

## HD-1 系列无卤阻燃(环保)型热收缩套管 HD-1 Series Non-Halogen Flame-Retardant (Environment-Friendly) Heat Shrinkable Tube



### 特性

1. HD-1系列无卤阻燃热收缩套管具有较好的阻燃性，且不含卤素，燃烧时无有害气体产生，低烟、无滴落。
2. 不含重金属，符合SGS标准。安全标准：UL224 VW-1 C-UL CSA C 22.2OFT RoHS

### Characteristics

1. HD-1 series non-halogen flame-retardant (environment-friendly) heat shrinkable tube boasts very good flame retardation and it does not contain halogen, so it will produce no hazardous gases when it is burnt, with low smoke and no drop.
2. It does not contain heavy metal and conforms to SGS standard.  
Safety standard: UL224 VW-1 C-UL CSA C 22.2OFT RoHS

### 特点及应用范围

1. HD-1系列H(无卤阻燃环保)型热收缩套管具有优质高聚物，经科学配比、机械共混成高聚物合金，产品成型后经电子加速器辐射交联、连续扩张而成。其产品具有柔软、阻燃、收缩快、性能稳定等优点。广泛应用于电线连接、焊点保护、电线端部、线束、电子器件防护和绝缘处理；健身器材零部件和钢结构表面防护，相关产品的防锈、防腐处理；电线和其它产品的标识等。

#### 2. 特点：

- (1) 八大重金属、卤元素通过SGS检测。
  - (2) 不含有机锡化合物(三丁基锡/三苯基锡类)、石棉(Asbestos)、烟雾剂(AzoCompounds)、限制其释放的物质；甲醛。
  - (3) 适用范围：-40℃~50℃
  - (4) 起始收缩温度70℃，超薄型完全收缩温度105℃。普通型完全收缩温度125℃。
  - (5) 柔软、阻燃、有光泽。
  - (6) 规格齐全， $\phi 0.8-\phi 180$ ，并可定制特殊规格。
  - (7) 供货及时，供货量大。
  - (8) 使用方便，用烘箱和热风枪加热即可收缩。
  - (9) 环保性能符合SonySS-00259标准与欧盟RoHS指令。
- 标准颜色：黑色、红色、黄色、绿色、蓝色、白色、特殊颜色，可按客户要求生产。

### Features and application

1. HD-1 series (non -halogen flame-retardant environment-friendly) heat shrinkable tube uses excellent polymers to mix into the alloy in scientific composition and mechanical mixing. After being shaped, the products continue to undergo the radiation cross-link and continuous expansion with electronic accelerator. The products are characterized by softness, flame retardation, fast shrinkage and stable performance, which are widely used in wire connection, welding protection, wire end, wiring and electronic components protection and insulation treatment; the surface protection of spare parts of body-building equipments and steel structure; rust resistance and treatment of related products; and the marking of electrical wires and other products.

#### 2. Charater

- (1) Eight heavy metals, and the halogen passes the SGS inspection.
  - (2) Not contain organic tin compound [Fentin (Triphenyltin-)chloride] asbestos, Azo compounds, and the material restricted for release: formaldehyde.
  - (3) Application: -40℃~50℃
  - (4) Initial shrinkage temperature: 70℃; super-thin fully shrinkage temperature: 105℃; and ordinary fully shrinkage temperature: 125℃
  - (5) Softness, flame retardation and good luster.
  - (6) Complete specifications:  $\phi 0.8-\phi 180$ , and special specifications are subject to the orders.
  - (7) Timely and large quantity of delivery.
  - (8) Convenient use, it can be shrinked after being heated with oven and hot air gun.
  - (9) The product complies with SonySS-00259, EU RoHS and other environmental standards.
- Standard color: black, red, yellow, green, blue and white, and special colors are upon the customer's needs.

