

# Optinova Delitube™ Food & Beverage Tubing

Solutions for Industrial Applications.



Delitube™, Optinova's exclusive product line for the food and beverage processing industry, is the only tubing solution in the extrusion industry that has obtained food grade approvals in all three largest markets China, EU and the US.

Made from PTFE, FEP and PFA, Delitube™ can be in direct contact with foods of all food types up to 175°C (347°F).



## Key advantages

- **Resistance to elements:** UV, crack, and chemical resistant.
- **Extremely low water absorption:** Prevents swelling and material degradation in humid conditions.
- **Flexible design:** Single- or multi-lumen tubing, 2D & 3D.
- **Low gas permeability and autoclavable:** Ensures containment of gases and suitability for sterilization processes.
- **Compliance:** FDA 21CFR 177.1550, USP Class VI, and MERCOSUR GMC-56-92 approved materials.
- **Food Grade Approvals:** By US NSF/ANSI 51, European EU10/2011, and Chinese GB4806.
- **Flexible Packaging:** Supply on spools or cut-to-length pieces.

## Applications

- Fluid handling and quality assurance of F&B processing lines
- Tubing in beverage production and dispensing machines
- Hot and cold water in coffee machines
- Milk and steam powder in coffee machines
- Filling and packing machines for F&B production

Delitube™ has a **long life-cycle** and is easy to clean which makes it **cost effective** and **low maintenance**.

## Technical specifications

<b>PTFE</b>
ID 0,10mm (0,004") to 23,00mm (0,90")
OD 0,50mm (0,020") to 25,4mm (1")
Wall thicknesses 0,20mm (0,008") to 5,00mm (0,196")
<b>FEP &amp; PFA</b>
ID 0,79mm (0,031") up to 113 mm (4,44")
OD 1,59mm (0,063") to 114,50 mm (4,50")
Wall thickness 0,20mm (0,008") to 5,00mm (0,196")
Tight tolerances from +/-0,05mm ( +/-0,002")

For more technical information, please contact us at our sales offices or visit our website: [optinova.com/contacts](http://optinova.com/contacts)

## Industrial-grade certifications



# We empower customers through highly reliable tubing solutions.



Properties	Unit	PTFE	FEP	PFA
Specific gravity		2.15	2.15	2.15
Transparency		Good	Very good	Excellent
Sterilization		EtO, Steam	EtO, Steam	EtO, Steam
<b>Environmental</b>				
Water absorption	%	<0.01	<0.01	<0.03
Weather resistance		Excellent	Excellent	Excellent
Chemical resistance		Excellent	Very good	Excellent
Flammability		V-0	V-0	V-0
Oxygen index	%	>95	>95	>95
<b>Thermal</b>				
Melting point	°C (°F)	330 (626)	257-275 (495-527)	300-310 (572-590)
Thermal conductivity	BTU/h/ft/°F	1.7	1.4	1.3
Min/Max service temp	°C (°F)	-240/260 (-400/500)	-200/200 (-328/390)	-200/260 (-328/500)
Shrink temperature	°C (°F)	335-345 (635-653)	149-232 (300-450)	
Deflection temp (66 psi)	°C (°F)	122 (252)	59 (138)	74(166)
Deflection temp (264 psi)	°C (°F)	55 (131)	57 (134)	48 (118)
<b>Mechanical</b>				
Tensile strength at break	MPa	20-34	20-28	25-30
Elongation at break	%	200-400	300-325	300
Compressive strength	psi	3 500	2 200	2 200
Impact strength	Ft-Lb/in	3.5	No Break	No Break
Flexural Modulus	MPa	275-620	550-700	590-700
Tensile Modulus	psi	80 000	50 000	40 000
Hardness	Shore D	55-65	55-60	55-64
<b>Electrical</b>				
Dielectric const at 103 Hz		2.1	2.1	2.1
Dielectric const at 106 Hz		2.1	2.1	2.1
Dielectric DF at 103 Hz		0.0002	0.0001	0.0002
Dielectric DF at 106 Hz		0.0002	0.0008	0.0003
Volume resistivity (D 257)	Ohm	>10 <sup>18</sup>		

Optinova tubing can be customized to meet specific customer requirements. We have OTC standard sizes in our global warehouses in the US, Germany and Thailand for fast delivery.

## About Us

Founded in 1971, Optinova is a world-leading extrusion partner for advanced medical and industrial tubing. With sales offices around the world and four extrusion plants in Finland, Thailand, and the US, we are serving partners from 50+ countries across industries.

## Contact Us

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