

A COSMO FIRST GROUP COMPANY

PRODUCT PORTFOLIO

Coating Solutions for Packaging, Print & Lamination

Water & solvent-based functional coatings engineered for heat sealing, barrier
Barrier Properties, Printability and with Premium Finishes backed by
state-of-the-art R&D.

CosmoSeal™
Heat Seal

CosmoPaperX™
Paper Barrier

CosmoPrime™
Primers

CosmoFlex™/Jet™
Printable

CosmoDigi™
HP Indigo

CosmoTherm™
Direct Thermal

ScuffX™/Sensia™
Surface Finish

CosmoSeal™ 601

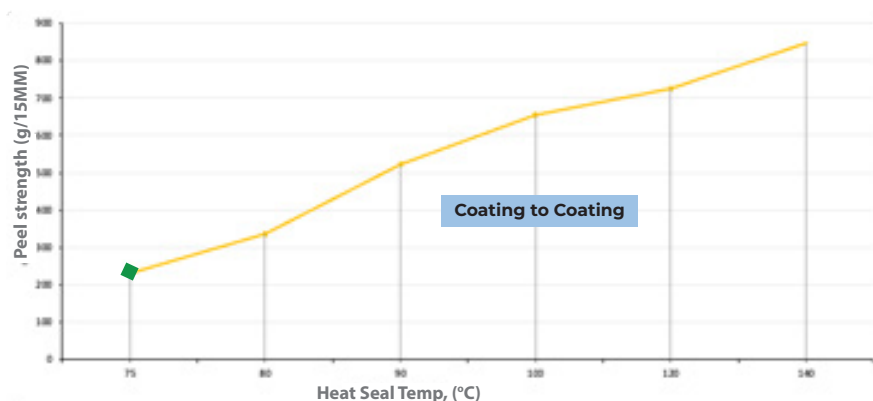
- CosmoSeal™ 601 is a water-based heat seal coating designed for foil used in packaging applications.

Product Key Features:

- Low SIT and excellent heat sealing
- Suitable for 2-ply and 3-ply foil
- Low COF for smooth high-speed processing
- Excellent antifoam and blocking resistance properties
- US/FDA compliant (175.300) for Direct Food Contact

Heat Sealing at Low Temp.:

- Heat Seal Parameter: 2.7 Bar, 0.5sec;
- Peel Mode: 180°, 100mm/min



High Speed Processability

- Low COF for smooth high-speed packaging line performance

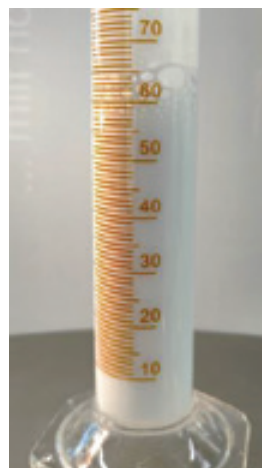


CosmoSeal™ 601

Coating Foam Analysis:

Coating with
foaming

CosmoSeal™
601



Pinholes, craters
& surface defects
visible



Smooth uniform
coating with no
defects

No Off-Odour

- Sensory evaluation ensures No Off-odour transfer from the coating
- Maintains product's taste, aroma, and overall quality
- No detectable odour in CosmoSeal™ 601 coated foil



CosmoSeal™ 601 Application



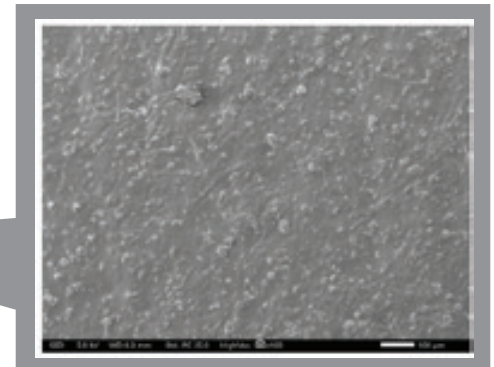
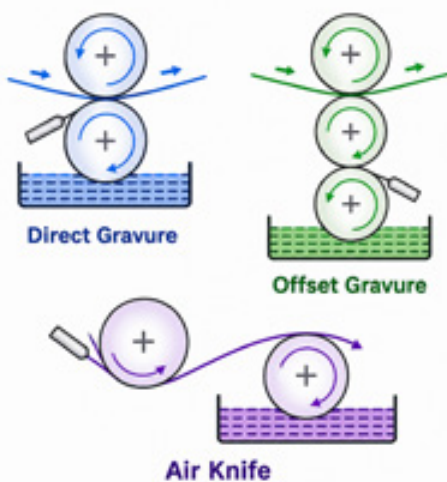
CosmoPaperX™ OGR 145S

- CosmoPaperX™ OGR 145S is a water-based oil, grease and water-resistant barrier coating with heat-sealable functionality.

