



TerraWet®

Waterbased Coatings

A member of  **ALTANA**

 **ACTEGA**
Coatings & Sealants

Perfect protection for high-performance production

TerraWet waterbased coatings protect the printed product, provide a fast further processing, give the right finishing and extend the printed product by valuable functions.

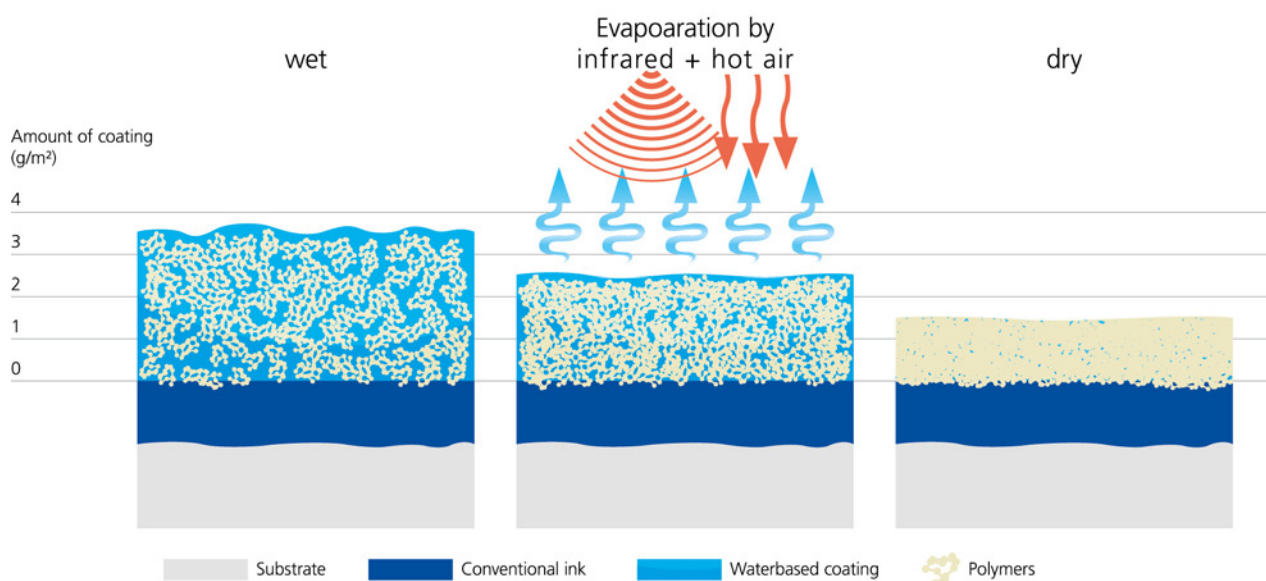
Waterbased coatings (also called dispersion coatings) dry physically by means of the absorption of the coating into the substrate and the evaporation of water. This drying is achieved through hot air and infrared. With the drying, water is extracted from the coating. The polymer particles approach each other and form the coating film. Waterbased coatings, as a result of their many advantages, have become the leading technology in the printing industry: environmentally friendly, odorless, tasteless, no yellowing and reduction of spray powder.

TerraWet waterbased coatings are leading on the market due to their quality and strength in innovation. The high-performance recipes are continuously being developed to a high level. Employed extensively and proven in practice, TerraWet waterbased coatings offer excellent processing capabilities, particularly high application safety and conformity with legal regulations. TerraWet waterbased coatings are based on carefully selected and tested raw materials. Dispersions of acrylate and styrene acrylate polymers and alkaline-neutral-

ized resins form the basic framework of the coating. These components guarantee that the required coating film is formed. The correct filming between the substrate and the coating particles, as well as between the coating particles with respect to each other, is achieved by innovative wetting agents. High performance waxes provide for scuff resistance. Additives control properties in a defined way, such as for example foaming characteristics and slip properties. Finally the water takes over the function of the solution.

The combination and the interaction of the individual elements provide the coating with the required character. TerraWet waterbased coatings ensure that both the required coating characteristics (e.g. high gloss) as well as the problem-free processing in the coating unit (e.g. drying) is fulfilled.

TerraWet stands for a broad product programme of water-based coatings for the printing industry. This brochure gives an overview of selected coatings out of this programme. On demand, we develop individual coatings according to your requirements. Please contact us.





TerraWet®

Waterbased Coatings

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Coatings mentioned in this brochure represent a selection of our product programme of TerraWet waterbased coatings for the graphic arts industry. Many other special solutions and functional coatings, as for example release coatings, anti-sealing coatings, coatings for digital printing, are available on demand.

Numerical values stated in this brochure refer to a scale of 1 to 10. While 10 stands for the highest/best value, 1 refers to the lowest/worst value.

Coatings for folded boxes food

TerraWet waterbased coatings protect the printed image with an excellent scratch and scuff resistance, and thus ensure trouble-free production. With their good block and wet block resistance they stand for maximum performance and productivity in the printing process and in converting.

