



Pharm-A-Clear **Silicone**

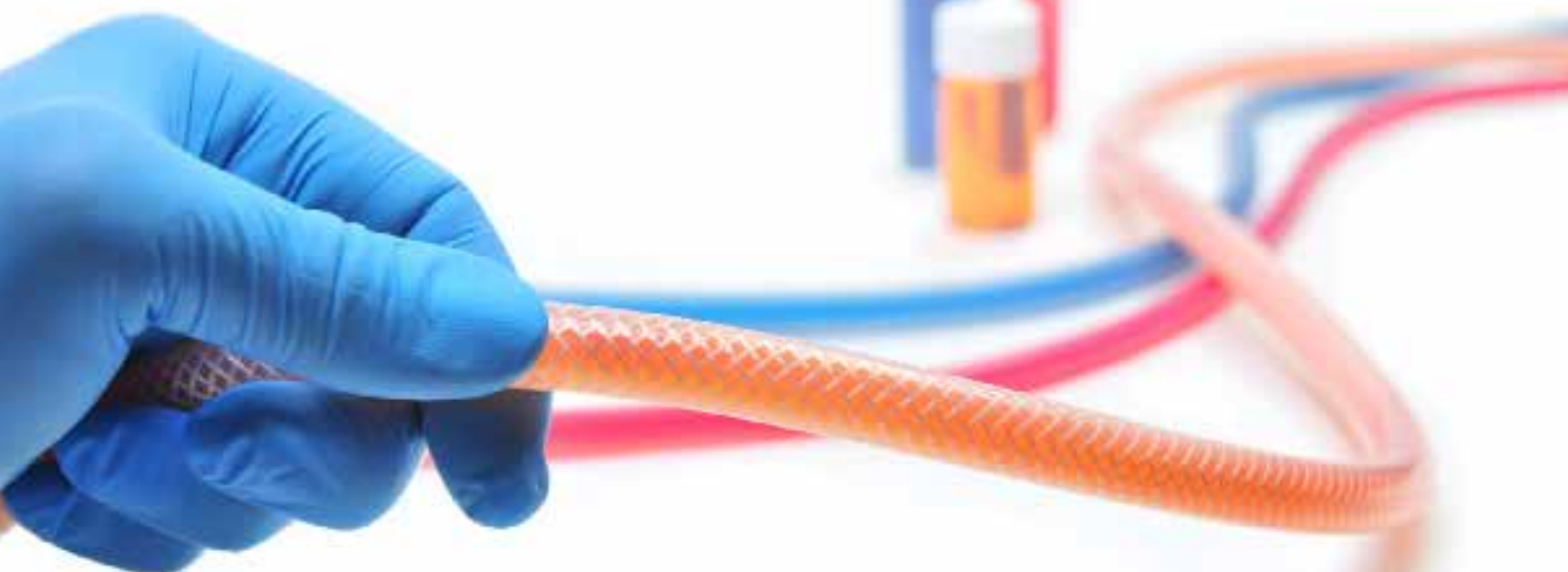
High-Performance Platinum-Cured Tubing

Bio-Compatible

Ultra-Low Extractables

Non-Pyrogenic

Non-Hemolic



Pharm-A-Clear
Silicone

TBL Plastics, LLC
PO Box 634
Andover, New Jersey 07821

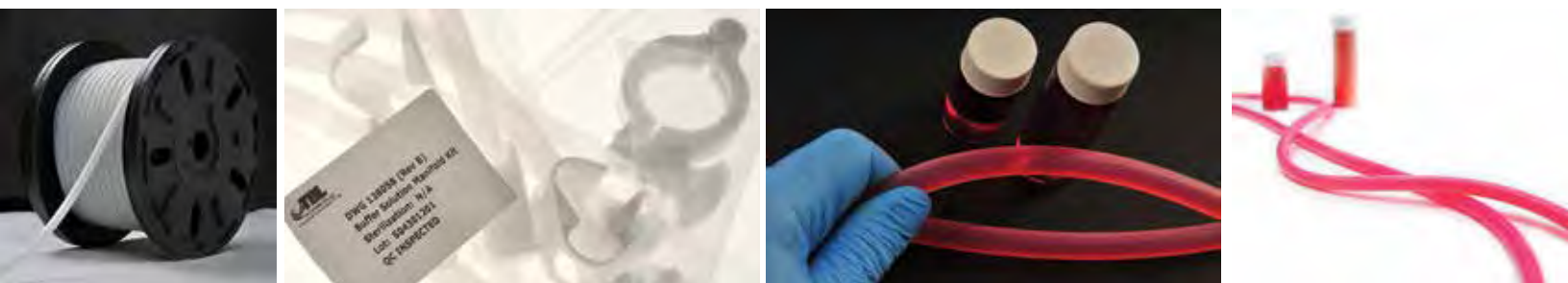
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Pharm-A-Clear TM C Silicone

