

Series 10

Additives for modification of various product groups

All 1- and 2-component pad printing inks are produced in such way, that only an individual on-site adjustment of the inks by means of thinners and retarders may be necessary. Additionally, hardeners for chemically/physically bonding inks must be added to the inks. Basically: under normal printing conditions, our ink settings are ideal for processing. A further addition of auxiliaries is not necessary and most of the times not useful. With the exception of the hardener in 2-component ink systems, the additives are already incorporated during production. It

is therefore not necessary - or in some cases counterproductive—for standard applications to increase the dosage of the additives. If however unfavorable factors like printing parameters, environmental conditions or material texture have to be considered, it is quite appropriate and helpful to modify the ink during the printing process. This technical data sheet offers a clear and complete range of additives to solve different problems and challenges. Please see details on recommended added quantities from the specific technical data sheet of the ink series.

Important Notice

Measuring of additives should not be “guessed”. Always use a balance or a scaled vessel. Overdosing often leads to undesired and sometimes not reversible problems; overdosing of leveling agents can even lead to a “turnaround” of the expected reaction (leveling disturbances). Thinner and retarder must ideally be worked into by

stirring. In any case and especially at an addition ratio of more than 10 % by weight, dosing should be realized step-by-step since otherwise the risk of undesired reciprocal reactions like gelling / flocculation could occur.

Thinner, Accelerator and Retarder

Thinners, accelerators and retarders are used to adjust the inks to the requirements of the various applications.

Article Number	Description	Rate of Evaporation
10-0330	Special thinner containing cyclohexanone The cyclohexanone-containing thinner is compatible with all solvent-based printing inks. Its aggressiveness makes it ideal for dissolving plastics such as PVC, PC, PS, ABS or PMMA.	40
10-03432	Special thinner, slow The special thinner has a long evaporation time. It ensures detailed printing even in poor climatic conditions (low humidity and high temperatures). Due to the longer evaporation time, care must be taken to ensure thorough drying. Otherwise, problems may arise with overprinting or with intermediate adhesion. No more than 10% by weight should be added.	>1200
10-02459	Special retarder This special retarder has a very long evaporation time and is mostly used when the standard retarders of the respective product group (e.g. Series 300-018) are no longer sufficient. It ensures detailed printing even in poor climatic conditions (low humidity and high temperatures). Due to the longer evaporation time, care must be taken to ensure thorough drying. Otherwise, problems may arise with overprinting or with intermediate adhesion. No more than 10% by weight should be added.	190

10-01840	Special thinner, mild	So-called stress cracks can occur when printing on sensitive plastics such as PET-G. These arise when very high tension builds up in the plastic as a result of the manufacturing process, which is discharged through the dissolving process during printing. This effect can also appear after a few weeks. The 10-01840 thinner was developed to prevent this effect. It has a high evaporation rate, is very mild, and is therefore less aggressive to the surface of the plastic. The usual amount added is 10% to 20% by weight.	20
10-010	Thinner for scratch-off inks	Thinner for Series 140-3107/XXX solvent screen printing scratch-off inks. The solvent scratch-off inks are ready for printing. If required, add 10–20% by weight of thinner. Only the recommended thinners may be used for scratch-off inks. Other thinners reduce or eliminate the scratch-off properties. Preliminary testing is essential before creating prints, since the end result is influenced by many different factors.	65

Cleaner

When cleaning substrates with a cloth, it should be noted that the cloth can quickly become saturated with the removed residues, leading to reapplication of impurities to the surface to be cleaned. Cleaning utensils should therefore always be changed promptly, or disposable wipes should be used.

Series 10-CLEAN

This universal cleaner is ideal for removing all types of impurities without leaving any residue, such as migration substances from protective films, adhesive and film residues, or grease residues on various plastics and metals. It is generally suitable for substrates sensitive to stress cracking, but this must nevertheless be verified in individual cases.

Series 10-002

This cleaner has been specifically developed for the treatment of printed PVC and tarpaulin material. The substrate is rubbed with this cleaner to remove grease, dust, residues or impregnations, and to prepare the substrate material for subsequent printing. The special solvent mixture is formulated to prevent it attacking commercially available PVC fabric film coatings, thus preserving their retention capacity for plasticizers. It is important that the cleaning agent's exposure time to the material is as short as possible, so that the PVC fabric material coatings are not changed or damaged.

Series 10-0588

This universal plastic cleaner is ideally suited for the residue-free removal of hydrophilic ("water-loving") contamination such as migration substances from protective films, as well as adhesive or film residues on various plastics. It is usually suitable for stress-sensitive substrates, but this must nevertheless be verified in individual cases.