They finish for high visual demands from matt to high gloss. Optimal and stable application characteristics, such as for example a low tendency to foaming or cracking as well as a fast drying, provide for a high efficiency in packaging printing.

For food packaging, ACTEGA Terra offers FoodSafe coatings. FoodSafe stands for the following quality characteristics:

- FoodSafe coatings are low migration. They fall below the global migration limit of 60 mg/kg (EU cube model).
- FoodSafe coatings have been tested by accredited testing laboratories and are certified for the direct contact to dry and fatty foodstuffs.
- FoodSafe coatings correspond to the Swiss Ordinance. They only contain those raw materials that are specified in the positive list (SR 817.023.21).

In addition, FoodSafe coatings do without unrequested constitutional components, such as mineral oils (MOSH, MOAH), heavy metals and phthalates. All FoodSafe coatings are low odour.

Measures by ACTEGA Terra for highest safety

- Selection and use of highly purified raw materials
- Innovative coating formulations
- Quality controls of raw materials and coating batches
- Regular analysis of raw materials and coatings by independent testing laboratories
- Storage and production in high-quality steel tanks
- Automated production with additional filtration system
- Independently certified hygiene management according to HACCP
- Certified management and environmental management system according to ISO 9001 and 14001
- Reference samples of each batch
- Highly qualified department for product safety
- Extensive know how with regard to food law, packaging law and chemical law

FoodSafe®	Gloss	Drying	Scuff resistance	Wet block resistance	Information
TerraWet Matt Coatings G 9/99 dull matt FoodSafe	2	9	6	10	
TerraWet Matt Coating G 9/73 matt FoodSafe	3	8	9	10	
TerraWet Matt Coating G 9/56 M FoodSafe	3	9	8	10	Also for non-absorbent substrates; especially good anti-curling behaviour; printability with laser; also suitable as primer
TerraWet Matt Coating G 9/115 silky matt FoodSafe	4	8	9	10	
TerraWet Glanzlack G 9/706 FoodSafe	6	8	9	7	
TerraWet Gloss Coating G 9/704 FoodSafe	6	9	9	8	
TerraWet Gloss Coating G 9/521 C FoodSafe	6	8	9	7	Anti-sealing characteristics against acrylic laminated foil
TerraWet Gloss Coating G 9/370 FoodSafe	7	7	8	7	
TerraWet Gloss Coating G 9/425 SZ FoodSafe	7	8	10	7	
TerraWet Gloss Coating G 9/374 FoodSafe	8	8	8	8	Also for non-absorbent substrates; low tendency to cracking; good transparency
TerraWet Gloss Coating G 9/378 FoodSafe	8	8	9	9	
TerraWet Gloss Coating G 9/230 FoodSafe	8	9	9	8	Especially good anti-curling behaviour; temporary barrier against fat and water; proved as coating for the reverse side of board; printability with laser
TerraWet High Gloss Coating G 9/285 FoodSafe	9	7	8	7	
TerraWet High Gloss Coating G 9/666 N2 FoodSafe	10	6	8	4	
TerraWet High Gloss Coating G 9/794 FoodSafe	10	5	8	3	

Coatings that are recommended for food applications carry the addition FoodSafe in their name. These are not only traditional coatings for food folded boxes, but also various functional coatings for special requirements. For more FoodSafe coatings, please see the following pages of this brochure.



Coatings for folded boxes non-food

TerraWet waterbased coatings make a decisive contribution to the production of modern folded boxes. They are real all-rounders with high tolerances.

They guarantee an excellent appearance of the folded boxes during converting in the printing plant and the long process

chain of filling, packing and transporting. They convince by their fast drying, low tendency to cracking, low tendency to foaming and a good block and wet block resistance.

For different finishing requirements, they are available from high gloss to dull matt.

TerraWet®	Gloss	Drying	Scuff resistance	Wet block resistance	Information
Matt Coating G 9/60 M dull matt	1	9	9	10	Low tendency to polish up
Matt Coating G 9/63 dull matt	1	9	9	10	Good suitability for stamping; velvet feel; low tendency to polish up; approved as adhesive agent for offline UV varnishing
Matt Coating G 9/72 GA 2 matt	3	7	7	10	
Matt Coating G 9/111 silky matt	4	8	7	10	
Gloss Coating G 9/373	8	8	9	9	
Gloss Coating G 9/351	8	9	9	9	
High Gloss Coating G 9/561	9	7	8	7	
High Gloss Coating G 9/582	10	6	8	4	

Coatings for folded boxes pharmaceuticals

ACTEGA Terra fulfills the high hygiene requirements of the pharmaceutical industry. Since 2010, our HACCP system, based on the Codex Alimentarius, is certified independently.

TerraWet waterbased coatings for the pharmaceutical industry are exactly adjusted to the range of slip angle needed in the further processing. Long-term quality certificates ensure the permanent examination according to customised specifications.

The consistent high quality as well as the very high scuff resistance guarantee production safety. For the increasing requirements regarding the appearance, ACTEGA Terra offers coatings from dull matt to high gloss for a successful inline finishing

On demand, fraud resistant coating systems as well as inkjet printable coatings are available.

