

RoHS  
Compliant



## Description

The PHD series is a flexible, polyolefin, thin wall tubing which offers the advantages of an integral adhesive lining. Provides excellent environmental protection for electronic components.

## Typical Properties

### Physical

Tensile Strength	: 2,100 PSI
Ultimate Elongation	: 450%
Longitudinal Change	: +1%, -5%
Secant Modulus (2%)	: 17,000 PSI
*Heat Aging (168 hrs @ 175°C)	: Elongation 175%
*Heat Shock (4 hrs @ 250°C)	: No dripping, cracking, or flowing
*Low Temp Flexibility (4 hrs @ -55°C)	: No cracking
**Flexibility	3
Shrinkage	: 2:1
Shrink Temp	: 121°C (250°F)
Operating Temp	: -55°C to 100°C (-67°F to 230°F)

### Electrical

Dielectric Strength	: 800V/Mil
Volume Resistivity	: $10^{14}\Omega\text{-cm}$

### Chemical

Corrosion Effect	: Non-Corrosive
Water Absorption	: 0.3%
Fungus Resistance	: Non-nutrient
Fluid Resistance	: Excellent
Applicable Specifications	: MIL-DTL-23053/4 Class 2

### Adhesive

Peel Strength, pli	
Polyethylene	30
PVC	10
Lead	15
Aluminium	40
Corrosive Effect (Copper Mirror)	Non-corrosive

\*Outer wall only.

\*\* Flexibility: The materials are rated on a scale of typical product data and should not be used for specifications purposes. Unless otherwise noted, all tests are performed at room temperature.

# Heat Shrink Tubing



## Part Number Table

Description	Dimensions				Standard Packages (Colour: Black)					
	Size (Inch)	Expanded I.D. (Min.) (Inch)	Recovered I.D. (Max.) (Inch)	Recovered Nominal Wall Thickness (Inch)	4 Foot Lengths (+1, -0)			6 Inch Lengths (± 0.125)		
					Part Number	Qty	Total Footage (Feet)	Part Number	Qty	Total Footage (Feet)
PHD Series-Flame Retardant, Adhesive-Lined Tubing	1/8	0.125	0.063	0.027	PHD-008-4025-BLK	25	100	PHD-008-6028-BLK	28	14
	3/16	0.187	0.093		PHD-012-4025-BLK			PHD-012-6024-BLK	24	12
	1/4	0.250	0.125	0.030	PHD-016-4025-BLK			PHD-016-6020-BLK	20	10
	3/8	0.375	0.187	0.031	PHD-024-4025-BLK			PHD-024-6016-BLK	16	8
	1/2	0.5	0.250	0.032	PHD-032-4005-BLK	5	20	PHD-032-6014-BLK	14	7
	3/4	0.75	0.375	0.037	PHD-048-4005-BLK			PHD-048-6012-BLK	12	6
	1	1	0.5	0.046	PHD-064-4005-BLK			PHD-064-6008-BLK	8	4
	1 1/2	1.5	0.75	0.049	PHD-096-4005-BLK			PHD-096-6005-BLK	5	2.5
	2	2	1	0.060	PHD-128-4002-BLK			2	8	PHD-128-6002-BLK

**Important Notice :** This data sheet and its contents (the "Information") belong to the members of the AVNET group of companies (the "Group") or are licensed to it. No licence is granted for the use of it other than for information purposes in connection with the products to which it relates. No licence of any intellectual property rights is granted. The Information is subject to change without notice and replaces all data sheets previously supplied. The Information supplied is believed to be accurate but the Group assumes no responsibility for its accuracy or completeness, any error in or omission from it or for any use made of it. Users of this data sheet should check for themselves the Information and the suitability of the products for their purpose and not make any assumptions based on information included or omitted. Liability for loss or damage resulting from any reliance on the Information or use of it (including liability resulting from negligence or where the Group was aware of the possibility of such loss or damage arising) is excluded. This will not operate to limit or restrict the Group's liability for death or personal injury resulting from its negligence. pro-POWER is the registered trademark of Premier Farnell Limited 2019.

Newark.com/exclusive-brands  
 Farnell.com/exclusive-brands  
 Element14.com/exclusive-brands

