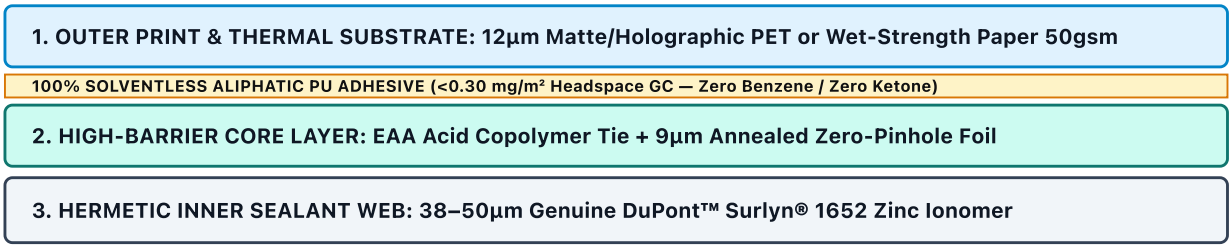
Cosmetic DuPont™ Surlyn® 1652 Sampling Sachets, Mask Pouches & 70% IPA Foil — Engineering TDS

Zero-Delamination Zinc-Ionomer Tie/Sealant Chemistry for Low-pH Vitamin C, Retinol, Essential Oils & SPF

1. MULTI-LAYER CROSS-SECTIONAL POLYMER STACK



Functional Layer	Verified Polymer & Micron Gauge	Converting & Lamination Process
Cosmetic Aesthetic Web	12µm Matte/Holographic PET or Wet-Strength Paper 50gsm	Pantone Metallic Ink, Tactile Soft-Touch & Hot-Foil Ready
Acid/Solvent Barrier	EAA Acid Copolymer Tie + 9µm Annealed Zero-Pinhole Foil	Blocks UV, Oxygen & Terpene/Alcohol Permeation
Chemical-Proof Sealant	38–50µm Genuine DuPont™ Surlyn® 1652 Zinc Ionomer	Seals Directly Through Oil/Cream Contamination @ 112°C

2. LABORATORY PHYSICAL, BARRIER & MIGRATION TEST MATRIX

Parameter	Verified Factory Value	Instrument / Condition	Standard
50°C × 12-Week Aging	Tested with 15% L-Ascorbic Acid (pH 2.8), 1% Retinol & SPF50	Bond Decay < 0.3 N/15mm (Zero Foil Blistering)	`ISO 11980 Stability`
70% IPA Wipe Weight Loss	36-Month Moisture/Alcohol Loss < 0.4% Gross Weight	4- to 12-Lane High-Speed Swab & Wipe Web	`USP <671> Permeation`
Laser Easy-Tear Score	CO2 Precision Laser Ablation Depth ±4µm (Outer PET Only)	Effortless Straight Tear (<2.2 N) with 100% Foil Intact	`Zero Spill Tear`
Dual-Chamber Frangible	Calibrated Center Burst Seal (18–26 N) Mixing Liquid + Cream	Activates Cleanly on Thumb Squeeze without Outer Rupture	`Luxury Sampling`

3. HIGH-SPEED FILLING MACHINE & HEAT-SEALING OPERATING WINDOW

Pre-Made Rotary & Inline Pouch Fillers

Validated on Toyo Jidoki, Mespack, Volpak, Bossar & Rezpack (35–90 ppm). Bag flat camber <1.0 mm ensures 99.8% vacuum pick-up reliability. Recommended jaw pressure: 0.28–0.35 MPa; dwell: 0.45–0.70 s.

VFFS / HFFS / Stick-Pack Web Tracking

Calibrated kinetic COF (μk = 0.19 ± 0.03) prevents forming-collar stick-slip on Syntegon/Bosch, Viking Masek, Rovema & Ilapak lines up to 600 packs/min. Heavy-wall 76 mm / 152 mm cores.

4. PRE-PRESS ARTWORK BLEED, PHOTO-EYE MARK & ZIPPER/VALVE CLEARANCES

CAD Dieline Element	Mandatory Tolerance	Production & Filling-Line Purpose
Outer Bleed & Safety Margin	+3.0 mm bleed · -4.0 mm inner text safe zone	Eliminates white edge flash during high-speed rotary slitting (±0.15 mm)
Heat-Seal & Gusset Ink Mask	Optional matte/heat-resistant overprint lacquer	Prevents jaw ink transfer at 145°C–195°C sealing temperatures
Photo-Eye Registration Mark	10 mm × 5 mm solid high-contrast block (≥85%)	Clear unobstructed track for SICK / Keyence optical cut-off sensors
Laser Tear Score & Zipper Axis	Zipper center 32–38 mm from top; laser score -12 mm	Clean consumer thumb-opening without tearing into zipper flange
Barcode / DataMatrix Contrast	Opaque double-white ink backing (≥82% reflectance)	Guarantees ANSI Grade-A retail & GS1 / Chestny ZNAK scan rates

Complimentary Pre-Production Line Trial Policy: Prior to bulk printing, Alex Gao's engineering lab dispatches free unprinted trial pouches or 50–100m test rolls matching exact micron structure so your co-packer can verify jaw temperatures, autoclave F0 profiles, or 50°C cosmetic stability.

5. FACTORY-DIRECT TIERED REFERENCE MATRIX (HP INDIGO DIGITAL VS. 10-COLOR ROTOGRAVURE)

Format / Specification	HP Indigo Digital	Mid-Scale Run	High-Volume Rotogravure
2mL–5mL 4-Side-Seal Serum Sachet (Surlyn® 1652)	5,000 pcs ($0.052)	25,000 pcs ($0.029)	**100,000+ pcs ($0.019)**
25mL–35mL Facial Sheet Mask Pure Foil Pouch	3,000 pcs ($0.088)	15,000 pcs ($0.052)	**50,000+ pcs ($0.036)**
Dual-Chamber Fresh-Mix Cosmetic Sachet (2×2.5mL)	10,000 pcs ($0.085)	30,000 pcs ($0.056)	**100,000+ pcs ($0.039)**
70% IPA Antiseptic Wipe Surlyn® Foil Rollstock	300 kg ($6.40/kg)	1,000 kg ($5.45/kg)	**3,000+ kg ($4.95/kg)**

6. CLEANROOM EXPORT CARTON, PALLETIZATION & BATCH COA PROTOCOL

Stage	Standard Operating Specification	Verification Document
Inner Sanitary Liner	Antistatic food-grade virgin PE inner bag heat-sealed inside cleanroom	ISO Class 8 Lot Traceability Label
Export Corrugated Box	Double-wall 5-ply BC-flute Kraft carton (ECT ≥ 44 lb/in · gross ≤ 18 kg)	Drop-Tested Carton Corner Guards
FCL / LCL Palletization	Heat-treated ISPM-15 fumigation-free pallets + LLDPE stretch hood + desiccant	Container Loading Photo Report
Mandatory Release COA	MOCON OTR/WVTR, Instron ASTM F88 seal curve & Agilent 8890 GC solvent chromatogram	PDF + Printed COA in Carton #1

Request Your Custom 1:1 Vector Dieline & Free 25-Pouch Sample Kit (2-Hour SLA):

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