TerraWet®	Gloss	Drying	Scuff resistance	Wet block resistance	Slip angle
Gloss Coating G 9/351	8	9	9	9	16°-22°
Gloss Coating G 9/373	8	8	9	9	18°-22°
Gloss Coating G 9/425 Pharma	8	7	8	7	23°-27°
Gloss Coating G 9/256	8	8	8	8	25°-30°
High Gloss Coating G 9/561	9	7	8	7	20°-24°

Coatings for cigarette packaging

For the tobacco industry, ACTEGA Terra offers overprint varnishes that are consistent with the high requirements on quality and appearance. Ingredients and the composition of the coatings comply to the demands of BAT, JTI and PMI. The coatings are sensory clean (odour-free and smoke taste neutral) and do not impair the smoke experience in any way.

Apart from a very good scratch and scuff resistance, they offer consistently adjusted slip angles for packing on modern high-speed machines. In order to fulfill the quality and

security requirements of the tobacco industry, specific controls can be carried out and certified per batch in addition to the traditional quality controls.

ACTEGA Terra offers coatings for cigarette folded boxes, soft packs and wrappers. Available are waterbased coatings for sheet-fed offset, web gravure and sheet-fed gravure. Gravure coatings are designed for a fast drying and highest speeds, they are free of solvents and provide a very low tendency to foaming.

	Gloss	Drying	Scuff resistance	Wet block resistance	Slip angle	Printing process	Information
TerraWet Matt Coating G 9/56 M CG matt	3	9	8	10	21°-25°	Offset	Especially good anti-curling behaviour; printability with laser; very good running behaviour; low structure
TerraWet Matt Coating G 9/56 silky matt	4	9	8	10	21°-25°	Offset	Especially good anti-curling behaviour; printability with laser; very good running behaviour; low structure
TerraWet Gloss Coating G 9/378 AR P	8	8	9	9	12°-14°	Offset	For fast running filling stations
TerraWet Gloss Coating G 9/522 CG	8	8	9	7	16°-21°	Offset	Fulfills the requirements of JTI, PMI and BAT; especially suitable for hot foil stamping
TerraWet Gloss Coating G 9/552 free of ammonia	8	9	9	6	25°-30°	Offset	Very good anti-curling behaviour
TerraWet Special Coating G 9/595 CG	8	8	9	7	15°-19°	Offset Gravure	Fulfills the requirements of JTI, PMI and BAT; low tendency to cracking
TerraWet Gloss Coating G 9/755 W	8	8	9	8	16°-20°	Offset Gravure	Low tendency to cracking; very good running behaviour
TerraWet High Gloss Coating G 9/635 B	9	7	8	7	18°-22°	Offset	
TerraFlex-T Special Coating G 10/814	8	8	9	7	15°-20°	Gravure	Fulfills the requirements of JTI, PMI and BAT; especially suitable for stamping; very good running behaviour; very high transparency; temporary barrier against fat and water
TerraFlex-T Special Coating G 10/840	8	9	9	10	15°-19°	Gravure	Fulfills the requirements of JTI, PMI and BAT
TerraFlex-T High Gloss Coating G 10/880 N2	9	8	8	7	16°-20°	Gravure	

Coatings for multipacks

For beverage trays and other multipacks, a kraft board with integrated glueing is employed which is especially tearproof and wet resistant. As a result of the coatings high wet block resistance, the packaging process is not a problem even in humid environment situations. The high scuff resistance of these coatings resists to high mechanical loads.

These coatings are adjusted especially to the slip properties which are required in the packaging line. By means of special quality controls and as a result of the consistent high quality, ACTEGA Terra ensures defined slip properties.

	Gloss	Drying	Scuff resistance	Wet block resistance	Slip angle	Information
TerraWet Matt Coating G 9/60 M dull matt	1	9	9	10	15°-20°	Low tendency to polish up
TerraWet Matt Coating G 9/111 silky matt	4	8	7	10	20°-24°	
TerraWet Gloss Coating G 9/330	7	6	8	7	12°-18°	
TerraWet Gloss Coating G 9/640 P	7	9	9	10	14°-18°	
TerraWet Gloss Coating G 9/373	8	8	9	9	18°-22°	
TerraWet Antislip Coating G 9/494	8	6	8	6	28°-32°	
TerraWet High Gloss Coating G 9/635 B	9	7	8	7	18°-22°	
TerraFlex-T Gloss Coating G 10/837	7	7	8	7	17°-21°	Gravure

Coatings for counter-glued printed products

Counter-glued printed products combine the advantages of corrugated board with the quality of offset printing. The sheet, printed and coated in offset, is glued to the corrugated board.

These coatings are made for highest wet block resistance, so that there are no problems regarding the lamination with

waterbased adhesives. Like this, process safety and a fast processing in the lamination process is reached.

Moreover, TerraWet waterbased coatings fulfill other requirements, such as a high scratch and scuff resistance as well as adjusted slip angles.

