

MATERIAL SAFETY DATA SHEET1-4. **Properties of Metalized / Coated Polyester Film.**

ITEM : PES GLITTER SIZE : ASSORTED COLOUR : ASSORTED
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General Value Of Standard 23 Micron Polyester Film.

Mechanical Properties

Item		Value	Unit	Test Condition	Test Method
Tensile Strength	MD	23	Kg/mm ²	25°C	ASTM-D882A
	TD	24	Kg/mm ²		
Elongation at Break	MD	120	%		
	TD	110	%		
Young's Modulus	MD	450	Kg/mm ²		
	TD	500	Kg/mm ²		
Impact Strength		35	Kg – cm	25°C	ASTM-D1709
Tear Strength	MD	14.6	G	Atmosphere	ASTM-D1922
	TD	15	G	Atmosphere	ASTM-D1922
Bursting Strength		5.5	Kg/cm ²	25°C	ASTM-D774
Folding Endurance		1.5 x 10	Cycles	MIT Method	ASTM-D2176

Physical Properties

Item	Value	Unit	Test Condition	Test Method
Density	1.4	g/m ²	25°C	ASTM-D1505
Water Absorption	0.45	%	25°C, 24hr	ASTM-D570
Water Vapor Permeability	23	g/m ² /24hr	40°C, 90%RH	ASTM-E96
Oxygen Permeability	45	cc/m ² / 24hr / atm	24°C, 1atm	ASTM-D1434

Thermal Properties

Item	Value	Unit	Test Condition	Test Method	
Melting Point	260	°C		TSI Method	
Service Temperature	-70 ~ 150	°C			
Heat Shrinkage	MD	1.5	%	150 °C / 30 min	ASTM-D2305
	TD	0.5	%		
Thermal Expansion Coefficient	3 x 10	cm/cm/°C	10 ~ 50 °C	ASTM-D696	
Thermal conductivity coefficient	3 x 10	cm / cm / sec / °C			
Specific Heat	0.32	cal / g / °C	25 °C		

Optical Properties

Item	Value	Unit	Test Condition	Test Method
Refractive Index	1.65	ND	25°C	ASTM-D542
Total Luminous Transmission	5	%	25°C	ASTM-D1003
Service Temperature	3	%		

4. Physical and Chemical Data

1)	Melting Point	:	255 ~ 265°C (491~477°F)
2)	Boiling Point	:	Not applicable
3)	Specific Heat	:	1.34 KJ/Kg at 25°C
4)	Heat of combustion	:	23.5 MJ/Kg
5)	Vapor Pressure (mmHg at 20°C)	:	Negligible
6)	Vapor Density (air = 1)	:	Not applicable
7)	Solubility in Water	:	Insoluble
8)	pH	:	Not applicable
9)	Specific Gravity	:	1.40 g/cm ²
10)	Appearance	:	Film
11)	Odour	:	Odourless
12)	Colour	:	Clear, Hazy, White, Yellowish

5. Fire and Explosion Hazard Data

1)	Flash Point	:	346 ~ 399°C (655 ~ 750°F)
2)	Auto ignition Temp	:	No data
3)	Flammable Limits (STP)	:	Not applicable
4)	Extinguishing Media	:	Water Spray, Carbon Dioxide, Dry Chemical, Halogenated Agents.
5)	Special Fire Fighting Protective Equipment:	:	Self-contained breathing apparatus with full face-piece and protective clothing.
6)	Unusual Fire and Explosion Hazards	:	Film remaining in contact with flame will ignite and continue to burn slowly, dropping flaming liquid which can spread the fire. If the flame source is stationary, the fire will shrink away and self-extinguish.

6. Reactive Data

1)	Stability	:	Stable under normal conditions
2)	Incompatibility (Material to Avoid)	:	Not applicable
3)	Hazardous Decomposition Products	:	Combustion products : Carbon Dioxide, Carbon Monoxide, Terephthalic Acid, Aldehydes
4)	Hazardous Polymerization	:	Will not occur

7. Health Hazard Assessment

- 1) **General :**
The health hazard assessment is based on an evaluation of the chemical composition together with information from a search of the scientific literature and other commercial sources.
- 2) **Ingestion :**
Not suitable for human consumption.
- 3) **Eye Contact :**
No irritation is likely to develop following contact with human eyes.
- 4) **Skin Contact :**
No irritation is likely to develop following contact with human skin.
- 5) **Skin Absorption :**
This product will probably not be absorbed through human skin.
- 6) **Inhalation :**
No toxic effects are known to be associated with inhalation of dust from this material.
- 7) **Other Effects of Over exposure :**
Because of the physical form of the product, it is very unlikely there will be exposure to the carbon black component of this product. Thus, it is unlikely any potential health hazards will be expressed.
- 8) **First Aid Procedures :**
 - A. **Skin :** Wash material off the skin with plenty of soap and water. If redness, itching or a burning sensation develops, get medical attention. For thermal burns, cool quickly with water and get medical attention.
 - B. **Eye :** Immediately flush with plenty of water. After initial flushing, continue flushing for at least 15 minutes. If redness, itching or a burning sensation develops, have eyes examined and treated by medical personnel.
 - C. **Ingestion :** Give one or two glasses of water to drink. If gastrointestinal symptoms develop, consult medical personnel
 - D. **Inhalation :** Remove victim to fresh air, if cough or other respiratory symptoms develop, consult medical personnel.

8. Precautions for Safe Handling and Use

- 1. Step to be taken in case material is released or spilled :
Collect for reuse or disposal.
- 2. Disposal Method :
Observe all federal, state and local laws regarding health and pollution.

9. Control Measure

- 1. Respiratory Protection (Specify Type): None Should be needed
 - 2. Ventilation :
 - A. Local Exhaust : Not applicable
 - B. Other : Not applicable
 - 3. Protective Clothing : None should be needed
 - 4. Eye Protection : Not applicable
 - 5. Other Protective Equipment : One should be needed
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This MSDS is true but only for information, which doesn't means all coverage related to the product safety matters. Glitron Products doesn't take the responsibility of all damages due to these products.

NOTE: IN CASE OF EMERGENCY PLEASE CONTACT AT 0092-300-846 7858