Non-Reinforced Platinum Cured Tubing



Pharm-A-Clear C Platinum Cured Silicone Tubing was developed to meet the most stringent requirements of the life sciences industries. All tubing is manufactured in a state of the art **Class 100,000 / ISO Class 7 Clean Room** environment. **Vertical extrusion** techniques are employed in conjunction with continuous **laser measurement** to ensure the most exacting tolerances.

Pharm-A-Clear C is widely use for liquid media transfer and works well in Peristaltic Pump applications. TBL stocks a wide range of sizes specific to most major pump manufactures and models.

Material Specifications:

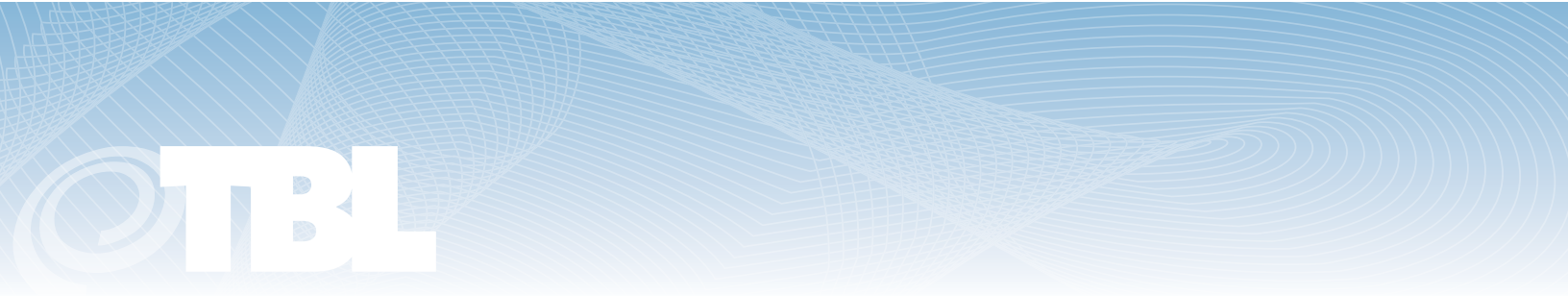
Pharm-A-Clear C (Platinum-Cured Silicone)

Physical Properties	Value	ASTM Test
Specific Gravity	1.15	
Hardness, Shore A	50	D 2240
Tensile Strength psi (Mpa)	1200 (8.3)	D 412
Elongation (%)	720	D 412
Tear Resistance, Die B lbf./in. (KN/m)	200 (35.1)	D 624
Tensile Modulus @ 100% psi (Mpa)	250 (1.7)	D 412
Temperature Rating, Deg. F	400	

TBL offers one of the most comprehensive validation packages in the industry.



Pharm-A-Clear
Silicone



Pharm-A-Clear TM LH

Silicone

Low Hysteresis
Platinum-Cured Tubing

We developed **Pharm-A-Clear LH (Low Hysteresis)** Platinum Cured Silicone Tubing for the most critical and exacting meter dose peristaltic pump applications. The **LH** series tubing is manufactured from a specific platinum cured silicone compound that exhibits many unique characteristics which are not typical of other platinum compounds. The compound exhibits the mechanical properties of peroxide cured with the purity levels that only platinum compound can assure.

