

Material Data Sheet: Transparent Reinforced PVC Vinyl Fabric

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Product Description: This is a transparent, flexible polyvinyl chloride (PVC) vinyl fabric reinforced with a 4x4 polyester scrim mesh per square inch. It is designed for use in manufacturing durable textile bags, offering high clarity, UV resistance, and tear strength. The material weighs 300 grams per square meter (GSM) and is suitable for applications requiring waterproofing and flexibility. This document combines key elements of a Material Data Sheet (technical specifications) and Safety Data Sheet (SDS) per OSHA Hazard Communication Standard (29 CFR 1910.1200) and GHS guidelines. The material is not classified as hazardous under normal use but requires precautions during processing (e.g., heating or cutting).

Section 1: Product and Company Identification

- **Product Name:** Transparent Reinforced PVC Vinyl Fabric (300 GSM, 4x4 Scrim)
- **Synonyms:** Clear PVC scrim vinyl, reinforced flexible PVC sheet
- **Manufacturer/Supplier:** Charm Tex

Section 2: Hazard Identification

Classification: Not hazardous under OSHA/GHS for normal handling and use. Solid polymer matrix encapsulates all components, minimizing exposure.

Hazard Statements: None under ambient conditions. Potential hazards from thermal processing (fumes) or fire (HCl gas).

- **Pictograms:** None required.
- **Signal Word:** None.
- **Precautionary Statements:**
 - Prevention: Use in well-ventilated areas during cutting/heating.
 - Response: In case of irritation from dust/fumes, seek fresh air.
 - Storage: Keep dry and away from heat sources.

- **Potential Health Effects:**

- Acute: Minimal; dust from cutting may cause mechanical irritation to eyes/skin.
- Chronic: None known for intact material. Prolonged exposure to processing fumes may irritate respiratory tract.

Section 3: Composition/Information on Ingredients

The material is a composite of PVC vinyl coated/laminated onto a polyester scrim mesh. All ingredients are bound in a stable matrix.

Component	CAS Number	Concentration (% by Weight)	Hazardous?
Polyvinyl Chloride (PVC)	9002-86-2	60-80%	No (bound polymer)
Plasticizers (e.g., Phthalates like DOP)	Proprietary	10-30%	No (bound)
Polyester Scrim Mesh (4x4 per sq. inch)	80595-68-2 (generic)	10-20%	No
Stabilizers/Additives (e.g., UV, Heat Stabilizers)	Proprietary	<5%	No
Colorants/Fillers	Proprietary	<5%	No

No hazardous ingredients above reporting thresholds. Residual vinyl chloride monomer <1 ppm.

Section 4: First-Aid Measures

- **Eye Contact:** Rinse with water for 15 minutes. Seek medical attention if irritation persists.
- **Skin Contact:** Wash with soap and water. For thermal burns (from hot processing), cool with water and seek medical help.
- **Inhalation:** Move to fresh air. If symptoms (coughing) occur, consult physician.
- **Ingestion:** Not applicable (solid material). If small particles are swallowed, rinse mouth; seek medical advice if large amounts.
- **Notes to Physician:** Treat symptomatically. No specific antidote.

Section 5: Fire-Fighting Measures

- **Suitable Extinguishing Media:** Water spray, CO₂, dry chemical.
- **Unsuitable Media:** None.
- **Specific Hazards:** Combustible solid. Produces HCl gas, CO, CO₂, smoke, and benzene upon burning. May form dense smoke obscuring vision.
- **Special Protective Equipment:** Self-contained breathing apparatus (SCBA) and full protective gear. Cool containers with water if exposed to fire.
- **Flash Point:** Not applicable (solid). Autoignition: >350°C.

Section 6: Accidental Release Measures

- **Personal Precautions:** Wear gloves and eye protection for large spills (e.g., scraps). Avoid dust inhalation.
- **Environmental Precautions:** Prevent entry into drains; collect scraps for recycling.
- **Methods for Cleanup:** Sweep or vacuum (HEPA filter) and dispose of as non-hazardous waste. Not applicable for intact rolls.

