	5/16" (7.94)	1/16" (1.59)	70 (483)	240 (1655)	76°	80 (552)	220 (1517)	65°
1/4" (6.35)	5/16" (7.94)	1/32" (0.79)	30 (207)	100 (689)	95°	35 (241)	90 (621)	90°
1/4" (6.35)	3/8" (9.25)	1/16" (1.59)	50 (345)	140 (965)	85°	65 (448)	180 (1241)	85°
1/4" (6.35)	1/2" (12.7)	1/8" (3.18)	87 (600)	285 (1965)	60°	100 (689)	300 (2068)	70°
3/8" (9.25)	1/2" (12.7)	1/16" (1.59)	36 (248)	100 (689)	89°	45 (310)	130 (896)	85°
3/8" (9.25)	5/8" (15.9)	1/8" (3.18)	58 (400)	180 (1241)	76°	70 (483)	190 (1310)	75°
1/2" (12.7)	11/16" (17.5)	3/32" (2.38)	38 (262)	105 (742)	88°	40 (276)	90 (621)	90°
5/8" (15.9)	7/8" (22.2)	1/8" (3.18)	42 (290)	145 (1000)	76°	50 (345)	100 (689)	80°

## Pluro-Tubing, Cord & Profile

### Pluro-Tubing

Pluro-tubing is a popular SWM specialty. It consists of two or more tubes bonded into a single, multiple tube unit. Any combination of diameter, wall thickness and color may be selected. Colors may be varied for coding purposes.

Typical Pluro-tubing applications include process controllers incorporating a three-tube pneumatic harness and dental equipment used to carry compressed air and water. In addition, Pluro-tubing can reduce assembly time by eliminating the need to bundle and tie individual tubes together.



### Cord & Profile

SWM also extrudes polyurethane cord and custom profiles. Standard cord is polyester urethane, natural in color and comes in diameters from 1/16" (1.59mm) to 1/2" (12.7mm). Other colors, sizes or compounds are available upon request.



# Coretec Tubing, Cord & Profiles

SWM recognizes the value of providing customized solutions to our partners. We build relationships with both our customers and our suppliers to ensure that we offer the best quality and service. We stay current on high-performance material issues to aid in product selection. We offer same day shipments, drop shipments and stocking agreements, as well as product customization per application. We strive to maintain high quality and achieve customer satisfaction with every order.

## Our Facilities



SWM locations shown  
Gilberdyke, UK (top),  
Middletown, DE, USA (middle)  
Richland, PA, USA (bottom)

SWM is focused on advancing advanced materials and technologies in our ISO 9001, ISO 14001, ISO 50001 and OHSAS 18001 certified facilities. Our diverse product lines are recognized worldwide for their superior performance in a variety of applications. For more than 70 years, SWM has served its customers through a wide global manufacturing network with diverse processing capabilities developing solutions tailored to meet our customers unique requirements.



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## About SWM

SWM is a leading global performance materials company. We use natural fibers, resins, and polymers to provide essential solutions that enhance product performance and help our customers win in a variety of industries and applications. For further information, please visit our web site at [www.swmintl.com](http://www.swmintl.com).

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