TerraWet®	Gloss	Drying	Scuff resistance	Wet block resistance	Information
Matt Coating G 9/60 M dull matt	1	9	9	10	Low tendency to polish up
Matt Coating G 9/56 M FoodSafe	3	9	8	10	Especially good anti-curling behaviour; printability with laser
Matt Coating G 9/72 GA 2 matt	3	7	7	10	
Matt Coating G 9/111 silky matt	4	8	7	10	
Gloss Coating G 9/373	8	8	9	9	
Gloss Coating G 9/351	8	9	9	9	
High Gloss Coating G 9/381	9	8	8	8	

Coatings for non-absorbent substrates

Coatings for non-absorbent substrates are especially designed for this type of substrate.

Coatings for PE laminated board are formulated in a way that they are oxygen permeable. Through the PE, the ink cannot absorb into the substrate, so that drying is slowed down. By means of the particular permeable coating layer, the ink is able to dry oxidatively. Additionally, these coatings are very fast drying, show a low tendency to cracking, are especially block resistant and provide a very good scratch and scuff resistance.

Coatings for foil laminated and metallised substrates provide a very high transparency. The metallic effect is affected as little as possible by the coating. A high brilliance is reached. At the same time, the very good scratch and scuff resistance prevent the appearance of scratches that would be especially visible on metallic substrates.

TerraWet®	Gloss	Drying	Scuff resistance	Wet block resistance	Substrate	Information
Matt Coating G 9/56 M FoodSafe	3	9	8	10	PE two-sided PE rear side Alu laminated	Especially good anti-curling behaviour; printability with laser
Special Coating G 9/221 M	4	7	8	9	PE two-sided	
Special Coating G 9/321	5	10	9	10	PE two-sided	
Special Coating G 9/221 FoodSafe	6	10	9	9	PE two-sided	
Special Coating G 9/585 K SZ FoodSafe	7	8	8	6	PE two-sided PE rear side	Temporary barrier against fat and water; good water resistance; low Cobb values; low tendency to cracking; transparent
Gloss Coating G 9/640 FoodSafe	7	9	9	10	PE two-sided Alu laminated	Temporary barrier against fat and water
Gloss Coating G 9/374 SZ new	8	8	9	9	Alu laminated	Low tendency to cracking
Special Coating G 9/595 W FoodSafe	8	8	9	7	Alu laminated Inline-Coldfoiler	Low tendency to cracking; especially good anti-curling behaviour; temporary barrier against fat and water; stable against ink build-up
Special Coating G 9/595 HG	9	8	9	7	Alu laminated	Low tendency to cracking; especially good anti-curling behaviour; especially transparent



Barrier Coatings

Internal and external influences significantly impair the quality of packaging and content. Fat, oil or moisture affect the substrate and damage the printing inks. TerraWet barrier coatings seal the substrate's surface and protect the packaging temporarily against external influences.

TerraWet barrier coatings for example protect the inner sides of fast-food packaging against fat, oil and water; labels of alcoholic drinks against water and alcohol; drinking cups

against water; cake trays against fat, oil and water; the outer sides of frozen food packaging against water.

Through the employment of TerraWet barrier coatings, the packaging remains intact and can fulfill its function without restrictions, even if it is exposed to difficult environmental situations. According to the coating, very low Cobb values are reached. This means that the packaging remains stable, also when it is exposed to high moisture levels.

TerraWet®	Gloss	Drying	Scuff resistance	Wet block resistance	Cobb ₃₀₀ (g/m ²)	KIT (1-15)	Temporary barrier	Information
Special Coating G 9/585 K SZ FoodSafe	7	8	8	6	7-12	5-7	Fat Water	Low tendency to cracking; transparent; approved as coating for the board's rear side
Special Coating G 9/585 L FoodSafe	7	8	9	7	10-15	5-7	Fat Water	Approved as coating for the board's rear side
Barrier Coating G 9/305 IMP heat resistant	5	9	7	6	40-45	5-7	Oil Fat Water	Heat resistant; suitable for crimping
Barrier Coating G 9/317 FoodSafe	5	7	5	4	10-15	5-7	Oil Fat Water	Heat resistant; approved as coating for the board's rear side
Barrier Coating G 9/428 FoodSafe	5	7	5	4	7-12	5-7	Oil Fat Water	Approved as coating for the board's rear side
Barrier Coating G 9/554 SZ FoodSafe	5	7	6	4	7-12	5-7	Oil Fat Water	Approved as coating for the board's rear side
Barrier Coating G 9/350 A	7	8	7	7	30-35	5-7	Alcohol (40%)	
Barrier Coating G 9/523	8	7	9	9	10-15	6-9	Alkali	

Heat-resistant coatings

Waterbased coatings protect the printing ink against abrasion and guarantee a problem-free converting. TerraWet heat resistant coatings can do even more: They protect the printed product in processes where large levels of heat arises. For example, in case of crimped yogurt sleeves, rear sides of blister cards, soft cheese packaging, tobacco round boxes or boxes with folding lids for small cigars. Without the protection of the heat resistant coating the ink could smear. The packaging would be damaged and the sealing tool polluted.

