

How UV-Curable Varnish and Water-Based Coatings Differ on Your Prints

Description

default watermark

The difference between an inkjet printhead-applied varnish, a UV coating, and a water-based coating on digitally printed truck curtains is significant in terms of chemistry, durability, flexibility, environmental impact, cost, and long-term performance.

1. Inkjet Printhead-Applied Varnish (UV)

UV Inkjet varnish or clear coating, liquid lamination, lacquer appears similar in finished appearance

Advantages

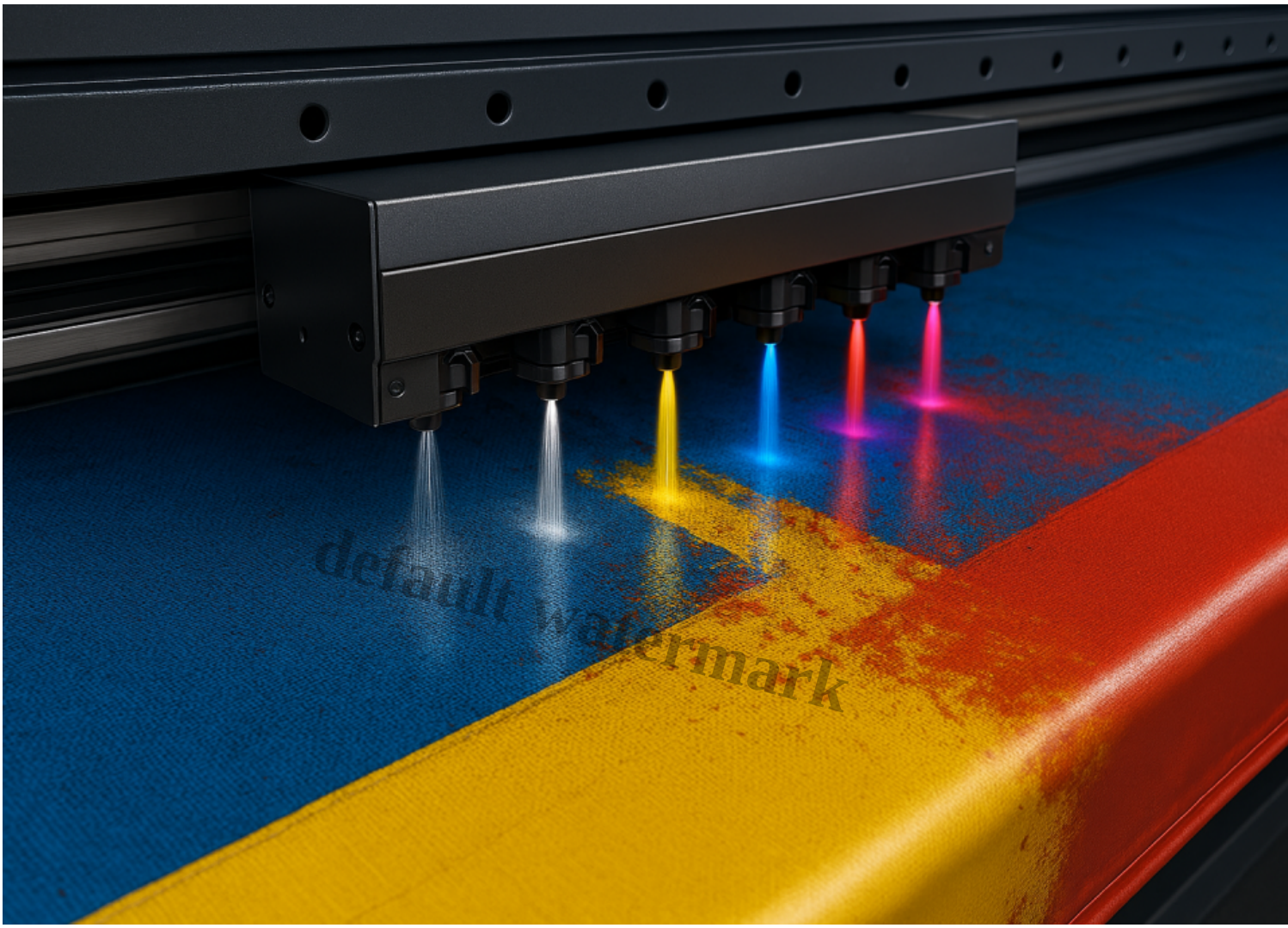
- Precise application only where needed.
- Can create spot gloss, matte, textured, or raised effects. (subject to capabilities of print heads)
- No additional finishing equipment required.
- Usualy processes at the same time as printing Also Good for decorative graphics and retail displays.