Material Specifications: Pharm-A-Clear LH

Physical Properties	Value	ASTM Test
Specific Gravity	1.11	
Hardness, Shore A	50	D 2240
Tensile Strength psi (Mpa)	1100	D 412
Elongation (%)	500	D 412
Tear Resistance, Die B lbf./in. (KN/m)	100	D 624
Compression Set, % (22 hrs. @ 177C)	20	
Bayshore Resilience, %	65	
Temperature Rating, Deg. F	400	

Hysteresis Performance

	Traditional Pt	Pharm-A-Clear LH	Peroxide Cured
First Cycle	53%	39%	55%
Second Cycle	35%	21%	33%
Third Cycle	31%	19%	31%

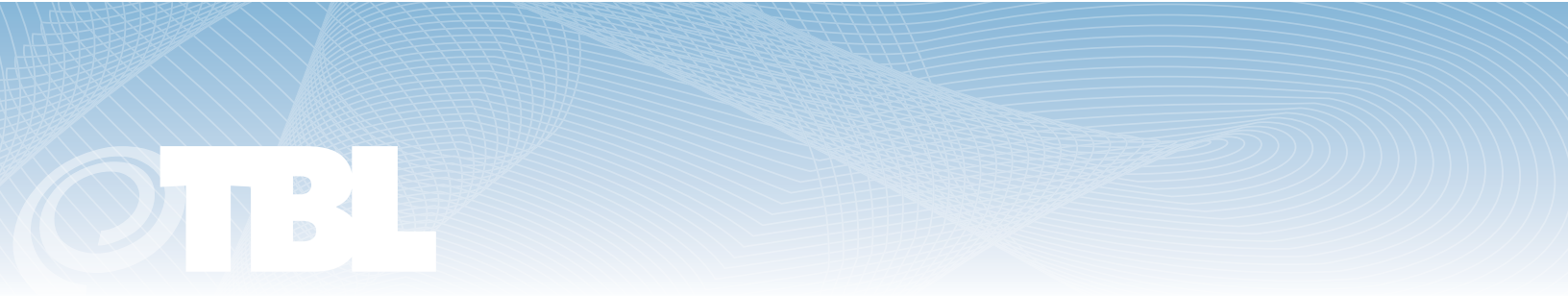
Hysteresis: The loss in elastic energy when an elastomer is dynamically deformed and then allowed to return to its original configuration.

Results confirm **Pharm-A-Clear LH** provide superior performance over traditional Platinum and Peroxide cured silicones.

Tubing Life @ 600 RPM



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Sizing Chart

Silicone Platinum Cured US Standard*					
Part Number	ID	OD	Wall	Pump Size	Std. Lenth
PLTS-*-021X144	.02"	0.144"	1/16"		25';50';100'
PLTS-*-031X093	1/32"	3/32"	1/32"		25';50';100'
PLTS-*-031X156	1/32"	5/32"	1/16"	#13	25';50';100'
PLTS-*-062X187	1/16"	3/16"	1/16"	#14	25';50';100'
PLTS-*-125X250	1/8"	1/4"	1/16"	#16	25';50';100'
PLTS-*-125X312	1/8"	5/16"	3/32"		25';50';100'
PLTS-*-187X312	3/16"	5/16"	1/16"	#03, #25	25';50';100'
PLTS-*-187X375	3/16"	3/8"	3/32"	#15	25';50';100'
PLTS-*-250X375	1/4"	3/8"	1/16"	#17	25';50';100'
PLTS-*-250X437	1/4"	7/16"	3/32"	#24	25';50';100'
PLTS-*-250X500	1/4"	1/2"	1/8"	#26	25';50';100'
PLTS-*-312X375	5/16"	3/8"	1/32"		25';50';100'
PLTS-*-312X437	5/16"	7/16"	1/16"	#18	25';50';100'
PLTS-*-312X500	5/16"	1/2"	3/32"		25';50';100'
PLTS-*-375X500	3/8"	1/2"	1/16"	#96	25';50';100'
PLTS-*-375X562	3/8"	9/16"	3/32"	#73	25';50';100'
PLTS-*-375X625	3/8"	5/8"	1/8"	#81	25';50';100'
PLTS-*-500X750	1/2"	3/4"	1/8"	#82	25';50';100'
PLTS-*-625X812	5/8"	13/16"	3/32"		25';50';100'
PLTS-*-625X875	5/8"	7/8"	1/8"		25';50';100'
PLTS-*-750X1156	3/4"	1-5/32"	1/8"		25';50';100'
PLTS-*-750X1125	3/4"	1-1/8"	3/16"	#90, #191	25';50';100'
PLTS-*-100X1250	1"	1-1/4"	1/8"		25';50';100'
PLTS-*-100X1375	1"	1-3/8"	3/16"	#92	25';50';100'

*To Specify:

Replace * with LH for Low Hysteresis

Replace * with C for Clear

Add suffix indicating continuous length when ordering. For example;