Also the ready and filled packaging can be exposed to heat. Food packaging, heated up during preparation, for example menu trays for the oven, become increasingly popular. Heat resistant coatings are formulated in a way that they do not release any volatile materials or emit odours, even at high temperatures. Preparation and consumption are not affected.

TerraWet®	Gloss	Drying	Scuff resistance	Wet block resistance	Heat resistance up to	Information
Matt Coating G 9/60 M dull matt	1	9	9	10	200°C	Low tendency to polish up
Matt Coating G 9/56 M FoodSafe	3	9	8	10	180°C	Especially good anti-curling behaviour; printability with laser
Gloss Coating G 9/305 heat resistant	5	9	6	6	220°C	E.g. rear side of blister cards
Barrier Coating G 9/305 IMP heat resistant	5	9	7	6	200°C	E.g. baking oven packaging; temporary barrier against oil, fat and water; suitable for crimping
Gloss Coating G 9/255 R3 heat resistant	6	8	8	1	240°C	E.g. round cheese boxes
Gloss Coating G 9/220 B heat resistant	8	7	9	5	230°C	E.g. yogurt sleeves, temporary barrier against oil, fat and water; low tendency to curling; suitable for crimping

Antislip coatings

For a trouble-free filling and logistics process without shifting, the slip angle of the printed product can be defined by means of the coating. The slip angle determines from which angle of inclination two printed and coated board surfaces lying on top of each other begin to slip.

Antislip coatings from ACTEGA Terra increase the friction coefficients to the defined value (up to maximum 37°). By means of consistent high quality and due to additional controls, the defined slip characteristics are ensured.

TerraWet®	Gloss	Drying	Scuff resistance	Wet block resistance	Slip angle
Antislip Coating G 9/24 matt	2	8	5	6	30°-35°
Antislip Coating G 9/41 silky matt	3	8	5	6	30°-35°
Antislip Coating G 9/240 VG	6	7	6	6	30°-35°
Antislip Coating G 9/260 SZ FoodSafe	7	6	6	5	28°-35°
Antislip Coating G 9/386 FoodSafe	8	8	8	8	25°-30°
Antislip Coating G 9/537	9	5	5	1	33°-37°

Blister Coatings

Blister packaging consist of two elements, the printed and coated blister card and the plastic blister. In a sealing process, the blister card and the blister are combined with each other by pressure and heat. The coating film and the blister soften, melt into each other and form a compound. An alternative is blistering by means of ultrasonic sound.

sensitive process works, ACTEGA Terra has developed highly specialised blister coatings with excellent sealing characteristics that proved to be leading in the market. As in the sealing process the hot tool comes into contact with the rear side of the printed and coated blister card, we recommend heat resistant coatings for the rear side (see page 11).

In the blister process, the coating acts as an agent between the blister card and the plastic blister. To ensure that this

TerraWet®	Gloss	Drying	Scuff resistance	Wet block resistance	Information
Blister Coating G 9/121	6	6	5	1	Suitable for hot sealing against PVC and board
Blister Coating G 9/415	6	6	5	1	Suitable for hot sealing against PET-A/G, PVC and board
Blister Coating G 9/420 new	6	6	5	1	Suitable for hot sealing against PET-A/ G, PVC and board
USV Coating G 9/423	6	6	5	1	Heat-sealing of board/board by ultrasonic sound sealing tools
Skin Coating G 9/153	3	10	3	3	Heat-sealing of board and PP, PVC and Surlyn foil (ionomer PE) in the skin process

Calender coatings

Calender coatings are designed for maximum gloss. They beat UV coatings with regard to gloss and are similar to a foil lamination. In addition, they convince by means of their odour and taste neutrality.

cylinders (alternatively band calendars) the coating is melted. The surfaces are optimally polished by the simultaneously applied pressure. Through this smoothing, the coating develops the highest level of gloss.

Calender coatings can be processed in sheet-fed offset (coating unit), in an offline coating machine and out of a calender (coating unit before calender). During the calendaring, the printed product runs through a calender in a subordinate production step. Between the heated calender

TerraWet calender coatings are the first selection if maximum gloss should be combined with optimal sensoric results. They stand for a very good running behaviour and optimal surfaces.

TerraWet+®	Gloss	Drying	Scuff resistance	Wet block resistance	Information
Calender Coating G 9/159 HG	10	7	9	6	Calender temperature 100°C - 115°C; especially good running behaviour
Calender Coating G 9/169 FoodSafe	10	7	9	6	Calender temperature: 100°C - 115°C



Primers

Primers take over the function of an adhesive agent between substrate and a subsequent finishing. For different applications, special primers have been developed which principally enable the finishing or clearly contribute to the improvement of results.

ACTEGA Terra offers primers for the inline UV varnishing on conventional inks (double coating unit) and the offline UV application. Also for foil lamination, bronzing and the printing in a second process, high-performance primers are available.

The primer provides for a consistent surface tension. An absorption of the finishing material into the substrate is

prevented to a large extent. Additionally, primers offer many advantages that enable a trouble-free further processing: minimization of blocking, minimization of powder application, no scratching.

