

#### **About BioPulse Solutions**

BioPulse Solutions Private Limited is India's first open architecture single-use bioprocessing integrator and cleanroom hose assembly manufacturer. We are also a prominent producer of stainless-steel process systems, with expertise in process engineering, automation, and turnkey projects. Our hybrid bioprocessing approach enables Biopharma customers to get access to unique, solutions for their complex applications without being restricted to rigid technology platforms. We manufacture and provide Custom Single-Use Assemblies, Fluid Handling Components, Integrated Systems, Hybrid Customized Solutions & Value-added Services thru our Certified Cleanrooms; also, Stainless Steel Fermenter, Bioreactor & Process Skids for Biopharma, designed & fabricated in house.

#### **About INDBio®**

INDBio® represents Customised and Engineered Single-use Bioprocessing Systems and Services offered by BioPulse Solutions Pvt.Ltd. It provides a range of single-use products and systems that are used in the production of biopharmaceuticals to improve the efficiency, scalability, and cost-effectiveness of bioprocessing operations. As a brand name, INDBio® is associated with innovation, quality, and reliability in the biopharmaceutical industry. It is known for its expertise in customisation and its commitment to developing new and innovative solutions to meet the evolving needs of the industry.

# **INDBio® TPE Tubing**

#### An ideal choice for Fluid transfer, Media Exchange and Filtration

INDBio® TPE tubing is a high-quality solution designed specifically for biopharma production and bioprocessing applications. Constructed using a thermoplastic elastomer (TPE), this tubing offers excellent flexibility, durability, and compatibility with a wide range of fluids and chemicals commonly used in the biopharma industry. It is an ideal choice for fluid transfer, media and buffer exchange, filtration and other critical processes. The tubing is available in two formulations **PharmaFlex™** and **Ultraflex™**. Both formulations offer exceptional performance, ensuring efficient fluid transfer while maintaining product integrity and minimizing production downtime.

## **Applications**

- Biopharmaceutical production & manufacturing Filtration and Separation Processes
- Single-use bioreactor Systems
- Chromatography & Purification Processes
- Cell culture and Fermentation Systems
- Media and Buffer Exchange
- Drug Discovery and Development
- Vaccine & Therapeutic Protein Production

## Advantage INDBio®



Superior Flexibility



Wide Chemical Compatibility



Sterilizable & Autoclavable



Controlled Extractable & Leachable



Customizable **Options** 



Traceability & Compliance



## PharmaFlex™ Tubing



- Opaque Tubing designed for peristaltic pump applications
- Provides excellent durability and extended pump life, reducing production downtime caused by tubing failure.
- Lightweight and flexible, enabling easy handling and installation
- Offers outstanding chemical compatibility, making it suitable for a wide range of applications
- High-Performance elastomer with superior mechanical properties
- BPOG extractables test results are available upon request

### **Physical Property**

Property	ASTM Method	Value/ Rating	
Durometer, (Hardness) Shore A	D2240	70	
Colour		Opaque, Natural	
Specific Gravity	D792	0.952	
Tensile Strength	D412	697 psi (4.81 Mpa)	
Elongation - %	D412	290%	
Temperature	-	Min: 50°C (-58°F) Max: 135°C (+275°F)	

Sterilization: Gamma 45 kGy

## **UltraFlex™ Tubing**



- Clear transparent tubing ideal for Ultra-Pharma fluid transfer, bioprocess, pharmaceutical, and peristaltic pump applications
- No phthalates, ensure product purity
- Extremely flexible with excellent resilience and bend radius facilitates easy installation in tight spaces
- Exhibits superior barrier properties, minimizing the risk of product contamination.
- Very low extractable/leachable, ensuring product integrity and compatibility
- Heat sealable, sterile-weldable, and certified animal free.
- BPOG extractables test results are available upon request

# **Physical Property**

Property	ASTM Method	Value/ Rating	
Durometer, (Hardness) Shore A	D2240	68	
Colour		Clear	
Specific Gravity	D792	0.89	
Tensile Strength	D412	870 psi (6.00 Mpa)	
Elongation - %	D412	470% (Break, 73°F/22.3°C)	
Temperature	-	Min: -80°C (-112°F) Max: 135°C (+275°F)	

Sterilization: Gamma 45 kGy

### **Compliances**

- USP Class VI
- Cytotoxicity Criteria
- US FDA CFR Title 21 Section 177.2600
- ISO 10993-5, ISO 10993-4
- REACH Compliant

- Cleanroom Manufactured
- Full Lot Traceability
- Non-Animal Derived BSE/TSE Compliant
- USP 661
- BPOG

Both PharmaFlex™ and Ultraflex™ tubing formulations provide reliable performance and meet stringent industry standards for biopharma production and bioprocessing applications. These TPE tubing options offer superior chemical resistance, low extractable/leachable, and excellent gas and oxygen permeability, ensuring product integrity and efficiency in your critical processes

## Ordering Information Pack size - 50 feet

Pharmaflex™	Ultraflex™	ID (mm)	OD (mm)
1.6	4.8	BP901012-14	BP901016-14
1.6	6.4	BP901012-15	BP901016-15
2.4	7.1	BP901012-18	BP901016-18
2.4	5.6	BP901012-19	BP901016-19
3	11	BP901012-23	BP901016-23
3.2	6.4	BP901012-05	BP901016-05
3.2	3.2	BP901012-12	BP901016-12
3.2	4.8	BP901012-21	BP901016-21
3.2	6.8	BP901012-22	BP901016-22
4	7	BP901012-16	BP901016-16
4	8	BP901012-17	BP901016-17
4.8	11.1	BP901012-24	BP901016-24
4.8	7.9	BP901012-01	BP901016-01
4.8	9.6	BP901012-25	BP901016-25
5.5	12.5	BP901012-13	BP901016-13
6.4	12.7	BP901012-07	BP901016-07
6.4	11.1	BP901012-10	BP901016-10
7.9	11.1	BP901012-04	BP901016-04
9.5	14.3	BP901012-02	BP901016-02
9.5	15.9	BP901012-08	BP901016-08
9.5	15.9	BP901012-09	BP901016-09
9.5	12.7	BP901012-11	BP901016-11
12.7	19.1	BP901012-03	BP901016-03
15.9	22.2	BP901012-20	BP901016-20
19.1	25.4	BP901012-06	BP901016-06