50 ft of 1/4" ID X 1/2" OD Platinum Cured Silicone tubing is part number PLTS-C-250X500-50

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Silicone



Sizing Chart

Silicone Platinum Cured Metric*

Part Number	ID	OD	Wall	Pump Size	Std. Lenth
PLTS-*-5MMX3.7MM	.5mm	3.7mm	1.6mm	#112	200'
PLTS-*-8MMX4MM	.8mm	4mm	1.6mm	#13	200'
PLTS-*-1.6MMX4.8MM	1.6mm	4.8mm	1.6mm	#14	200'
PLTS-*-1.6MMX6.4MM	1.6mm	6.4mm	2.4mm	#119	200'
PLTS-*-3.2MMX6.4MM	3.2mm	6.4mm	1.6mm	#16	200'
PLTS-*-3.2MMX8MM	3.2mm	8mm	2.4mm	#120	200'
PLTS-*-4.8MMX8MM	4.8mm	8mm	1.6mm	#25	200'
PLTS-*-4.8MMX9.6MM	4.8mm	9.6mm	2.4mm	#15	50'
PLTS-*-4.8MMX11.2MM	4.8mm	11.2mm	3.2mm	#123	50'
PLTS-*-6.4MMX9.6MM	6.4mm	9.6mm	1.6mm	#17	50'
PLTS-*-6.4MMX11.2MM	6.4mm	11.2mm	2.4mm	#24	50'
PLTS-*-6.4MMX12.8MM	6.4mm	12.8mm	3.2mm	#26	50'
PLTS-*-8MMX11.2MM	8mm	11.2mm	1.6mm	#18	50'
PLTS-*-8MMX12.8MM	8mm	12.8mm	2.4mm	#121	50'
PLTS-*-8MMX16MM	8mm	16mm	4mm	#185	50'
PLTS-*-9.6MMX14.4MM	9.6mm	14.4mm	2.4mm	#122	50'
PLTS-*-9.6MMX16MM	9.6mm	16mm	3.2mm	#73	50'
PLTS-v-9.6MMX19.2MM	9.6mm	19.2mm	4.8mm	#190	50'
PLTS-*-12MMX20MM	12mm	20mm	4mm	#186	50'
PLTS-*-12.4MMX18.8MM	12.4mm	18.8mm	3.2mm	#82	50'
PLTS-*-12.7MMX22.3MM	12.7mm	22.3mm	4.8mm	#88	50'
PLTS-*-15.9MMX22.3MM	15.9mm	22.3mm	3.2mm	#184	50'
PLTS-*-15.9MMX29.5MM	15.9mm	29.5mm	4.8mm	#189	25'
PLTS-*-16MMX24MM	16mm	24mm	4mm	#187	25'
PLTS-*-19MMX28.6MM	19mm	28.6mm	4.8mm	#191	25'
PLTS-*-25.4MMX35MM	25.4mm	35mm	4.8mm	#92	25'

*To Specify:

Replace * with LH for Low Hysteresis

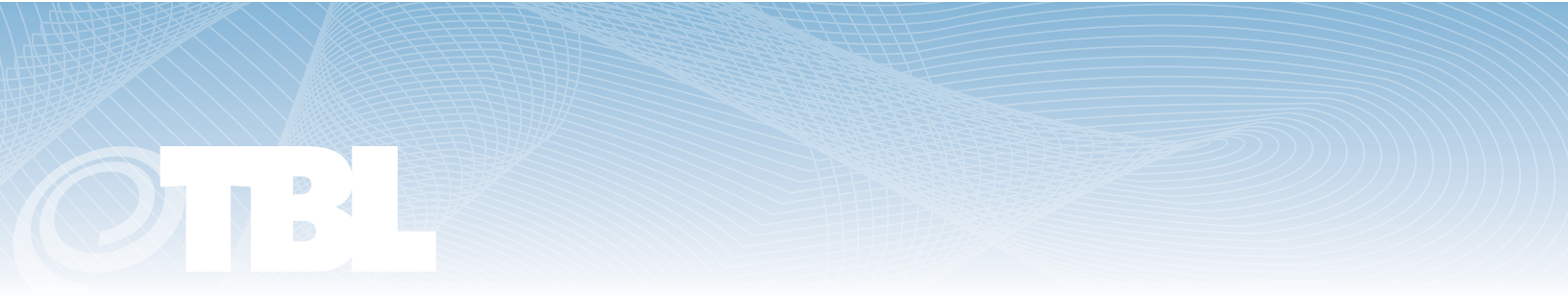
Replace * with C for Clear

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TBL
Thermoplastic Biologic
A RubberFab Technologies Affiliate
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Pharm-A-Clear TM Silicone

