



## Eco-friendly, Recyclable Metallized Coatings

Successfully tested  
in Accordance with  
US Industry Standards

**SINGULUS** 

# DECOLINE II

Eco-friendly, Recyclable Metallized Coatings from SINGULUS TECHNOLOGIES



**Green  
Metallizing**



**Chrome (VI)-  
free**



**Cost  
Effective**



**Reliable  
Process**



**Sustainable  
Process**

## SINGULUS TECHNOLOGIES: Recyclable and Sustainable Metallized Coatings

SINGULUS TECHNOLOGIES has produced metallized finishes on PET plastic that have passed the key recyclability tests including:

- » Metal detection
- » NIR resin identification

Successfully tested in accordance with US industry standards. These coatings are significantly eco-friendly as compared to conventional metallizing processes.

- » On many substrates (including PET, SAN, and glass) resin-based spray primers and topcoats can be avoided
- » Substantially less energy is required to apply the coatings (70 %+ reduction, cost savings)
- » Zero VOC emission processes with no EPA reporting requirements are possible
- » Eco-friendly, low-energy lasers can be utilized to create a wide range of print decorations

The SINGULUS TECHNOLOGIES metallizing equipment and technology is onshore-ready:

- » The machine footprint can be as small as an injection molding machine
- » Our inline process is available with robotic part handling automation minimizing labor requirements
- » Onshoring the metallizing and deco processes closer to final package filling furthers environmental stewardship
  - › Avoids sea transportation which uses the least eco-friendly fossil fuel blends
  - › US electrical power generation sources are cleaner than most Asian sources (Renewables/Nuclear & Nat. Gas versus Coal & Oil)
- » The coatings are safe, non-toxic, Prop 65 compliant, and utilize plentiful materials (no rare minerals nor precious metals)





**DECOLINE II**  
Turnkey Production System

SINGULUS TECHNOLOGIES is a leading global provider of innovative production technologies for the manufacturing of high-tech products. The company's core competencies include various processes of coating technology (PVD sputtering, PECVD, evaporation), surface treatment as well as wet-chemical and thermal production processes.

Metallized coatings are widely used in various industries, including automotive, electronics, packaging, and more. They provide aesthetic appeal, enhance durability, and offer functional properties like heat resistance, electrical conductivity, and corrosion resistance.

However, traditional metallized coatings often involve the use of non-recyclable materials and harmful substances, posing environmental concerns.



**PAINTLINE**  
Inline Lacquering System

**POLYCOATER**  
PVD/Sputtering System

Subsidiaries  
Offices



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THIN FILM  
DEPOSITION

SURFACE  
ENGINEERING

THERMAL  
PROCESSING

WET  
CHEMICAL

**SINGULUS TECHNOLOGIES - Thin-Film Coating and Surface Treatment**

*SINGULUS TECHNOLOGIES develops and assembles innovative machines and systems for efficient thin-film coating and surface treatment processes, which are used worldwide in the Photovoltaics, Semiconductor, Medical Technology, Packaging, Glass & Automotive as well as Battery & Hydrogen markets.*

*The company's core competencies include various processes of coating technology (PVD sputtering, PECVD, evaporation), surface treatment as well as wet-chemical and thermal production processes.*

*SINGULUS TECHNOLOGIES sees sustainability as an opportunity to position itself with innovative products. In the focus are environmental awareness, efficient use of resources and avoidance of unnecessary CO<sub>2</sub> pollution.*

*SINGULUS TECHNOLOGIES attaches great importance to responsible and sustainable corporate governance.*