Product Key Features:

- Excellent oil and grease resistance
- Good resistance against water and moisture
- Heat sealable
- US/FDA compliant (175.300) for direct food contact
- Anti-blocking property

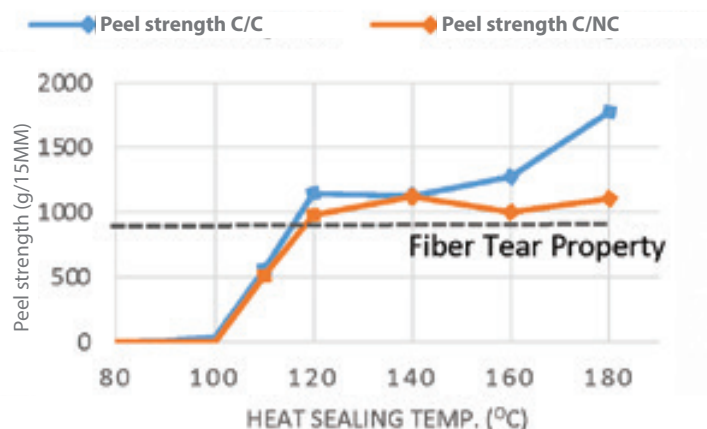
Suitable for Various Coating Techniques



CosmoPaperX™ OGR 145S Coated Paper

Heat Seal Strength

Heat Seal Parameter: 2.7 Bar, 2sec;
Peel Mode: 180°, 100mm/min
Paper GSM: 235 GSM



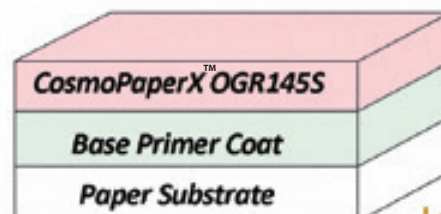
Water Cobb Index: (on Paper GSM 150-240 GSM)



Typical Performance:

- Water Cobb_{120s}: <3
- Water Cobb_{180s}: <10

Barrier with Heat Sealable Property



Recommended Structure and its feature

Oxygen Transmission Rate (OTR) 23°C/50% RH cc/(m²-day)

Low Barrier Paper **Medium** Barrier Paper
n/a <3

Vapor Transmission Rate (MVTR)(23°C/90%RH g/m²-day)

>50 20-50

Barrier Application with HSL: in Low Barrier Paper for frozen food, baked goods and Medium Barrier Paper for Candy Bars, Tea Bags

Paper Substrate

CosmoPaperX™ OGR145S

CosmoPaperX™ OGR145S

Paper Substrate

<Coating to Coating>

Paper Substrate

CosmoPaperX™ OGR145S

Paper Substrate

CosmoPaperX™ OGR145S

<Coating to Non-Coating>

CosmoPaperX™ OGR 145B

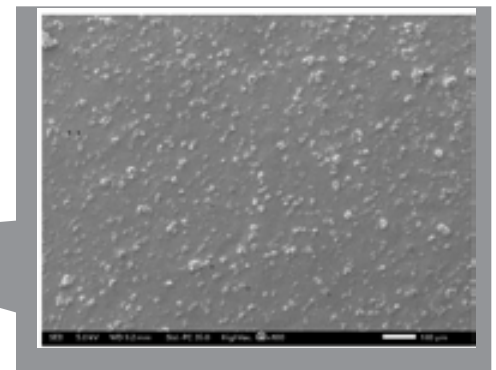
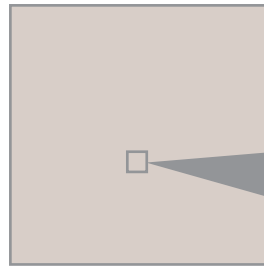
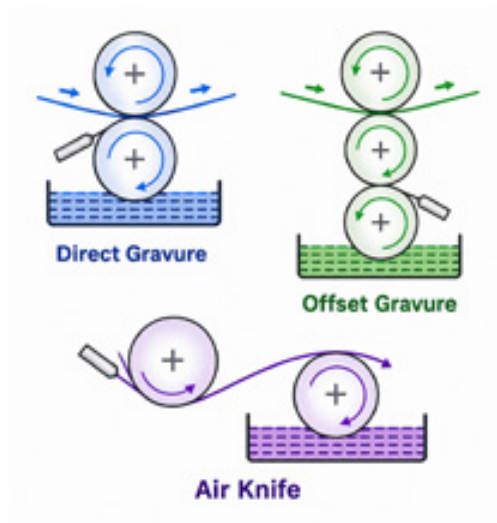
- CosmoPaperX™ OGR 145B is a water-based oil, grease and water-resistant barrier coating.