In addition to cleaning plastic, Series 10-0588 is also ideal for cleaning anti-graffiti paints.

Series 10-06384

This universal, rather slow, modern cleaner is ideal for removing all types of impurities without leaving any residue, such as migration substances from protective films, adhesive and film residues or grease residues on various plastics and metals. It is generally suitable for substrates sensitive to stress cracking, but this must nevertheless be verified in individual cases.

Series 10-03459 (resin cleaner substitute)

This universal cleaner is ideal for removing all types of impurities without leaving any residue, such as migration substances from protective films, adhesive and film residues, or grease residues on various plastics and metals. It is generally suitable for substrates sensitive to stress cracking, but this must nevertheless be verified in individual cases.

Additives for pre-treatment

The liquid adhesion primers are used when the ink systems used do not provide sufficient adhesion to the intended substrate:

Article Number	Description
10-MET	The liquid adhesion primer for metals is suitable for a whole range of metals if sufficient adhesion cannot be achieved with the ink system used. The primer contains phosphoric acid, which reacts with the metal and atmospheric oxygen after application, and thus builds up an ideal bonding bridge between the substrate and the ink system. Protective equipment such as gloves and goggles must be worn during handling. The primer must be applied evenly, e.g. with a cloth or sponge, and should be left to act for 3 to 4 hours. The excess must then be washed off with a clean cloth or under cold water. The primer is then printable.
10-PP	The liquid adhesion primer Series 10-PP is used when the ink systems used do not achieve sufficient adhesion to polyolefin substrates. The primer is applied evenly to the substrate using a brush or cloth, and dried. The surface is then printable.
10-PE	The liquid adhesion primer Series 10-PE is used when the ink systems used do not achieve sufficient adhesion to polyethylene substrates. The primer is applied evenly to the substrate using a brush or cloth, and dried. The surface is then printable.

Additives to improve printability and appearance

In some cases, it is necessary to adapt the printing inks from the standard range to external conditions, e.g. if spattering occurs at high temperatures and low humidity, or if you want to adjust the matte level of a color shade. We have universal additives in our range enabling inks to be individually and precisely adjusted to the needs of our customers for various applications.

Article Number	Description
10-MP/01	The Series 10-MP is a matting paste with broad compatibility and easy incorporation. It is used to adjust gloss/matte levels. The usual amount added is 8% by weight, depending on the desired degree of gloss and the product.
10-VP/1	The Series 10-VP/1 is a thickening paste with broad compatibility and easy incorporation. It is used to adjust print viscosity and print sharpness. The amount added is 5% to 10% by weight.
10-03839	The thickening powder is incorporated with an addition of 1% to 3% by weight at high shear forces.
10-0913	The matting powder is usually used when a product is to be heavily matted, and the matting paste is not sufficient. The powder must be incorporated with high shear forces. The usual amount added is 3% to 10% by weight.
10-06401	The flex additive Series 10-06401 is recommended to increase the elasticity of printed ink film. The embossing characteristics and flexibility of the inks and varnishes are improved by adding 3–5% by weight. When adding, ensure compatibility and blocking resistance to avoid overdosing.
10-LSM	Series 10-LSM is a universal additive that can be added to all inks and varnishes in the range. It counteracts the influence of light with regard to weathering. Weathering can be counteracted by adding 3% to 5% of the light stabilizer 10-LSM. The length of time until a change is observed can be increased many times over. However, the actual effect requires specific testing. It is impossible to state precisely how long weathering will be delayed. CAUTION: The additive must be stirred in very well. A higher addition than 3% to 5% has no positive effect. It must be protected from heat and especially light.

Other

Delivery	Upon request
Zertifikate / Normen	www.printcolor.ch/certificates
Other	Stir well before use. Information on shelf life can be found on the cover label.

Safety Information

Actual Material Safety Data Sheets according to EC-Regulation 1907/2006 are available for all products mentioned in this data sheet.

Issued on	Revised on	Edited by	Version
18.08.2023	-	T31 / T35	1

Important Information

Our technical advice whether spoken, written, or through test trials corresponds to our current knowledge to inform about our products and their use. This is not meant as an assurance for certain properties of the products nor their suitability for each application. You are, therefore, obliged to conduct your own tests with our supplied products to confirm their suitability for the desired process or purpose. The selection and testing of the ink for specific applications is exclusively your responsibility. Should, however, any liability claims arise, such claims shall be limited to the value of the goods delivered by us and utilized by you with respect to any and all damages not caused intentionally or by gross negligence.