CHT R. BEITLICH GMBH

®PRINTPERFEKT 226 EC

Characterization	Ready-to-use, hot curing screen printing paste on all-aqueous base for environmentally friendly colour prints on light coloured textiles; free from white spirit, APEO-free.
Chemical Structure	Unpigmented basic paste free from white spirit; compound of acrylate dispersions, thickener and additives
Supplied Form	Medium viscosity, light coloured paste
Ionic Character	Anionic
pH Value	7.5 - 9.0
Viscosity	14,000 - 19,000 mPas (Brookfield RVT 20/5)
Storage	If stored properly in a cool place between + 5°C and + 25°C in closed original containers, the product wil be stable for about 6 months. Protect from frost and excessive heat. Opened containers must be closed again tightly.

The above given values are product describing data. Please consult the 'delivery specification' for binding product specifications. Further data about product properties, toxicological, ecological data as well as data relevant to safety can be found in the safety data sheet.

Properties

Processing / Fixation

PRINTPERFEKT 226 EC is ready-to-print and has only to be coloured in the desired shade with suitable pigments.

The prints produced with PRINTPERFEKT 226 EC stand out for their very good fastness level. With critical qualities TUBASSIST FIX 102 W may be added to achieve a further improvement.

Curing of the prints is normally effected by hot air in a range of 130 - 160°C. For special curing conditions with reduced curing temperature or shortened curing time, TUBASSIST FIX 104 W can be applied as a special low-temperature curing agent after preliminary trials.

Film Properties / Handle

PRINTPERFEKT 226 EC results in soft prints which hardly affect the textile character of the goods.

® = registered trade mark

Printing Properties / Fastnesses / Further Properties

PRINTPERFEKT 226 EC can be excellently processed with common screen printing methods and can be easily printed wet-on-wet. Brilliant prints with sharp outlines result with PRINTPERFEKT 226 EC; the printing pastes do not tend to block the screens and are thus also suitable for fine meshes, e. g. the four-colour screen printing. If fixation is carried out properly, the prints effected with PRINTPERFEKT 226 EC will have a very good fastness to washing and dry cleaning.

Application Procedure

Fields of Application

PRINTPERFEKT 226 EC is mainly applied for single and multicoloured prints on light coloured fabric qualities, like e. g. prints on cotton knitwear (sweatshirts, T-shirts, etc.) or cotton wovens (advertizing bags, patches to be sewed or ironed on). PRINTPERFEKT 226 EC has little odour and can therefore also be applied in poorly ventilated working rooms.

The viscosity of PRINTPERFEKT 226 EC can be decreased by adding e.g. diammonium phosphate solution to such a low level that the pigment pastes may also be processed with the spray and brush technique.

Recommendation for Use / Processing

Condition of Substrate / Substrates

PRINTPERFEKT 226 EC can be applied very well on a multitude of nowadays common textile qualities.

For achieving good printing results with a high fastness level, the substrates have to be dry, clean and possibly free from auxiliary rests or preparation add-ons. Generally, the materials should be tested as to their suitability - especially impregnated qualities or heat-sensitive textiles or colour qualities (e. g. thermomigration of disperse dyestuffs).

Recipe Recommendation

Colour print on light coloured textiles	PRINTPERFEKT 226 EC + 0.1 – 5.0 % COLORMATCH pigments (fluor colours 10 - 20 %; possibly with the addition of TUBASSIST FIX 102 W, 1.0 – 3.0 %)

We recommend to stir up PRINTPERFEKT 226 EC before use. Colour additions have to be mixed homogeneously with the basic paste.

Additives and Auxiliary Agents

TUBASSIST FIX 102 W

Recommendable for critical substrates in order to grant a high fastness to washing and dry cleaning. Higher concentrations may possibly impair the handle. Printing pastes already containing fixing agent have to be processed at once, possibly within 1 - 2 working days.

TUBASSIST FIX 104 W

An addition is useful if the temperatures or curing times required for hot curing cannot be achieved. TUBASSIST FIX 104 W also produces fast crosslinking reactions and good aftercuring during storage at curing temperatures below 120°C. Thus, even under bad curing conditions, good fastnesses can be achieved. Even in small concentrations (0.5 – 2.0 %), printing pastes already mixed with fixing agents, have to be processed at once, possibly within 2 – 4 hours. TUBASSIST FIX 104 W used in concentrated form is very reactive even at room temperature. Therefore, the usual precautions for chemicals, like protective gloves and goggles, etc. have to be taken when handling the product. Further information can be found in the technical leaflet.

COLORMATCH Pigments

For colouring PRINTPERFEKT 226 EC we recommend to add 0.1 – 5.0 % COLORMATCH pigments (10 - 20 % COLORMATCH FL pigments).

TUBASSIST RTD 607 W

If need be, 2.0 – 5.0 % of this retarder are added to reduce the drying speed in the printing screens and to improve the printing behaviour. High concentrations may reduce the speed of the drying and curing process which may then have to be adjusted.

Diluting/Thickening In general not necessary; if need be, the viscosity can be decreased by adding small amounts of water (up to 5.0 %) or diammonium phosphate solution. The viscosity can be increased by stirring in homogeneously 0.1 - 0.5 % TUBASSIST T 526 W, which is advisable if an extreme drop in viscosity occurred due to high pigment concentrations.

Cleaning of Working Utensils Immediately with cold water; on prolonged stoppages during printing, the screens have to be kept moist or cleaned intermediately. Dried-on paste rests have to be softened with common detergents (e.g. dishwashing soap) and rinsed with a strong water jet, cured paste rests can only be removed mechanically.

Printing Process Application by means of all common screen printing methods with monofilament PES screen gauzes of 34 - 90 S/T, preferably 43 - 62 S/T, depending on design and quality of goods.

Drying / Fixation Can be carried out in one or two steps. For achieving the best possible fastness properties a fixation of the printing inks by a heat treatment is necessary.

Water steam arising during the drying and curing stage must be drawn off continuously by an adequate ventilation. By doing so, an insufficient fixation of the printing ink due to humidity accumulation in the drying or curing zone is avoided.

Recommended conditions for drying and curing with hot air:

	In the drying chamber:	In the continuous drier:
One stage:	130 – 150°C, 20 – 5 min	140 - 160°C, 6 - 3 min
Two-stage:	Drying 80 - 120°C, 10 - 5 min, drying at room temperature is possible after preliminary trials Curing 130 - 160°C, 10 - 3 min	

When curing with IR radiators or other sources of energy, it is essential to run a meaningful trial before going into production.

Recommendation for Use

Before going into production we recommend making it a rule first to test the suitability of the printing pastes for the substrates to be used as to wettability, adhesion, fastness properties, thermostability and processing parameters and to control everything as well during the production run.

We reserve the right to modify the product and technical leaflet.

Our department for applied technique is always at your service for further information and advice.

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CHT R. BEITLICH GMBH
Postfach 12 80, 72002 Tübingen, Bismarckstraße 102, 72072 Tübingen, Germany
Telephone: 07071/154-0, Fax: 07071/154-290, Email: info@cht.com, Homepage: www.cht.com