Product Key Features:

- Excellent oil and grease resistance
- Good resistance against water and moisture
- Heat resistant grade
- Anti-blocking property
- US/FDA compliant (175.300) for direct food contact



Suitable for Various Coating Techniques

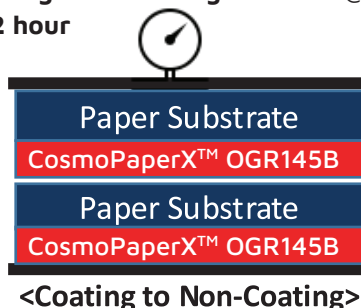


CosmoPaperX™ OGR 145B Coated Paper

Anti-Blocking Property

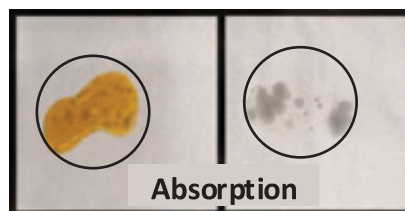
Paper GSM: 130 GSM;

Blocking under 500kg Pressure @ 40°C temp for 2 hour

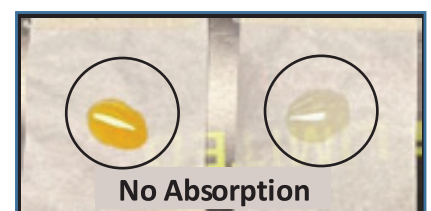


Oil- Resistant Property

- Mustard & Soya oil was dropped onto CosmoPaperX™ OGR 145B coated paper to confirm its oil resistance.
- 8+ KIT Passed



No Coating



OGR145B Coating

Heat Resistant Property



- Heat-Resistant (Up to 200–250°C) retains coating performance during plate and bowl moulding.
- Suitable for hot food serving and catering applications.

Water Cobb Index: (on Paper GSM 150-240 GSM)



Typical Performance:

- Water Cobb_{120s}: <5
- Water Cobb_{1800s}: <15

CosmoPaperX™ OGRGL

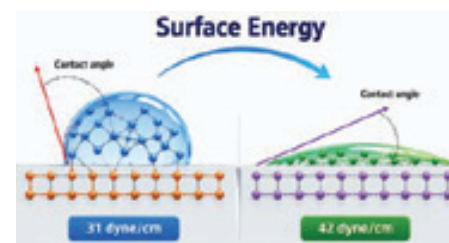
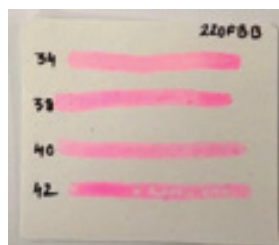
- OGR-GL is a water-based functional coating that delivers enhanced glueability for coated paper and paperboard, enabling strong adhesion and efficient converting

Product Key Features:

- Excellent oil-grease resistance
- Moderate resistance against water and moisture
- Glueable PSA & HM adhesive
- US/FDA compliant (175.300) for direct food contact
- Coater-ready formulation for gravure, flexo, reverse roll, air knife or Mayer bar
- Ideal for paper-based QSR packaging, takeaway packs, and foldable boxes



CosmoPaperX™ OGRGL Coated Paper



• CosmoPaperX™ OGRGL Application

- Surface Energy with 40 dyne/cm Supports Glueability

CosmoPaperX™ X01S

- CosmoPaperX™ X01S is a water-based heat-sealable coating designed to provide strong heat sealing on paper and paperboard

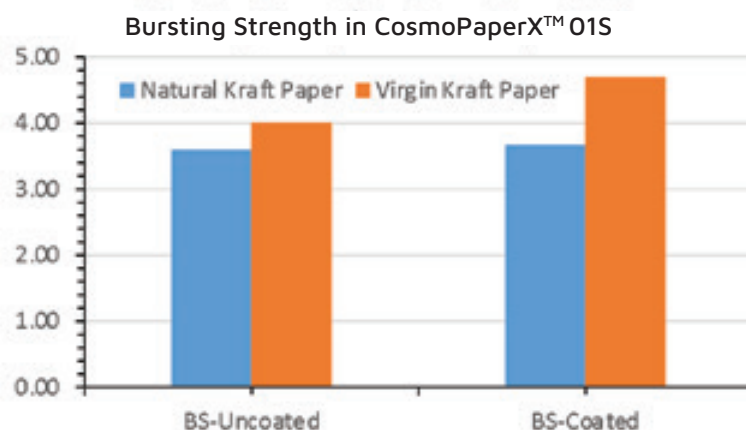
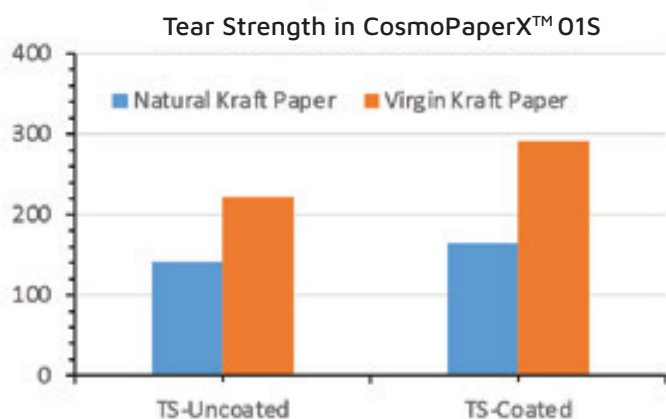
Product Key Features:

- Excellent heat sealing at low temp
- Moderate resistance to water
- Helps to increase the paper strength and weight handling
- Coater-ready formulation for gravure, flexo, reverse roll, air knife or Mayer bar



CosmoPaperX™ 01S Application

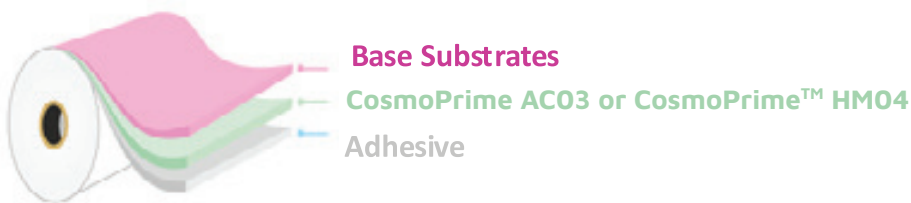
CosmoPaperX™ 01S Coated Paper: Tear Strength and Burst Strength



- A primer is a specially formulated coating applied to material surfaces including film, foil, or paper to improve surface energy.

Product Key Features:

- Improves bonding with adhesives.
- Improved initial tack & peel strength
- Works on PP, PE, PET, foils, and speciality papers.
- Ensures quick bonding and clean, residue-free panels



CosmoPrime™ AC03

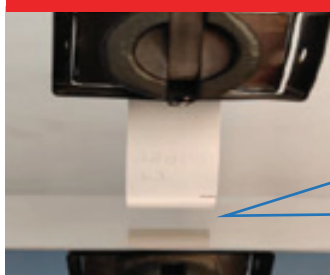
- CosmoPrime™ AC03 is a specially formulated adhesive primer designed to improve bonding between face materials and aggressive acrylic adhesives.

Loop Tack: FINAT Test Method No. 9

Without Primer Coating



CosmoPrime Coating



- Panel remains clean and residue-free
- Controlled tack with balanced adhesion

CosmoPrime™ HM04

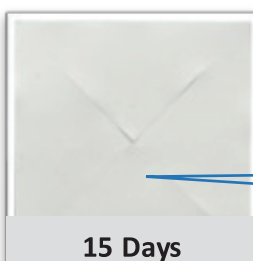
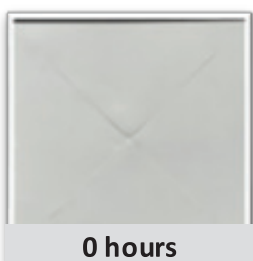
- CosmoPrime™ HM04 is a water-based barrier coating developed to prevent adhesive migration into the face material

Curling & Migration Test:

- Temperature: 50°C
- Sample size: 10 x 10 cm laminate

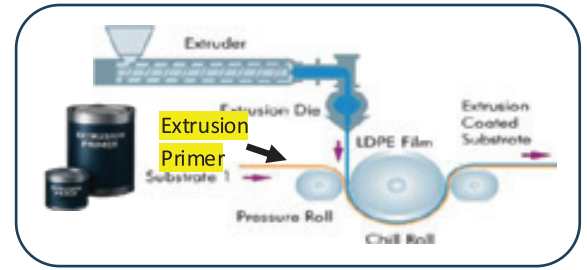
Primer Coating for Hot Melt Adhesive

Reg. Primer Coating

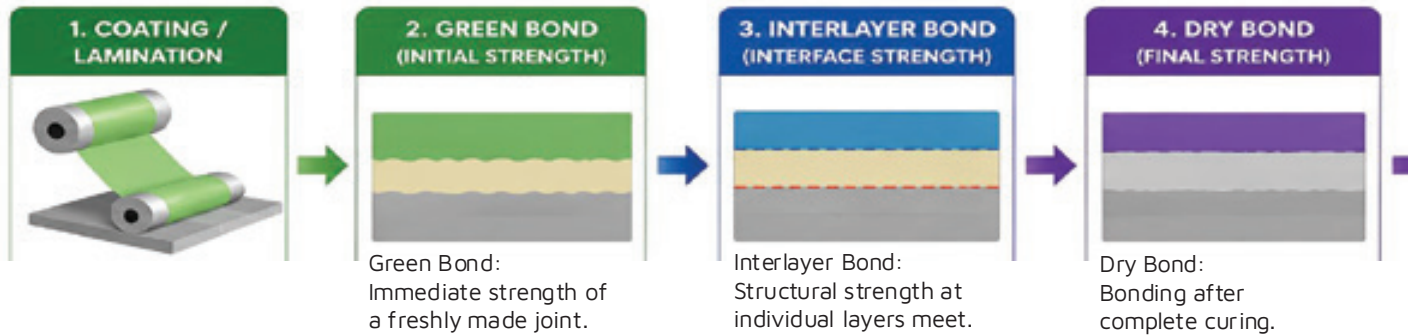


- Film remains dimensionally stable
- Confirms excellent resistance to adhesive migration

- Extrusion primers improves surface properties and enhances bonding with molten PE, EVA, ensuring better laminate strength and long-term performance.



