



COATING PLASMA INDUSTRIE

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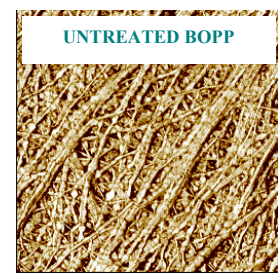
*Flexible packaging suppliers and converters, get more value-added products, have access to new applications and penetrate new market sectors by using industrial surface treatments under atmospheric and low pressure cold plasma conditions.*

*Thanks to its high-tech manufacturing equipments, CPI will ensure your product and market requirements at very competitive costs compared to standard treatments.*

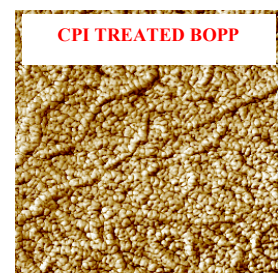
## CPI PRODUCTS

- **A large panel of surface treatments**
  - ✓ Increase of surface energy
  - ✓ Permanent modification of surface wettability
  - ✓ Improvement of bio-compatibility properties
  - ✓ Barrier coatings
  - ✓ Anti-fog coatings
  - ✓ Surface functionality
- **All type of substrates, 2- and 3-dimensional**
  - ✓ Plastics and bio-polymers
  - ✓ Metals
  - ✓ Ceramics
  - ✓ Glasses
  - ✓ Flat films
  - ✓ Products with complex geometry
  - ✓ Powders
- **Competitiveness based on technological knowledge**
  - ✓ New processes developed by our engineering team
  - ✓ Efficiency of treatment controlled by specific tests (standard tests methods)
  - ✓ Preferential partnership with BIOPHY RESEARCH for surface analyses

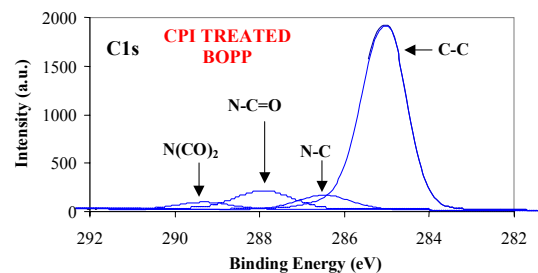
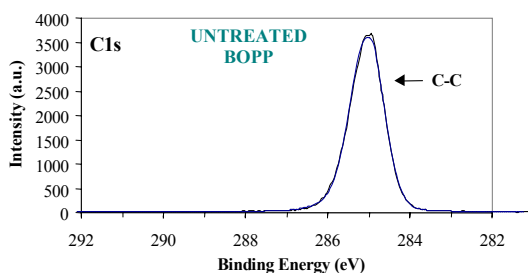
*Morphology evolution of Aldyne™ CPI treated BOPP AFM analyses*



0 1.00 µm  
Data type Phase  
Z range 30.0 de



0 1.00 µm  
Data type Phase  
Z range 20.0 de



*Chemical surface evolution of Aldyne™ CPI treated BOPP – XPS analyses*

## CUSTOMERS SERVICES

- **Supplying of manufactured products**
- **Custom applications under industrial subcontract**

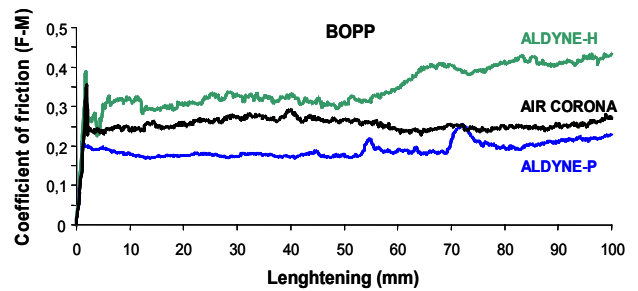


## ALDYNE™ PROCESS

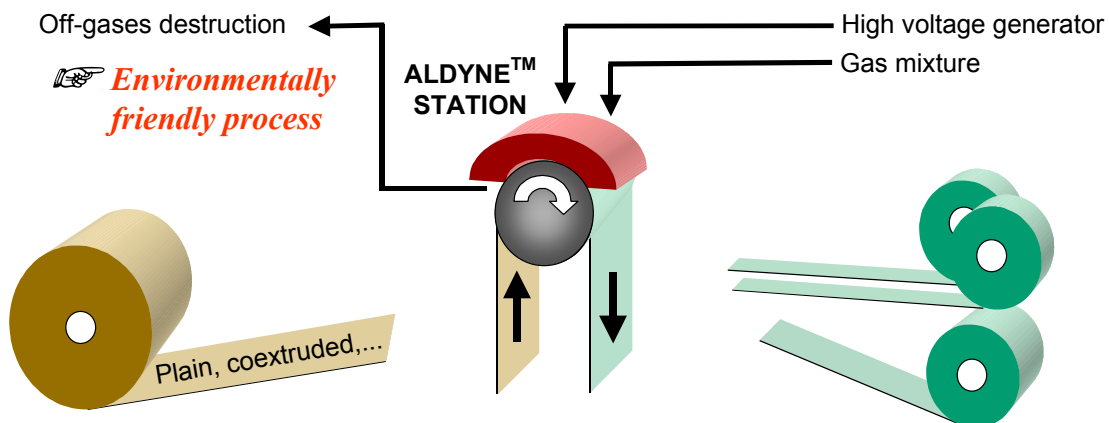
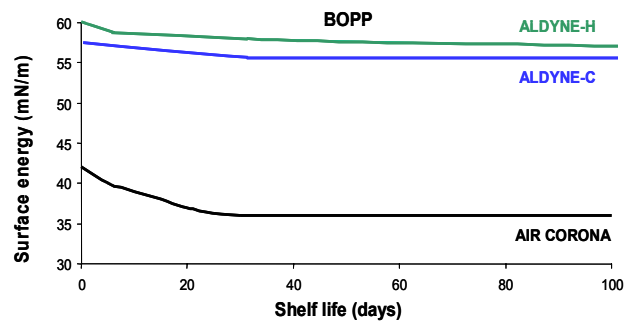
CPI provides modifications of polymer surfaces using Aldyne™, an atmospheric cold plasma process developed by AIR LIQUIDE and SOFTAL GmbH. This chemical functionality grafting process is particularly suitable for flexible packaging and other plastic film converting industries :

- **On a large range of substrates**
  - ✓ Polymer films and non wovens (BOPP, PP cast, PE, PA, PET or PVC), papers and metals (Al)
  - ✓ Any width up to 2.0 m
- **With exclusive surface performances**
  - ✓ High level and stable surface energy
  - ✓ High level and permanent wettability
  - ✓ Adjustable coefficient of friction
  - ✓ Anti-blocking effect
- **Allowing exceptional advantages**
  - ✓ Suppression of adhesion primers
  - ✓ Printing with all types of inks (water-based, solvent-based, UV curable)
  - ✓ Improve adhesion of laminate, metallized, and varnished films

Coefficient of friction modulation after Aldyne™ CPI treatment (film / metal COF)



Surface energy evolution after Aldyne™ CPI treatment



### CPI treated film according to the customer requests

#### Adjustable dimensions

- Width.....200 - 2000 mm
- Core diameter.....76 / 152 mm
- Outer diameter...≤800 mm

#### New surface properties without any primer addition

- Printable film with all type of inks (water, solvent, UV)
- Improvement of adhesion quality
- Adjustable coefficient of friction

⇒ **A HIGH QUALITY FILM AT A VERY COMPETITIVE COST**