In order to prevent an extreme absorption of the printing inks into the substrate, TerraWet primers are also used with regard to the grounding for printing inks. The substrate is upvalued, a better printing image can be realised and the relation of adhesion between substrate and printing inks is improved.

For your individual requirements, we develop the suitable primer. Please contact us.

TerraWet®	Gloss	Drying	Scuff resistance	Wet block resistance	Application	Information
Matt Coating G 9/63 dull matt	1	9	9	10	UV offline coating	For matt/gloss effects; good suitability for stamping; velvet feel
Matt Coating G 9/45 matt	3	9	8	10	UV offline coating	For matt/gloss effects; structure-free matt surfaces
Primer G 9/361	8	8	8	7	UV offline coating Foil lamination	Approved for the two-sided coating
Primer G 9/601 FoodSafe	8	8	7	6	UV offline coating Foil lamination	Transparent
Primer G 9/173	5	9	6	5	UV offline coating Foil lamination	Transparent; approved for metallic inks
Primer G 9/163 T	5	8	5	3	UV offline coating Foil lamination	Transparent; approved for metallic inks
Primer G 9/650 Inline	8	9	8	8	UV offline coating on conventional ink	Low draw back effect; also suitable for printing presses with a basic interdeck dryer
Primer G 9/728 Inline	9	5	5	3	UV offline coating on conventional ink	Very low draw back effect
Primer G 9/185 FoodSafe	10	5	7	3	UV offline coating on conventional ink	Very low draw back effect
Bronzing Primer G 9/521 B	8	8	8	8	Bronzing	Adhesive agent between substrate/ adhesive ink and a bronzing

Haptic coatings

Traditionally, coatings have a visual function. They protect the printed product and finish the printing image. Haptic coatings go one step ahead. They also approach the other senses of a person and enable a multi-sensoric marketing. Feeling and touching is a subconscious perception process that should not be underestimated.

By means of the inline finishing with matt haptic coatings, surfaces are created that provide a soft or velvet feel or that remind of suede. A running behaviour as even as possible, a good scuff resistance and a very good block resistance stand in focus for a trouble-free printing process.

TerraWet®	Gloss	Drying	Scuff resistance	Wet block resistance	Information
Mattl Coating G 9/50 soft	1	8	8	10	Velvet feel
Matt Coating G 9/70 Gentle Touch	1	8	6	8	Distinct wet feeling; suede
Matt Coating G 9/84 Magic Touch	2	7	8	8	Especially strong feel; low tendency to polish up

Coatings for playing cards

TerraWet coatings for playing cards contribute decisively to joy of playing and playability.

Apart from an appealing visual appearance, it is especially important that the coating is hand sweat and moisture abrasive. Only with these characteristics, a persistent hand and a lasting joy of playing can be ensured. TerraWet playing card coatings are designed for high demands and convince by means of their particularly high scuff and scratch resistance.

Especially for casino playing cards (e.g. poker), ACTEGA Terra offers casino qualities that show an outstanding surface slip and an excellent fan. Even with regard to high temperatures and a humid climate, the coating keeps its terrific fan and playability.

All coatings correspond to the European Standard EN 71-3 and fulfill the requirements on toys and toy packaging.

	Gloss	Drying	Scuff resistance	Wet block resistance	Slip angle	Information
TerraWet Playing Card Coating G 9/110	7	7	10	9	10°-14°	For quartet, collection and playing cards; suitable for calendering up to 110°C
TerraWet Playing Card Coating G 9/312	6	7	10	9	8°-12°	For casino cards; suitable for calendering up to 110°
Aquaprint 555 W2	7	8	10	8	9°-14°	For casino cards; high resistance

Coatings for wet glue labels

Aquaprint and TerraWet stand for a superior programme of waterbased coatings for label printing. For coated, cast coated, metallised and uncoated papers, we offer outstanding coatings in the requested high gloss, gloss and matt levels.

TerraWet label coatings are especially wet block and wet scuff resistant, in order to prevent problems in the further processing. Other advantages are: a very good anti-curling

behaviour, the excellent caustic solution penetration (de-inking) as well as a low tendency to cracking.

In particular, for metallised papers we recommend highly transparent coatings that have a minimal effect on brilliance. Selected label coatings additionally fulfill requirements such as barrier functions (e.g. against alcohol), heat resistance or adjusted slip angles.