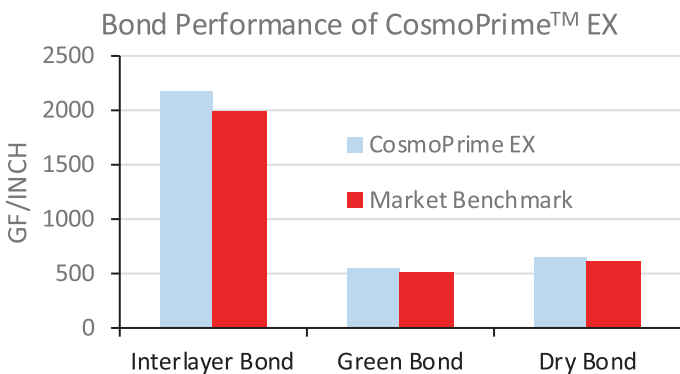
Bonding Development



CosmoPrime™ EX:

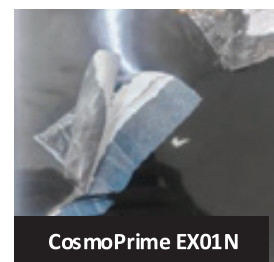
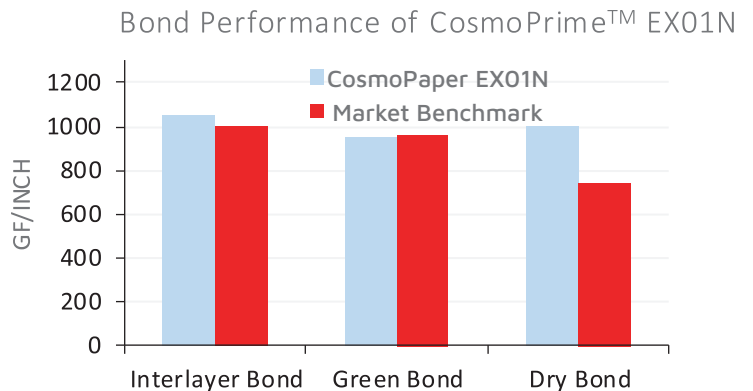
CosmoPrime™ EX is a water-based extrusion primer for strong EVA and PE adhesion to BOPP and PET.

Bonding Performance



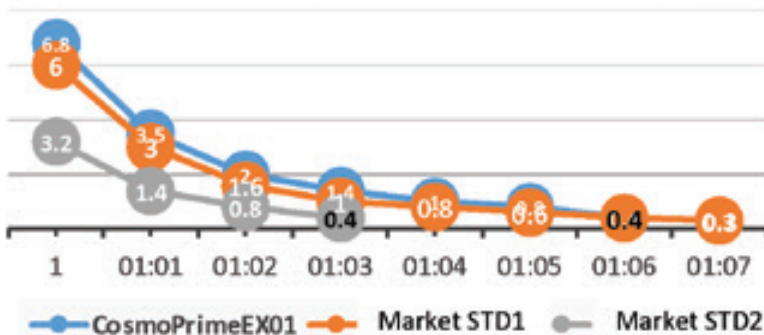
CosmoPrime™ EX01N:

CosmoPrime™ EX01N is a water-based extrusion primer for strong EVA and PE adhesion to PET and nylon.

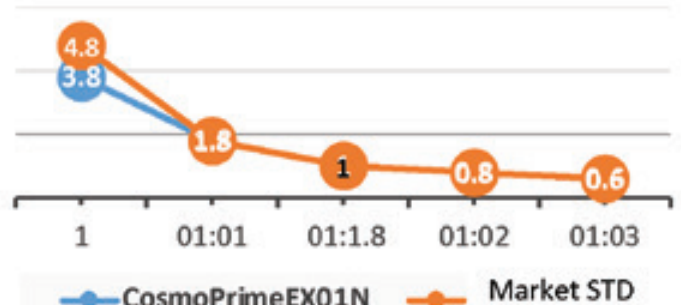


Recommended dilution:

RI with Recommended Dilution for CosmoPrime™ EX



RI with Recommended Dilution for CosmoPrime™ EX01N



Eco-friendly primer that improves printability and adhesion of water-based and UV-cured inks for flexible packaging and label applications.

- **CosmoFlex™ CB01** – Suitable for BOPP Films
- **CosmoFlex™ CP02** – Suitable for PET Films

Product Key Features:

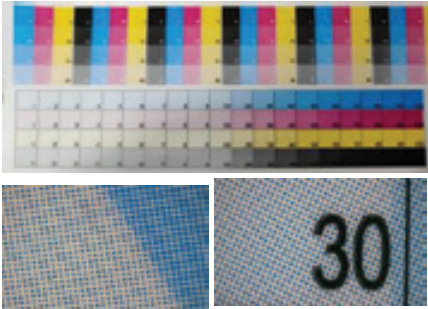
- Ready-to-use solution
- Superior adhesion on films
- Excellent deep-freeze and cold-water resistance
- Broad ink compatibility (Water-based & UV flexo, UV offset, TT printing, screen & letterpress)



Print Adhesion on Films:

Parameter	CosmoFlex™ CB01	CosmoFlex™ CP02
Base film	White BOPP	White PET
Ink pick-off test	100% Pass	100% Pass
Tape test (cross-hatch/5B)	5B - No ink peel-off	5B - No ink peel-off
Finger rub test	Good rub resistance	Good rub resistance

- Ink anchorage and printability evaluation on CosmoFlex™ substrates.



