Material Specifications:
Flame Retardant Shrink Film

Description:

Pro-Tect's 9, 10.5 & 12 mil F/R Shrink Wrap is a modern thermo plastic film formulated with both linear and low density heat sensitive resins. When heated, the shrink wrap will shrink 25% to 30% of its surface dimension. Our shrink film is manufactured to our specifications from virgin resins and fractional melt low density polyethylene resulting in uniform bi-axial shrinking and super strength. The UVI in our shrink wrap is a hindered amine to protect against film deterioration by the sun. Hindered amine protects the film by remaining within the molecular structure of the film. In addition to the fractional melt and linear low density polyethylene, our specially formulated films contain Ethyl Vinyl Acetate (EVA). Shrink film containing EVA retains more elasticity and does not become brittle when exposed to cold temperatures. Puncture resistance is greater; burn holes do not propagate and will not split easily in the machine direction when whipped by the wind.

Flame Resistance:

Pro-Tect Plastic's shrink films are formulated and manufactured to satisfy the flammability requirements of the National Fire Protection Association's (N.F.P.A) 701 and British Standard BS 476 Part 12 ignition source G. Flammability test per ASTM E-84 for flame spread and smoke developed places this product into the class A category for interior wall and ceiling finish. Flame spread: 5, smoke development 25.

9 mil Flame Retardant Shrink Film Material Specifications 0.009"

Film Properties		ASTM	UNITS	NOMINAL VALUE
Tear Strength	MD	D-1922	Grams	1,000
	TD		Grams	1,600
Tensile Strength	MD	D-882	PSI	3,000
	TD		PSI	3,000
Elongation	MD	D-882	Percentage %	700
	TD		Percentage %	800
Secant Modulus	MD	D-882	PSI	24,200
	TD		PSI	27,400
Dart Impact (100%)	Pass	D-1709	Grams	1,100
Puncture Resistance		AEP Test	LBS	40

***9 mil F/R Material Conforms to the Following Federal Specifications: L-P-378E –Types IV & V – Class 3**
Meets the Requirements of NFPA 701

PO Box 1377 ❍ Jacksonville, OR 97530 ❍ E-Mail: info@pro-tect.net ❍ www.shrinkwrapcontainments.com
Phone: (541) 774-5506 ❍ Fax: (541) 774-5508 ❍ (800) 889-WRAP (9727)

10.5 mil Flame Retardant Shrink Film Material Specifications

Film Properties		ASTM	UNITS	NOMINAL VALUE
Tear Strength	MD	D-1922	Grams	900
	TD		Grams	1,500
Tensile Strength	MD	D-882	PSI	2,400
	TD		PSI	2,500
Elongation	MD	D-882	Percentage %	500
	TD		Percentage %	600
Shrinkage	MD	D-2732	Percentage %	50-80
	TD		Percentage %	0-20
Dart Impact (100%)		D-1709	Grams	1,250
Puncture Resistance		Internal	LBS	39
Slip Level/ COF		D-1894	g/200g	High Slip,COF<.150

***10.5 mil F/R Material Meets the Requirements of NFPA 701 & UV Additives to Protect Film up to 3 months**

12 mil Flame Retardant Shrink Film Material Specifications

Film Properties		ASTM	UNITS	NOMINAL VALUE
Tear Strength	MD	D-1922	Grams	1,700
	TD		Grams	2,800
Tensile Strength	MD	D-882	PSI	2,500
	TD		PSI	2,400
Tensile Yield	MD	D-882	PSI	1400
	TD		PSI	1200
Elongation	MD	D-882	Percentage %	600
	TD		Percentage %	700
Dart Impact (100%)		D-1709	Grams	900
Shrink Temp		D-2732	Degree F	300

***12 mil F/R Material Meets the Requirements of NFPA 701 & UV Additives to Protect Film up to 3 months**

Applications:

Pro-Tect Plastics Flame Retardant Thermo Plastic Shrink Film is used in construction of environmental containment systems. Pro-Tect specially formulated films confirms to Class One containment requirements specified by the Steel Structures Painting Council Guide 6 (95). Class One provides a high level of emissions control with impenetrable walls, fully sealed joints, airlocks or re-sealed airways, and negative air achievement. Contact us today for any questions regarding material and/ or application.