### 性能特性 Performance characteristics

性能 Performance	测试方法 Testing method	性能指标 Indexes	典型值 Typical	
物理特性 Physical characteristics	拉伸强度Mpa Tensile strength Mpa	GB/T1040	≥10.4	12.6
	断裂伸长率 % Elongation at break%	GB/T1040	≥200	300
	热老化后拉伸强度Mpa Tensile strengty after thermal ageing Mpa	UL224 158℃ × 168hr	≥7.3	9.8
	热老化后断裂伸长率 % Elongation at break after thermal ageing %	UL224 158℃ × 168hr	≥100	300
	耐热冲击 Thermal shock resistance	UL224 158℃ × 1hr	不发粘Non-sticking	PASS
电气特性 Electrical characteristics	抗冷弯曲 Cold bending resistance	UL224 -30℃ × 1hr	不龟裂Non-crack	PASS
	击穿强度kv/mm Breakdown strength kv/mm	GB1418	≥1.5	1.8
	耐压 Pressure resistance	300V 600V UL224	1500V不击穿Non-breakdown 2000V不击穿Non-breakdown	PASS PASS
化学特性 Chemical characteristics	体电阻率 $\Omega \cdot \text{cm}$ Volume resistivity $\Omega \cdot \text{cm}$	GB1410	$1 \times 10^{14}$	$1 \times 10^{15}$
	抗腐蚀性 Corrosion resistance	UL224 158℃ × 168hr		PASS
	铜安定性 Copper invariability	UL224 158℃ × 168hr		PASS
	阻燃性 Flame retardation	UL224	VW-1	PASS

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规格 Specification	收缩前尺寸(mm) Dimension before shrinking		收缩后尺寸(mm) Dimension after shrinking		标准包装(米/盘) Standard packaging (m/disc)	适用范围 Application (mm)
	内径 Internal diameter	壁厚 Wall thickness	内径 Internal diameter	壁厚 Wall thickness		
φ 1.0	1.2±0.3	0.20±0.05	0.48±0.1	0.32±0.05	200	0.75-0.9
φ 1.5	1.7±0.3	0.20±0.05	0.73±0.1	0.32±0.05	200	0.95-1.4
φ 2.0	2.2±0.3	0.25±0.05	0.98±0.1	0.32±0.05	200	1.1-1.8
φ 2.5	2.6±0.3	0.25±0.05	1.23±0.2	0.35±0.05	200	1.35-2.3
φ 3.0	3.2±0.4	0.25±0.05	1.45±0.2	0.35±0.05	200	1.6-2.7
φ 3.5	3.6±0.4	0.25±0.05	1.72±0.2	0.35±0.05	200	1.85-3.2
φ 4.0	4.2±0.4	0.25±0.05	1.96±0.2	0.35±0.05	200	2.1-3.6
φ 4.5	4.6±0.4	0.25±0.05	2.20±0.2	0.35±0.05	200	2.35-4.0
φ 5.0	5.2±0.4	0.25±0.05	2.48±0.2	0.35±0.05	200	2.6-4.5
φ 6.0	6.2±0.4	0.28±0.15	2.96±0.3	0.45±0.15	200	3.1-5.4
φ 7.0	7.2±0.4	0.28±0.15	3.48±0.3	0.45±0.15	100	3.7-6.5
φ 8.0	8.2±0.5	0.28±0.15	3.95±0.3	0.45±0.15	100	4.2-7.2
φ 9.0	9.2±0.5	0.30±0.15	4.40±0.3	0.50±0.15	100	4.7-8.0
φ 10	10.2±0.5	0.30±0.15	4.90±0.3	0.50±0.15	100	5.2-9.0
φ 11	11.2±0.5	0.30±0.15	5.40±0.3	0.50±0.15	100	5.7-10
φ 12	12.2±0.5	0.30±0.15	5.90±0.5	0.50±0.15	100	6.2-11
φ 13	13.2±0.5	0.33±0.15	6.40±0.5	0.50±0.15	100	6.7-12
φ 14	14.2±0.5	0.35±0.15	6.90±0.5	0.50±0.15	100	7.3-13
φ 15	15.2±0.6	0.38±0.15	7.40±0.5	0.60±0.15	100	7.8-14
φ 16	16.2±0.6	0.38±0.15	7.90±0.5	0.60±0.15	100	8.3-15
φ 17	17.2±0.6	0.38±0.15	8.40±0.5	0.60±0.15	100	8.8-16
φ 18	18.2±0.6	0.40±0.15	8.90±0.5	0.60±0.15	100	9.3-17
φ 20	20.2±0.8	0.40±0.20	9.90±0.5	0.70±0.20	100	11.4-19
φ 22	22.2±0.8	0.42±0.20	10.80±1.0	0.70±0.20	100	12.4-21
φ 25	25.3±0.8	0.45±0.20	12.30±1.0	0.70±0.20	50	12.8-24
φ 28	28.3±0.8	0.45±0.20	13.50±1.0	0.70±0.20	50	14.4-26
φ 30	30.2±0.8	0.45±0.20	14.70±1.0	0.70±0.20	50	16-29