Practical example

Lankwitzer Premium Coatings

Advantages

- Environmentally-friendly, ultra-fast coating process thanks to 100% solvent-free UV paint technology.
- Excellent adhesion to ABS, PC, PP and other substrates.
- Maximum yield due to 100% solids and recyclability.
- Immediate fault detection; as a result, significant reduction in defective parts.
- The finest brilliance combined with the highest mechanical and chemical resistance.

100% UV = 100% satisfaction with cosmetic packaging

VOC-free UV paint system combined with metallisation for the highest aesthetic demands on cosmetic packaging

Today, manufacturers of cosmetic packaging expect millions of painted parts with scratch-resistant surfaces and a perfect mirror finish that is achieved in an efficient and environmentally-friendly process. Is this possible?
Yes, the solution is a 100% VOC-free UV paint system and metallisation.
Efficiency comes from process speed and high reproducibility with low space requirements. 100% UV paints, applied by hot spraying, are levelled in no more than 15 seconds and cure in 2-5 seconds when exposed to special UV lamps. Long drying ovens and explosion-proof equipment are no longer necessary. Plastic elements are coated in-house as standard on extremely compact coating lines at speeds of 8 – 10 m/min. After a few minutes of curing under UV light, the coated parts are immediately ready for packaging.
By adding special transparent dye solutions, we provide high-gloss clear paints in a very wide range of colours. They can be printed or embossed according to customer specifications using special settings of the coating systems.

Description of coating process

Objects coated

Cosmetic packaging, e.g.:
caps, rings, closures, flacons

Material

ABS, PP, PC, Surlyn and others

Coating line

Hot spraying with compressed air, automatic coating lines, parts are on spindles or rails

Coating process

- Pretreatment: ionisation, for PP
  flame treatment or special adhesive primer
- UV primer/undercoat
  - Paint temperature 60 – 80 °C
  - Nozzle 0.3 – 0.5 mm (max. 8 mm)
  - Levelling zone 10 – 20 s (IR optional)
- UV drying 3 – 5 s
  Hg emitter, output ≥ 120 W/cm
- Metallisation (Al, Cu, stainless steel) or coating with top coat
  - Paint temperature 60 – 80 °C
  - Nozzle 0.3 – 0.5 mm (max. 8 mm)
  - Levelling zone 10 – 20 s (IR optional)
- UV drying 3 – 5 s
  Hg emitter, output ≥ 120 W/cm

Properties/Approvals

- Loreal QAC-MC-828 F
  Avon
  Estée Lauder
  and many other company standards
- Resistance to filled product
  Fragrances/perfumes and creams

Materials Used

- UV metallising primer
  EvoPrime 480 Series - 100% UV paint
- UV-silvering coat
  EvoDecor 470 Series – 100% UV top coat
- Optional – EvoPrime 322
  as bonding agent for PP

Technical data (example)

EvoPrime 480, EvoDecor 470

Viscosity at delivery	25 – 35 s 4 mm DIN 53211, 20 °C
Weight solids	100%
Volume solids	100%
Density	1.08 g/cm³