Reinforced Platinum-Cured Tubing

For higher temperature and pressure applications or those with a need for improved kink resistance we also offer our **Pharm-A-Clear R** platinum-cured braided silicone tubing. **Pharm-A-Clear R** is constructed using an inner and outer platinum-cured silicone shell with a polyester inner braiding. The inner core is a softer (60 durometer, shore A) material for flexibility, while the outer shell is slightly harder (70 durometer, shore A) for strength.



Sizing Chart

Silicone Platinum-Cured Reinforced Tubing

Part Number	ID	OD	WALL	Std. Length
PLTS-R-125	.125"	.345"	.110"	50' , 100'
PLTS-R-187	.187"	.407"	.110"	50' , 100'
PLTS-R-250	.250"	.490"	.120"	50' , 100'
PLTS-R-375	.375"	.625"	.125"	50' , 100'
PLTS-R-500	.500"	.800"	.150"	50' , 100'
PLTS-R-625	.625"	.965"	.170"	50'
PLTS-R-750	.750"	1.10"	.175"	50'

*Please contact us for Pharm-A-Clear R material properties.



Pharm-A-Clear ^R
Silicone



Applications

Bio Process Equipment
USP Water
Hot WFI
Sterile Transfer
Cell-Culture Media
Clean Steam *
Asceptic Fill and Transfer

Options

Sterile Kits

Sterilization

Ethylene Oxide (ETO)
Autoclavable
Gamma Irradiation
Steam in Place *

Packaging

ISO Class 7 Clean Room
Manifold
Spools/ Coils

Benefits

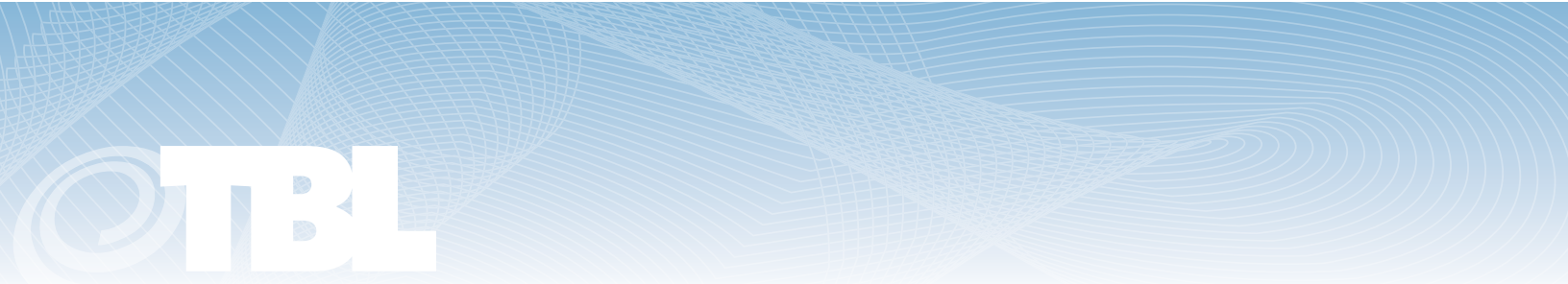
Superior Bio Compatibility
Rated For High Temperatures (Steam in Place)*
Extremely Flexible
No Taste or Odor Imparted
Ultra-Pure Medical Grade
Non-Pyrogenic
Lot and Batch Traceable
High Pressure Rating*

Certifications

U.S. Pharmacopoeia Class VI
ISO 10993-3
Cytotoxicity Criteria
Meets 3-A Standards
CFR Title 21 Section 177.2600
Current Good Manufacturing Practices (CGMP)
Animal Derived Ingredient Free (ADIF)
Traceability: Lot and Batch
Certification: Lot and Batch
Non-Braided: -90°F - 335°F
Braided: -90°F - 350°F

* Denotes Braided only





Pharm-A-Clear **Silicone** Platinum-Cured Tubing



Turn-Key, Custom Assembly and Packaging Services.



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