Print Quality under storage condition:

- **Cold water** test to ensure label adhesion and print durability under real-life cold storage and wet conditions.

- Printed films are immersed in cold water at 2–3°C for 2 hours,
- Evaluated for adhesion and ink resistant.

Cold Water Test	Tape Test	Crock Meter Rubbing Test
CosmoFlex™ CB01	100% Pass	Above 25 cycles
CosmoFlex™ CP02	100% Pass	Above 25 cycles



- **Deep freezer** test ensure labels remain firmly adhered and maintain print quality under real cold-storage conditions

- Printed samples are kept for 48 hrs at a temp. between –15 °C and –20 °C

Deep Freezer Test	Tape Test	Crock Meter Rubbing Test
CosmoFlex™ CB01	100% Pass	Above 25 cycles
CosmoFlex™ CP02	100% Pass	Above 25 cycles



High-performance printable coatings designed for HP Indigo presses, available in both inline and offline formats

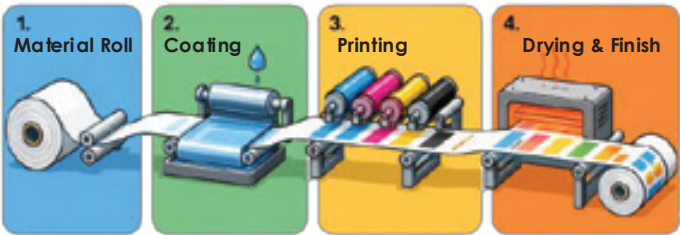
- **CosmoDigi™ 001** – Offline HP Indigo Printable Coating
- **CosmoDigi™ I02** – Inline HP Indigo Printable Coating



Product Key Features:

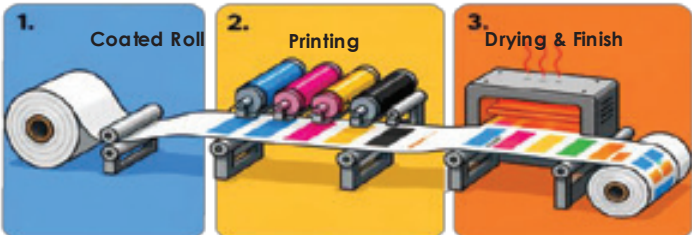
- 100% ink anchorage with no ink picking and excellent dot gain (inline & offline)
- Easy cleaning — no primer residue on coating rollers even after long runs
- No foaming or gel formation in the priming tank during continuous operation
- No blanket memory or static issues observed in long runs

Inline Coating:



- Coating applied during printing process
- Speeds up production, no extra handling

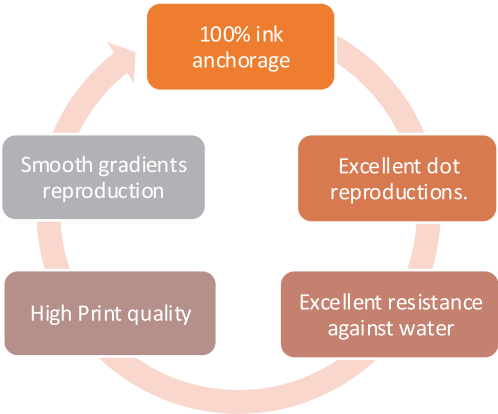
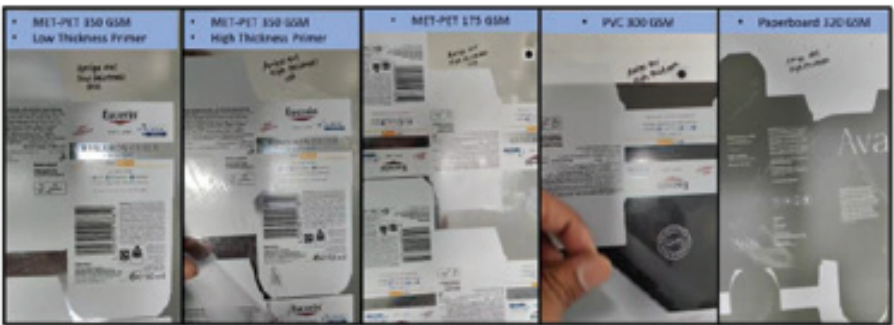
Offline Coating:



- Coating applied before printing in separate process
- Enables specialized finishes and effects

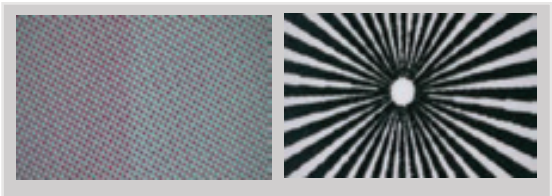
CosmoDigi™ I02:

- CosmoDigi™ I02 tested on HP Indigo 6K, 25K & 18K series shows excellent anchorage and print quality.
- Competitorsoffers separate solutions for each HP printer series, while Cosmo has developed a universal solution compatible across multiple HP printers.

