

TerraGloss®

UV Coatings



Gloss, reactivity and adhesion

TerraGloss UV coatings provide finishing on the highest level, protect the printed product perfectly and enable a smooth further processing.

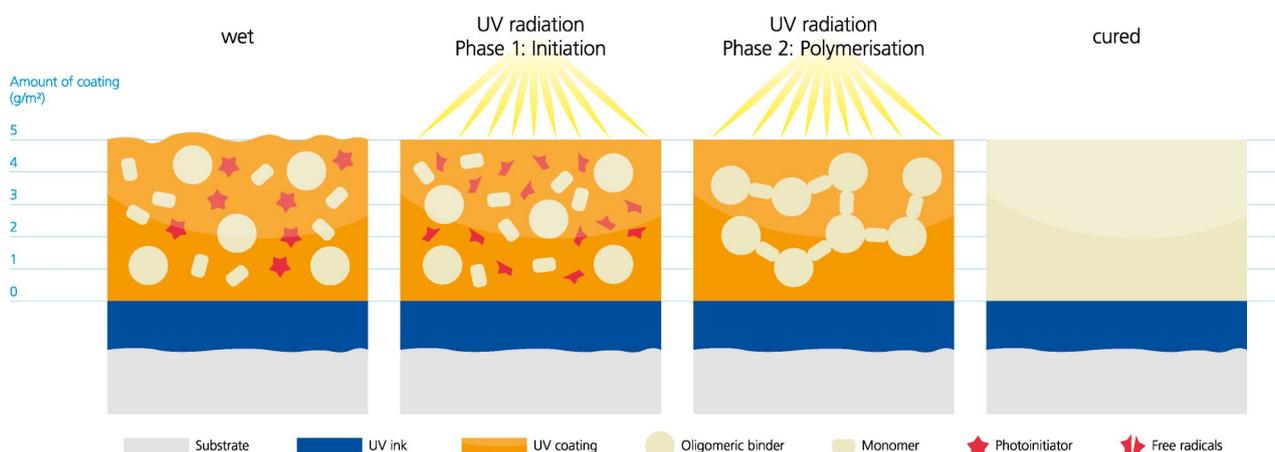
UV coatings cure under ultraviolet radiation by means of a chemical reaction, a chain polymerisation. During the radiation with UV energy the photoinitiators become highly reactive particles. These highly reactive particles crosslink the acrylates so that a plastic film is formed within milliseconds.

TerraGloss UV coatings offer many advantages: a high reactivity, low odour, very good running characteristics, high gloss, a very high scratch and scuff resistance as well as a high chemical resistance. TerraGloss UV coatings are based on carefully selected and tested raw materials. So-called reactive acrylates (resins, oligomers and monomers) are responsible for the development of the coating film. Further components are high-quality photoinitiators and additives.

The additives take over the fine alignment (e.g. flowout and slip) of the UV coatings.

The amount of solids is almost 100%. TerraGloss UV coatings do not include water or solvents, and therefore almost no volatile substances. They convince by their consistent utilization of exclusively high-quality raw materials, advanced formulations and a trouble-free processing. They are of consistent high quality. Their broad application spectrum offers optimum solutions.

On demand, ACTEGA Terra develops individual coating formulations, so that customers receive the UV coating that corresponds to their requirements. Competent technical services as well as services, as for example a FTIR curing analysis, complete the overall offer.





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Coatings mentioned in this brochure represent a selection of our product programme TerraGloss UV coatings. Many special coatings, for example UV based primers or coatings for other printing processes such as web offset, gravure or digital printing, are available on demand.

The numeric values mentioned in this brochure refer to a scale of 1 to 10. While 10 stands for the highest/best value, 1 represents the lowest/worst value.

UV coatings on conventional inks (double coating unit)

On printing presses with conventional inks and double coating unit, high-gloss results are achieved by systems of waterbased TerraWet primer and TerraGloss UV coatings. High machine speeds and a good adhesion can be realised.