	Gloss	Drying	Scuff resistance	Wet block resistance	Anti-Curling	Substrate	Information
TerraWet Matt Coating G 9/56 M FoodSafe	3	9	8	10	9	Coated Cast coated Metallised	
TerraWet Matt Coating G 9/111 silky matt	4	8	7	10	8	Coated	
TerraWet Gloss Coating G 9/373	8	8	9	9	8	Coated	
TerraWet Special Coating G 9/688	8	8	8	7	9	Coated Cast coated Metallised	Excellent caustic solution penetration; low tendency to cracking; good wet block resistance; good transparency
TerraWet Special Coating G 9/787	8	8	9	8	9	Coated Cast coated Metallised	Excellent caustic solution penetration; low tendency to cracking; good transparency; good wet scuff resistance
TerraWet Gloss Coating G 9/640 FoodSafe	7	9	9	10	8	Coated Metallised	Temporary barrier against fat and water
TerraWet Special Coating G 9/595 HG	9	8	9	7	9	Coated Cast coated Metallised	Low tendency to cracking; very good transparency
TerraWet High Gloss Coating G 9/666 N2 FoodSafe	10	6	8	4	7	Coated	
TerraWet Barrier Coating G 9/523	8	7	9	9	8	Coated	Barrier against alcohol (40%); good wet scuff resistance
TerraWet Gloss Coating G 9/519	5	5	8	5	10	Uncoated	
Aquaprint 651	4	7	9	7	10	Uncoated Coated	
Aquaprint 590	8	8	8	6	9	Coated Cast coated	Very good sealing properties for the application on labels for round boxes.
Aquaprint AH 571	3	8	-	6	9	Rear side	Dry Peel Off coating for the rear side of wet glue labels. The coating film enables the take-off of the glued label from the carrier (e.g. glass).

Coatings for in-mould labels

Aquaprint and TerraWet are the outstanding coating solution for the production of in-mould labels.

In the in-mould-labelling process, plastic packaging is produced and decorated in one pass. A printed, coated and stamped plastic foil label is placed in a casting mould and liquid plastic is extruded into the form. The hot plastic meets the reverse side of the label and both elements melt into each other.

The coating plays a vital role for the production of packaging with in-mould labels.

In the printing and further processing, the coating provides a fast drying, a high scratch and scuff resistance and a good flatness.

With regard to injection moulding, labels must be able to be separated very easily and provide a good heat resistance. In the filling process and the later use, the coating guarantees high water resistances as well as resistances against fat and oil.

	Gloss	Drying	Scuff resistance	Anti-Curling	Water resistance	Heat resistance	Information
Aquaprint 522 T	7	9	8	7	9	180°C	Also suitable for wrap-around-labels
Aquaprint 523 PAT T 2	5	10	10	10	10	160°C	Suitable for the pasteurisation
Aquaprint 527 T	7	7	9	8	5	200°C	For overlapping in-mould labels
Aquaprint 529 T	7	9	8	7	9	200°C	Good running properties on the rotation die cutter
Aquaprint 507 +	10	6	8	9	4	100°C	Good transparency
TerraWet Special Coating G 9/221 S	9	10	7	6	8	180°C	
TerraWet Special Coating G 9/288 ZA 2	8	7	10	10	5	160°C	Antistatic

For more information, please see our brochure [Coatings for In-mould Label](#).

Coatings for commercial prints: sheet-fed offset

TerraWet waterbased coatings protect the printed product and enable a fast further processing. For commercial printing, the TerraWet range offers two-sided coatings with excellent scratch and scuff resistance, fast drying and good running properties.

TerraWet waterbased coatings are available from dull matt to high gloss. Applied inline, they provide a good possibility of differentiation. They attract attention and finish on a high level.

For presses with a coating module before perfecting, ACTEGA Terra offers especially developed coating systems. These coatings which are extremely fast drying guarantee a problem-free reverse printing. With their excellent running behaviour, they are the leading solution in practice.

	Gloss	Drying	Scuff resistance	Wet block resistance	Two-sided	Information
TerraWet Matt Coating G 9/55 C dull matt	2	9	6	10	9	
TerraWet Matt Coating G 9/72 GA 2 matt	3	7	7	10	9	
TerraWet Matt Coating G 9/111 silky matt	4	8	7	10	9	
TerraWet Gloss Coating G 9/373	8	8	9	9	9	
TerraWet Gloss Coating G 9/351	8	9	9	9	9	
TerraWet High Gloss Coating G 9/381	9	8	8	8	8	
TerraWet High Gloss Coating G 9/582	10	6	8	4	1	For the one-sided coating
Aquaprint 651	4	7	9	7	9	Excellent anti-curling behaviour
TerraPerfekt Matt Coating G 39/77	2	10	9	10	10	For the coating unit before perfecting
TerraPerfekt Matt Coating G 39/76	3	10	9	10	10	For the coating unit before perfecting
TerraPerfekt Matt Coating G 39/91 silky matt	4	10	9	10	10	For the coating unit before perfecting
TerraPerfekt Gloss Coating G 39/220	6	10	9	10	10	For the coating unit before perfecting

For more coatings, as for example drip off, please see our brochure [TerraEffekt Effect Coatings](#).

Coatings for commercial prints: web offset

Where web offset printing presses provide a coating unit, inline varnishing represents an efficient finishing method. Waterbased coatings by ACTEGA Terra are especially adjusted to heatset and corresponding temperatures. The coatings are composed in a way so that no weld puddles appear if track temperatures of more than 100 degrees are realised. A trouble-free wetting of the coating on heatset inks as well as a consistent closed coating layer provide visually perfect surfaces.