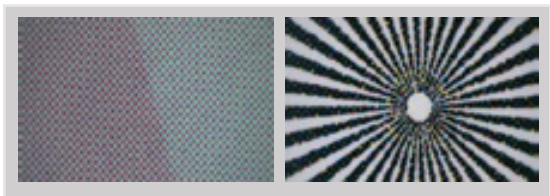


CosmoDigi™ I02 Performance:

- Evaluation of print quality, dot reproduction, and line sharpness on coated substrates



CosmoDigi™ I02



Market Product

Direct Thermal Printable Water-based coating that delivers high-quality, ribbon-free printing on paper and films.

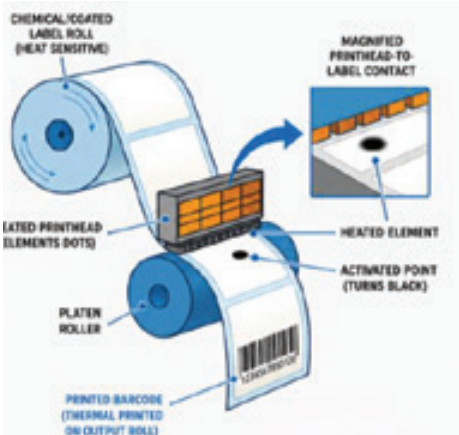
The basic layer structure is:
base paper or film active thermal coating topcoat.

Topcoat: provide protection against abrasion, moisture, chemicals, and UV exposure, helping to preserve print legibility and extend image life.



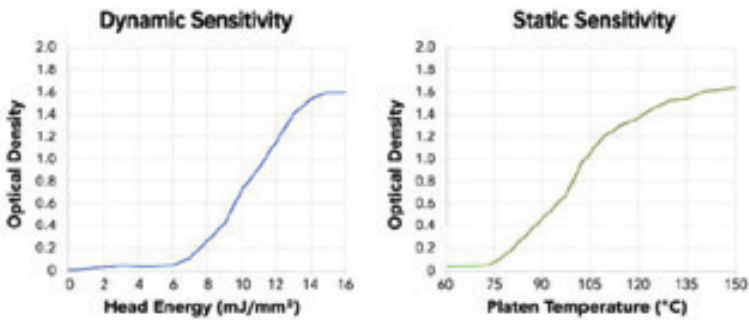
Product Key Features:

- Resistance to fading and humidity
- Resistance to water, oil and alcohol
- Suitable to print with UV flexo
- High brightness alcohol
- No ribbon disposal



Direct Thermal Printing Process

Thermal Imaging Performance of DTP Coating



Thermal Stability and Image Retention - DTP Top Coated Product

Test Parameter	Unit / Test Method	Coated Products
Ageing at 60 °C for 24 h	% Background Density Increase	15
Ageing at 90 °C for 1 h	% Background Density Increase	100
Ageing at 100 °C for 3 min	% Background Density Increase	557
Ageing at 40 °C, 48 h, 75% RH	% Image Loss	20

CosmoSensia™01

Lamination Coating-Velvet Finish

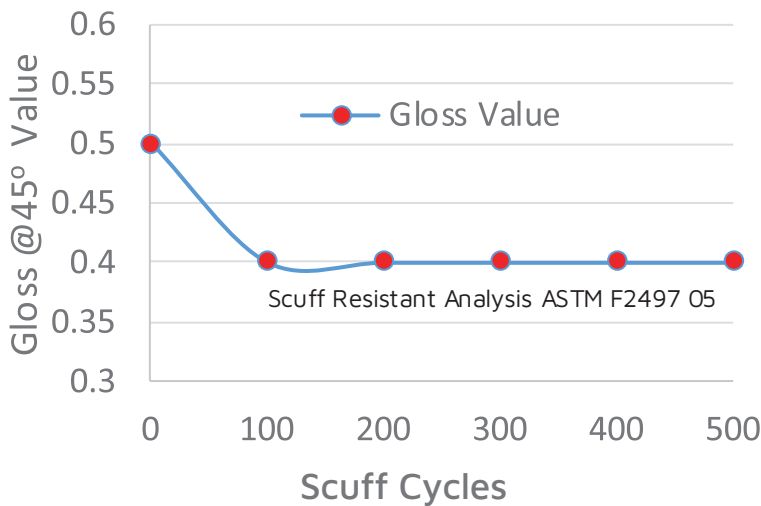
CosmoSensia™ 01 :