The waterbased primer out of the first coating unit closes the surface and prevents the absorption of the UV coating into the substrate and the inks to a large extent. The UV coating out of the second coating unit properly cures; sensory problems and disturbances of the coating film are avoided.

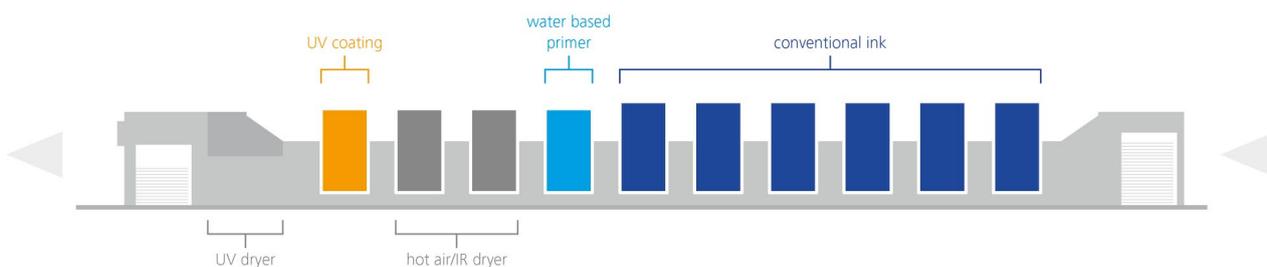
TerraWet primer minimize a possible gloss decrease (draw back), which can be observed after 24 hours. For different drying configurations, different primers with different drying speeds and a correspondingly low draw back are available.

TerraGloss UV coatings are characterised by an extremely high reactivity, low odour and an even run. Apart from UV

high gloss coatings, also matt coatings are offered which provide a high-value dull matt finishing together with a high scratch and scuff resistance.

Selected TerraGloss UV coatings are certified by accredited laboratories as having very good migration properties and are approved for the indirect food contact. In combination with a waterbased FoodSafe primer, the highest possible safety is achieved which can be realised by UV coating systems.

Individual adaptations, as for example the adjustment of the slip angle, make TerraGloss UV coatings the first choice for printing presses with a double coating unit.



TerraWet®	Gloss	Drying	Scuff resistance	Wet block resistance	Adhesion
Primer G 9/624 Inline	8	7	7	6	9
Primer G 9/650 Inline	8	9	8	8	9
Primer G 9/728 Inline	9	5	5	3	8
Primer G 9/185 FoodSafe	10	5	7	3	8

TerraGloss®	Gloss	Reactivity	Glueability/suitability for hot foil stamping	Information
UV Matt Varnish G 8/177 L NVK	1	6	No	
UV Special Varnish G 8/282 F NVK	8	8	No	Low migration; global migration < 60 mg/kg (EU cube model); certified for indirect food contact
UV Gloss Varnish G 8/363 F NVK	9	8	No	
UV Gloss Varnish G 8/372 F NVK	10	9	No	Stable slip angle