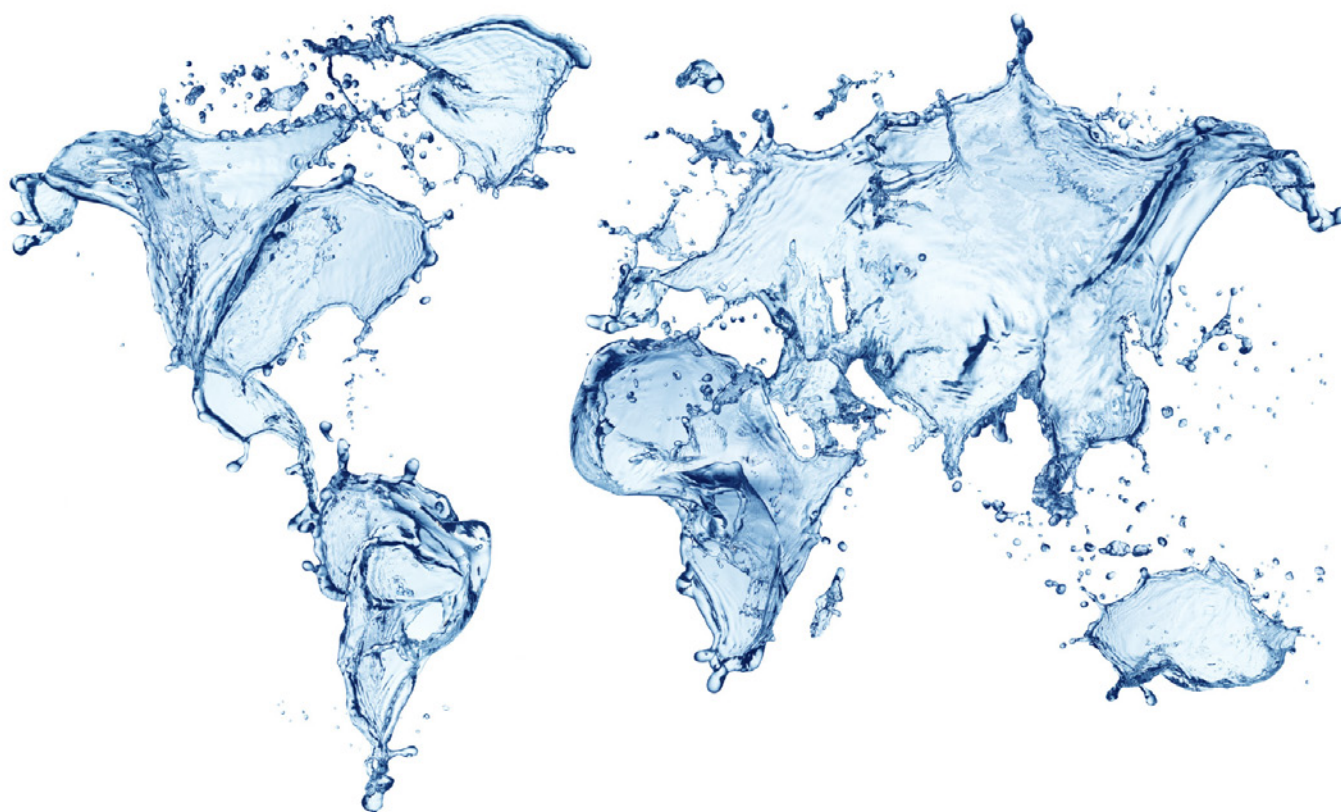
The application goes without problems: no fogging, no extruding, no orange skin. By means of the surface slip of the coating, silicones can be avoided in the further processing. Like this, printing products are protected in an optimal way and high-value finished.

	Gloss	Drying	Scuff resistance	Wet block resistance	Information
TerraWeb Matt Coating G 14/107 dull matt	2	5	5	4	
TerraWeb Matt Coating G 14/110 silky matt	4	7	8	5	Low structure. The creation of pinholes is reduced with regard to difficult surfaces.
TerraWeb Gloss Coating G 14/136 W	8	7	8	5	The creation of pinholes is reduced with regard to difficult surfaces
TerraWeb High Gloss Coating G 14/122	10	3	8	1	

Additive and cleaning agents

Cleaning agents	Description
TerraWet Clean Cleaning agent G 12/180	Environmental-friendly cleaning agent for coating units, anilox rollers, pipe systems, 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 Retarder G 12/111	Additive in order to slow down the drying of the coating (sticking to the coating blanket, cracking)
TerraAdd Slip Agent G 12/115	Additive for waterbased coatings in order to improve slip properties
TerraAdd Defoamer G 12/119	Additive in order to reduce foaming
TerraAdd Wetting Agent G 12/127	Additive for waterbased coatings in order to improve the wetting of coating on the printing ink
TerraAdd Anticracking Agent G 12/141	Additive for waterbased coatings in order to prevent cracking of the coating layer



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.

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: TerraWet High Gloss Coating G 9/794 FoodSafe
TerraWet Matt Coating G 9/84 Magic Touch
Inside: TerraWet Matt Coating G 9/84 Magic Touch