Velvet coating is a special surface coating that gives materials a soft, smooth, and luxurious “velvet-like” touch and appearance

Product Key Features:

- Creates a soft, velvety premium finish
- Enhances brand identity with a luxurious look and feel
- Suitable for post-lamination processes like spot UV, foil stamping, and printing
- Suitable for gold and silver embossing for visual enhancement
- Durable and scuff-resistant

CosmoSensia™ 01 Velvet Coating

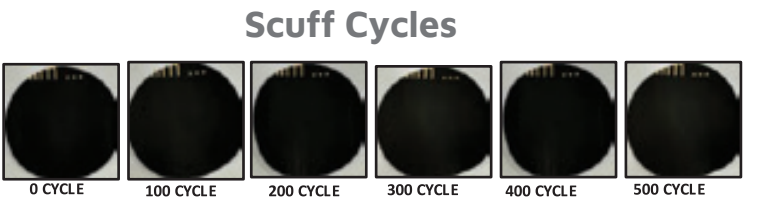


Scratch Resistant:

(Scuff Resistant Analysis ASTM F2497 05)

Typical Performance:

- Rotational speed of 60 ± 1 RPM,
- Uniform test load of 2 PSI



CosmoScuff™ 01

Lamination Coating - Gloss & Matt Finish

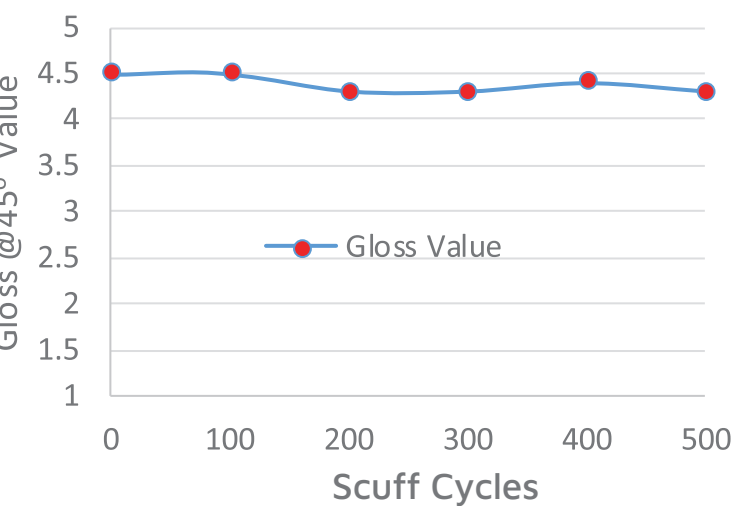
CosmoScuff™ 01 :

CosmoScuff™ coating is a protective layer applied laminated surfaces to prevent scratches, rub marks, and surface damage.

Product Key Features:

- Excellent resistance to scuff marks
- Compatible with UV spot coating, foil stamping, and embossing
- Protects printed surfaces from scuffs and abrasion
- Maintains a premium appearance throughout handling.

Cosmo Scuff™01-Scratch Resistant Coating



Scratch Resistant:

(Scuff Resistant Analysis ASTM F2497 05)

Typical Performance:

- Rotational speed of 60 ± 1 RPM,
- Uniform test load of 2 PSI



ABOUT PARENT COMPANY

Established in 1981 by Mr Ashok Jaipuria, Cosmo First Limited is an over four-decade-old global conglomerate. Its consumer vertical comprises Cosmo Consumer, which is into Window Films, Paint Protection Films & Ceramic Coatings for automobiles, and Zigly Pet Care, which provides a digital-first omni channel pet care ecosystem. Its industrial vertical includes Cosmo Films for speciality films for packaging, labels, lamination, and industrial applications; Cosmo Speciality Chemicals for coatings, adhesives and masterbatches, and Cosmo Plastech for rigid packaging. With sustainable innovation, development, and research embedded in its core values, Cosmo First serves customers in 100+ countries.

RESEARCH & DEVELOPMENT

Our cutting-edge R&D facility is equipped with a comprehensive suite of advanced analytical and processing instruments, enabling precise product characterization and innovation at the molecular level.

- Analytical Capabilities: FTIR, FTIR-Microscope, DSC, TGA, DMA, GC-MS, SEM-EDS, Optical Microscope, Particle Size Analyzer, Intrinsic Viscosity Analyzer, and Filter Pressure Test Machine.
- Processing Capabilities: Blown Film Line, Cast Film Line, Twin Screw Lab Extruder, and Advanced Film Stretcher (KARO-IV).

With this robust infrastructure, our scientists deliver precision, reliability, and breakthrough innovation in every stage of product development.



Head Office / Delhi Sales Office

1st Floor, Uppal's Plaza, District Centre, M-6,
Jasola Vihar, New Delhi, Delhi - 110025

Mumbai Sales Office

402, E-Square, 4th floor, Subhash Road, Near Garware
House, Vile Parle East, Mumbai - 400057

Manufacturing Unit

B-10, MIDC Area, Waluj, Chhatrapati Sambhajnagar
Maharashtra - 431136