Disadvantages for Truck Curtains

- Usually very thin coating weight.
- Limited protection against abrasion.
- Limited chemical resistance.
- Can crack on highly flexible curtain-side materials.
- Expensive coating chemistry.
- Not designed primarily for heavy-duty transport applications.

default watermark





Typical Thickness

5â??15 microns.

Best For

Indoor graphics.

Retail displays.

Decorative vehicle graphics.

2. UV Liquid Coating

A UV-curable acrylic coating applied by roller, spray, curtain coater, or flood coating system and cured using UV lamps. â?? Usually only


חמודי הובלות
054-3254108
ש.ע לחקלאות
053-8215544



Advantages

- Excellent gloss levels.
- High scratch resistance.
- Fast curing.
- Good chemical resistance.
- Good weather resistance.

Disadvantages for Truck Curtains

- Can become brittle over time.
- Risk of cracking during repeated flexing.
- May delaminate from some PVC curtain materials.
- Higher energy consumption due to UV curing.
- Difficult to recycle coated materials.

Typical Thickness

- 10â??50 microns.

Best For

- Rigid boards.
- Signage.
- Vehicle panels.
- Short-to-medium flexibility applications.

3. Water-Based Acrylic Coating

Applied by roller, spray, gravure, flexo, or other coating systems and dried using ambient air or warm air.

default watermark

Advantages

- Excellent flexibility.
- Better elongation characteristics.
- Less cracking on folding curtains.
- Lower VOC emissions.
- Lower energy consumption.
- Easier to formulate with anti-graffiti and anti-microbial additives.
- Better sustainability profile.
- Easier handling and storage.

Disadvantages

- Longer drying times than UV.

- Slightly lower initial hardness.
- May require multiple coats for maximum protection.

Typical Thickness

- 5â??30 microns.

Best For

- Truck curtains.
- Tensioned fabrics.
- Banners.
- Flexible PVC.
- Textile graphics.

default watermark


SCANIA
KING OF THE ROAD
ר.א הובלות בע"מ
חמודי: 054-6638737



default watermark




default watermark



Truck Curtain Application Comparison

Truck curtains experience:

- Constant flexing.
- Folding.
- Wind loading.
- UV exposure.
- Road salt.

- Fuel splashes.
- Cleaning chemicals.
- Abrasion from straps and buckles.

For these reasons, flexibility is often more important than ultimate hardness.

Property	Inkjet Varnish	UV Coating	Water-Based Coating
Flexibility	Fair	Moderate	Excellent
Abrasion Resistance	Fair	Very Good	Good to Very Good
UV Resistance	Good	Excellent	Excellent
Chemical Resistance	Fair	Excellent	Good
Crack Resistance	Poor	Moderate	Excellent
Sustainability	Moderate	Poor	Excellent
Repairability	Difficult	Difficult	Easier
Cost per mÂ²	High	Medium	Low-Medium
Suitability for Truck Curtains	Fair	Good	Excellent

default watermark

What Most Truck Curtain Manufacturers Prefer

Many fleet graphics suppliers and curtain manufacturers favour flexible acrylic coatings because they:

- Move with the PVC fabric.
- Resist cracking around folds.
- Maintain image quality longer.
- Reduce the risk of coating failure.
- Provide a lower environmental footprint.

For digitally printed UV or latex truck curtains, a properly formulated water-based acrylic protective coating often provides the best balance between:

- Durability
- Flexibility
- Weather resistance
- Washability
- Sustainability
- Cost

default watermark


default watermark



-

This is one reason why specialist coating systems such as water-based acrylic protective coatings are increasingly being used as an alternative to traditional UV varnishes when long-term curtain flexibility is critical.

Date Created
2026/05/29
Author
dlandor