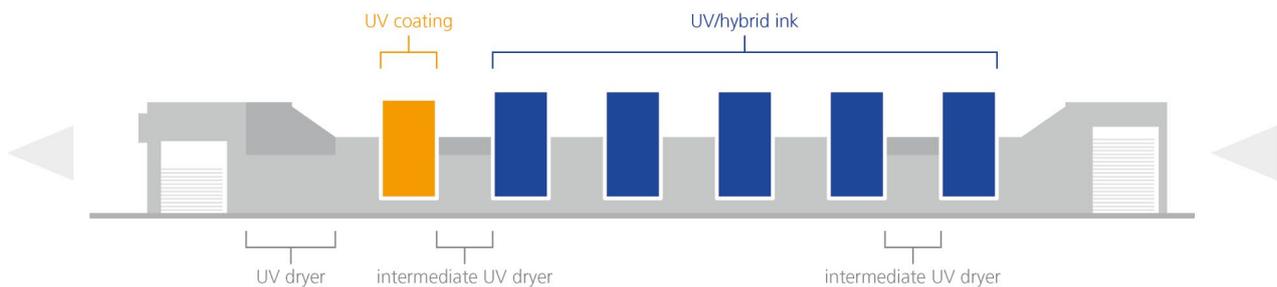
UV coatings over UV inks

TerraGloss UV coatings for the application on UV or hybrid inks enable a high level of finishing and stable slip values for folded boxes, labels and commercial prints. TerraGloss UV coatings are especially suitable for non-absorbent substrates, such as foil laminated boards.

TerraGloss UV coatings are characterised by high-quality formulations, a high reactivity and their especially low odour. They convince by means of their good running characteristics, a very good adhesion as well as by the excellent scratch and scuff resistance.

Apart from traditional high gloss coatings, the TerraGloss programme also offers dull matt UV coatings for highest finishing requirements out of the coating unit. For a subsequent glueing or hot foil stamping, UV coatings are available which are especially glueable or suitable for hot foil stamping.

TerraGloss UV coatings are provided with different surface smoothness from very smooth to anti slip characteristics. For individual requirements, the slip angle range of many coatings can be exactly adjusted.



TerraGloss®	Gloss	Reactivity	Glueability/suitability for hot foil stamping	Information
UV Matt Varnish G 8/177 L NVK	1	6	No	
UV Special Varnish G 8/282 F NVK	8	8	No	Low migration; global migration < 60 mg/kg (EU cube model); certified for indirect food contact
UV Special Varnish G 8/282 F VK	8	8	Yes	Low migration; global migration < 60 mg/kg (EU cube model); certified for indirect food contact
UV Gloss Varnish G 8/363 F NVK	9	8	No	
UV Gloss Varnish G 8/363 F VK H	8	8	Yes	Anti-penetration
UV Gloss Varnish G 8/372 F NVK	10	9	No	Stable slip angle

UV coatings for the ink duct

Highly viscous UV coatings for the application with fountain solution out of the ink duct represent an alternative if no coating unit is available. Especially for UV matt coatings, the varnishing out of the ink duct before and after the coating unit (inline or offline) is an efficient method. Very fine detail can be achieved without the use of a coating plate.

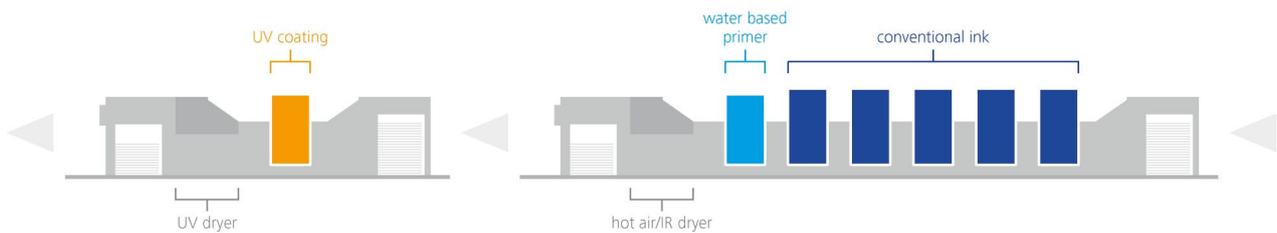
TerraGloss®	Gloss	Reactivity	Glueability/suitability for hot foil stamping
UV Matt Varnish G 8/177 D NVK	1	6	No
UV Gloss Varnish G 8/178 D NVK	7	8	No

UV coatings offline

ACTEGA Terra offers excellent coatings for the offline coating of printed products on a coating machine or by means of a coating unit in sheet-fed offset in a separate process. These products are characterised by a very good gloss and good running capabilities.