Section 7: Handling and Storage

- **Handling:** Use good industrial hygiene. Avoid dragging to prevent static sparks. Cut in ventilated areas to minimize dust.
- **Storage:** Store in cool, dry place (<30°C), away from direct sunlight and incompatible materials (strong oxidizers). Keep rolls upright to avoid creasing. Shelf life: 2+ years.

Section 8: Exposure Controls/Personal Protection

- **Exposure Limits:** None established for the fabric. For PVC dust: OSHA PEL 5 mg/m³ (respirable fraction).
- **Engineering Controls:** Local exhaust ventilation during cutting/heating.
- **Personal Protective Equipment (PPE):**
 - Respiratory: NIOSH-approved dust mask if dust levels high.
 - Eyes: Safety goggles.
 - Skin: Gloves (nitrile) for handling; cotton overalls.
 - Hygiene: Wash hands after use.

Section 9: Physical and Chemical Properties

Material Specifications (Values for 300 GSM, 4x4 Scrim):

Property	Value	Test Method
Weight	300 g/m ²	ASTM D751
Thickness	0.30-0.35 mm	ASTM D751
Scrim Mesh	4 x 4 per sq. inch (Polyester, ~1000 denier)	Manufacturer Spec
Tensile Strength (Warp/Fill)	2500-3000 N/5 cm	ASTM D5035
Tear Strength (Warp/Fill)	250-350 N	ASTM D2261
Adhesion (Peel)	>10 N/cm	ASTM D413
Color/Clarity	Transparent (92% light transmission)	Visual
Specific Gravity	1.2-1.4	ASTM D792
Water Resistance	Hydrostatic head >2000 mm	ASTM D751
UV Resistance	500 hours min (no cracking)	ASTM G154

Flame Retardancy	Optional (Class 1 if FR grade)	NFPA 701
pH	Not applicable	-
Solubility in Water	Insoluble	-
Odor	Slight PVC	-
Appearance	Clear, flexible sheet with embedded mesh	-

Chemical Properties: Stable; resistant to dilute acids/alkalis, oils, and mildew. Not resistant to ketones/aromatics.

Section 10: Stability and Reactivity

- **Stability:** Stable under normal conditions.
- **Reactivity:** Non-reactive. Avoid strong oxidizers, amines, or high heat (>250°C).
- **Hazardous Decomposition:** At >250°C, releases HCl gas and smoke.
- **Hazardous Polymerization:** Will not occur.

Section 11: Toxicological Information

- **Acute Toxicity:** Low (LD50 >5000 mg/kg oral, dermal). No significant effects from intact material.
- **Chronic Effects:** Possible irritation from prolonged dust exposure. No known carcinogenicity (IARC Group 3 for PVC).
- **Sensitization:** Not a skin sensitizer.

Section 12: Ecological Information

- **Ecotoxicity:** Low mobility in soil; non-biodegradable. Avoid release to water (may harm aquatic life if combusted).
- **Persistence/Degradability:** Persistent polymer.
- **Bioaccumulation:** Low.

Section 13: Disposal Considerations

- **Waste Disposal:** Non-hazardous. Recycle where facilities exist or landfill/incinerate per local regulations. Do not burn openly due to HCl emissions.
- **Contaminated Packaging:** Reuse or recycle.

Section 14: Transport Information

- **UN Number:** Not regulated.

- **DOT/TDG/IMDG/IATA:** Non-hazardous material.

Section 15: Regulatory Information

- **TSCA:** All components listed.
- **SARA Title III:** No reportable quantities.
- **REACH:** Compliant (EU).
- **Proposition 65 (CA):** No warnings required.
- **Other:** Phthalate-free options available; confirm for food contact if needed.