

Series 400

Additives for modification of product group 400

All 1- and 2-component water based screen 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 even 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.

Traditional Additives

Our traditional universal additives have proven themselves for decades.

Article Number	Description
400-018	Universal retarder

Hardener

Hardeners react with the binder of the printing ink. This means that the ink can only be processed for a limited period from this time. This time is called potlife. In most cases after expiration of the potlife, the ink will turn thick and rubberlike. In some cases expiration of potlife is not clearly obvious. The inks should in any case be replaced when the process time mentioned in the technical data sheet has expired.

Curing is a chemical reaction between the ink and the hardener which is temperature and time consuming. If printed parts are stored at too low temperatures, the reaction is stopped and curing remains incomplete. The higher the temperature and the longer the reaction time is, the better cured ink films can be obtained. Duration of curing is extremely depending on the used ink. Humidity (e.g. condensation) on printed parts should be avoided since the hardeners are reaction with water and therefore will not be available for film formation.

Series 482-HDA: Hardener for outdoor applications

The cured ink films offer excellent mechanical and chemical resistance. The temperature should not fall below 20°C during curing.

Excellent for	Series 482
Use possible	Series 420, Serie 480

Leveling and Wetting Agent

The use of the following auxiliaries can be useful in conjunction with ink film errors that cannot be attributed to technical printing defects:

Article Number	Description	Addition Ratio
400-VMS	Leveling agent to eliminate surface defects, such as bubbles.	0.5–2%
400-BMS	Wetting agent to eliminate film defects, such as orange peel effect.	0.5–2 %

Cleaning Agents

Article Number	Description
400-URS	Dieser Universalreiniger zeichnet sich durch eine hohe Reinigungswirkung bei rückstandsfreier Verdunstung der Lösemittel nach dem Reinigungsprozess aus. Der Flammpunkt liegt bei über 21 °C. Es enthält keine fettenden Hochsieder und ist deshalb ohne Nachreinigung verwendbar.
400-BRS	Eco-Reiniger mit sehr guter Reinigungswirkung. Diese Mischung ist schwerer flüchtig als der Universalreiniger Serie 400-URS und benötigt nach der Reinigung von Arbeits- und Druckmaterialien eine etwas längere Abdunstzeit, die durch Umluft reduziert werden kann.
400-URS/03	

More Additives

Problem	Article Number	Description
Verstopfte Siebgewebe	400-URS/ISO	Tampon prints are often tested for abrasion resistance. The additive Series 700-RCA significantly increases resistance with the addition of 5–10 % by weight. Series 700-RCA is universally applicable, but the cured ink films cannot be overprinted any more.

Other

Delivery	Upon request
Certificates / Standards	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.

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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.