You can achieve optimal coating results, if a TerraWet primer is applied in the first process of printing. This waterbased

primer acts as an adhesive agent and creates a consistent surface tension. By means of the even surface, an absorption of the UV coating into the substrate is prevented to a large extent. There are also many other advantages which enable a problem-free further processing: a minimization of block-ing, a minimization of powder application, no scratching.



TerraWet®	Gloss	Drying	Scuff resistance	Wet block resistance	Information
Matt Coating G 9/63 dull matt	1	9	9	10	Velvet feel; for the UV spot coating
Primer G 9/163 T	5	8	5	3	For metallic inks
Special Coating G 9/595 W FoodSafe	8	8	9	7	Low tendency to cracking
Primer G 9/601 FoodSafe	8	8	7	6	
Primer G 9/361	8	8	8	7	Approved for two-sided coating

TerraGloss®	Gloss	Reactivity	Glueability/suitability for hot foil stamping	Information
UV Matt Varnish G 8/177 L NVK	1	6	No	
UV Special Varnish G 8/282 F NVK	8	8	No	Low migration; global migration < 60 mg/kg (EU cube model); certified for indirect food contact
UV Special Varnish G 8/282 F VK	8	8	Yes	Low migration; global migration < 60 mg/kg (EU cube model); certified for indirect food contact
UV Gloss Varnish G 8/363 F NVK	9	8	No	
UV Gloss Varnish G 8/363 F VK H	8	8	Yes	Anti-penetration
UV Gloss Varnish G 8/372 F NVK	10	9	No	Stable slip angle

UV special coatings

ACTEGA Terra offers a variety of UV coatings for special requirements. Please find a selection here. More coatings are available on demand or can be developed according to individual customer requests. Contact us.

TerraGloss®	Gloss	Reactivity	Glueability/suitability for hot foil stamping	Information
UV Matt Varnish G 8/130 L NVK	3	6	No	For foil (IML)
UV Special Varnish G 8/136 L NVK	8	7	No	For foil (IML)
UV Special Varnish G 8/187 R	7	7	No	For the printing with rubbing inks
UV Special Varnish G 8/251 Release	8	7	No	UV based special coating with release effect
UV Special Varnish G 8/251 L NVK	8	7	No	For digital printing; approved by HP Indigo
UV Spot Varnish G 8/292 NVK	8	8	No	Very high edge definition for the spot coating
UV Structure Varnish G 8/364 L NVK	7	7	No	UV based special coating with structure effect
TerraEffekt UV Primer 3000 PlasticStar + TerraGloss UV Special Varnish G 8/300 F VK Plastic Star	4	7	No	Plastic haptic effect

Additives and cleaning agents

Cleaning agent	Description
TerraGloss Clean UV Cleaning Agent G 13/160	Cleaning agent for the cleaning of coating units, anilox rollers, tube systems, rubber blankets and coating plates
TerraWet Clean Cleaning Liquid G 12/200	Manual and periodical cleaning agent for the in-depth cleaning of anilox rollers

Additives	Description
TerraAdd UV Wetting and Slip Agent G 13/101	Additive for better wetting and running capabilities. Slip characteristics are changed.
TerraAdd UV Defoamer G 13/108	Additive in order to improve defoaming
TerraAdd UV Antistatic Agent G 13/110	Additive in order to decrease static charge
TerraAdd UV Accelerator G 13/122	Additive for reactivity increase

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Please consider: All information provided here are made to the best of our knowledge. This brochure does not claim to be complete. It represents a technical quality description, is advisory and does not release from own tests

and examinations in customer-specific circumstances due to the wide range of materials, production conditions, operations and processes. If an application is intended to be made under different conditions than those specified here, we only assume liability after having examined the respective different conditions. We reserve the right to change product characteristics because of technical progress, amendment of applicable law and mandatory production-related needs.



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Coated with
Outside: TerraGloss UV Matt Varnish G 8/177 L NVK
TerraGloss UV Gloss Varnish G 8/372 F NVK
Inside: TerraGloss UV Matt Varnish G 8/177 L NVK

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