

TECHNICAL DATA SHEET (TDS)

Product Name: High-Barrier Stand-Up Pouch (Food Grade)

Material Structure: Matte PET 12 μ m / VMPET 12 μ m / LDPE 105 μ m

Certifications: ISO 9001:2015, IFS Food v7, BRCGS Packaging (Grade AA/B)

1. Material Composition & Functional Properties

Layer	Material	Thickness	Key Function
Outer Layer	Matte PET (Polyethylene Terephthalate)	12 μ m	Superior printability, abrasion resistance, matte aesthetic
Barrier Layer	VMPET (Vacuum Metallized PET)	12 μ m	Blocks oxygen, moisture, UV light; enhances shelf life
Sealing Layer	LDPE (Low-Density Polyethylene)	105 μ m	Excellent heat-seal performance, FDA/EU food contact safe

Total Thickness: ~129 μ m

2. Critical Performance Data

- Barrier Properties (ASTM F1927/F1307):**
 - Oxygen Transmission Rate (OTR): <0.8 cc/m²/day (23°C, 0% RH)

- Water Vapor Transmission Rate (WVTR): **<1.2 g/m²/day** (38°C, 90% RH)
 - **Mechanical Strength:**
 - Tensile Strength (MD/TD): $\geq 120/110$ N/mm² (ISO 527-3)
 - Heat Seal Strength: **≥ 35 N/15mm** (ASTM F88, 130°C sealing temp)
 - **Temperature Range:**
 - Storage: **-30°C to +50°C**
 - Sealing: **110°C–140°C** (recommended)
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3. Compliance & Certifications

- **Food Safety Standards:**
 - FDA 21 CFR 177.1630 (PET), 177.1520 (LDPE)
 - EU 10/2011 (Plastics Regulation)
 - Swiss Ordinance (SR 817.023.21)
 - **Sustainability:**
 - Recyclability: Mono-material LDPE layer facilitates recycling (check local schemes)
 - Heavy Metals: Compliant with EU 94/62/EC (<100 ppm total)
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4. Printing & Customization Options

- **Printing Methods:** Flexographic (up to 8 colors), Gravure, Digital
 - **Surface Treatment:** Corona treatment (≥ 42 dynes/cm) for ink adhesion
 - **Optional Features:**
 - Resealable zippers (FDA-compliant)
 - Tear notches, Euro slots
 - Transparent windows (patch integration)
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5. Target Applications

- ✓ **Dry Foods:** Coffee, snacks, powdered beverages
 - ✓ **Liquids:** Sauces, dressings (with proper seal integrity testing)
 - ✓ **Sensitive Products:** Vitamins, pet food (UV protection via VMPET)
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6. Handling & Storage Guidelines

- **Storage Conditions:** 15–25°C, RH <65% (avoid direct sunlight)
 - **Shelf Life:** 18 months (unprinted rolls in original packaging)
 - **MOQ:** 10,000–50,000 units (varies by design complexity)
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7. Quality Assurance

- **Batch Testing:** OTR/WVTR validation, seal strength checks
 - **Documentation:** COA (Certificate of Analysis), DoC (Declaration of Compliance) available upon request
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Notes:

- For **high-acid or fatty foods**, additional migration testing (e.g., overall migration limit $<10 \text{ mg/dm}^2$) is recommended.
- **BRC/IFS Audit Ready:** Full traceability of raw materials (resin lot numbers, metallization logs).