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MAGNAPRINT/MINERPRINT BINDERS & AUXILIARIES FOR PIGMENT PRINTING

PRODUCTS FOR T-SHIRT PRINTING These comprise ready to use printing bases, specially formulated for specific end uses. These systems have been designed to offer good all round fastness properties, however due to the variation in substrates and procedures, satisfactory results cannot be guaranteed.
IN ALL CASES PRELIMINARY TRIALS SHOULD BE CARRIED OUT ON EACH FABRIC AND UNDER THE CUSTOMERS CONDITIONS OF PROCESSING TO ENSURE THE RESULTS MEET THE SPECIFICATION DESIRED FOR THE END USE.
The printing bases can be blended in varying proportions with pigment colour concentrates and are miscible with each other in most cases.

MAGNAPRINT BINDER FF is a fully aqueous butadiene/acrylonitrile ready to use printing base.

MAGNAPRINT BINDER SL/N is a semi emulsion, acrylic based ready to use printing paste containing approximately 40% solvent (White Spirit).

They have been designed to offer good all round fastness and soft handle on most substrates. MAGNAPRINT BINDER SL/N has improved drying efficiency compared to MAGNAPRINT BINDER FF and any tendency to 'dry in' during stoppages is minimal. These products can be used to give good definition on fabrics where the preparation or finishing conditions is questionable, e.g. Resin treated goods. However, fastness can not be guaranteed in this case.

APPLICATION:

MAGNAPRINT BINDER SL/N or MAGNAPRINT BINDER FF	940 - 999
MINERPRINT/QPRINT PIGMENT CONCENTRATES	60 - 1
*AUXILIARIES	x

* See Auxiliary Summary

1000 Parts

Notes:

1. Colour Mixing

MAGNAPRINT BINDER SL/N or MAGNAPRINT BINDER FF may be mixed with any of the Minerprint Pigments listed.

Intermixing is possible giving a wide range of coloured pastes from a relatively small range of pigments.

Adequate stirring should be given to ensure thorough mixing.

Thinning of the paste can be carried out by the addition of 10-5 gms per litre of a 1:3 solution of Water in Ammonium Sulphate. This will reduce the viscosity without affecting the colour strength and in addition act as a catalyst to increase the rate of curing.

Thickening of the print paste can be achieved by the simple addition of up to 1% MAGNAPRINT CLEAR M04.

This method of increasing viscosity is particularly useful to overcome flushing problems.

2. Printing

The use of 42(T) – 62(T) mesh monofilament screens is recommended in order to meet the requirements of either even coverage or fine line definition.

Screen lacquers should be post hardened or waterproof treated, as water based printing inks may cause breakdown of inadequately prepared screens.

Most substrate e.g. Cotton, Polyester Cotton, 100% Polyester are suitable for printing but fibres which possess a low surface adhesion e.g. Polypropylene, Silk, Polyamide or Wool will require special care during the drying and curing process.

3. Fastness

Whilst each of the above bases has been designed to offer good fastness properties on well prepared fabrics, due to the variation in substrates, satisfactory results cannot be guaranteed. Modification to improve fastness properties includes the addition of FIXATOR CM/F.

4. Drying & Curing

For the best fastness properties, prints should be thoroughly dried followed by curing using standard convection heating at 150 – 170°C (300 – 340°F) for 2 – 5 minutes.

Infra red dryers are commonly used in which case the curing times may be reduced.

5. Safety & Handling

Adequate ventilation is necessary to prevent build up of solvent vapours, which could be a fire hazard in the dryer.

METALLIC BINDER A is a ready to use solvent less printing paste for use with metallic powders. It provides very brilliant effects, which do not tarnish on exposure to air.

The preparation of the metallic paste is quite simple: -

Blend thoroughly (preferably by hand or alternatively with a mixer which does not incorporate air), METALLIC BINDER A with (120 – 200 parts per 1000) metallic powder. An addition of between 20 – 50 parts by weight of FIXATOR CM/F should be used to improve fastness properties.

OPAQUE BINDER KP (Minerprint Matt Lacquer NT) is a ready to use aqueous base, specially formulated to give high covering power on dark dyed materials. It is used to produce coloured 'imitation' discharge effects.

PUFF BINDER 3DP New (Minerfoam SR Special) is a thermosetting system, specifically formulated for application to fabric, expanding in place to provide a three dimensional print giving a similar effect to that achieved by 'Flock printing'. Minerfoam offers good wash fastness and moderate dry-cleaning fastness properties and may be tinted with Minerprint pigments and can be used for producing darker shades. The pigment addition requires a thorough blending by means of a high-speed mixer. For optimum raised effects we recommend curing immediately after printing which simultaneously raises and fixes the print.

MINERFOAM FLOCK FL provides velvety effects similar to 'Flock printing' and it offers good handle and a satisfactory wash and dry cleaning fastness. Prints, after drying must be polymerised at 150°C for 90–120 seconds. Lifting effect is obtained at 150°C. It is advisable not to overcome such a temperature.

FLITTER BINDER FB is a ready to use, high binder content printing paste for use with metallic flitters or polyester jewels. The print paste has been specially formulated to give the print paste a perfectly clear finish in order to prevent the dulling of the flitters. The concentration of the flitter used depends not only on the desired effect but the particle size. Normally between 250-300 parts by weight per 1000 are recommended.

PEARLAMINE MT/MAGNAPEARL F/3 (Pearl Binder AS) is a ready to use printing paste containing speciality products, in order to give the resultant print a pearl-like appearance. It can be used colourless or by the addition of 5-30 parts by weight per 1000 of pigment to produce subtle pearl effects.

GLOSS PASTE DP98/5 can be used to produce glossy lacquer effects on white or dyed backgrounds.

SUPER WHITE FFC (Minerprint White 45) & MINERPRINT WHITE SC are ready to use white printing pastes of opacity, which offers excellent fastness properties and high covering power. They can be 'cut' with acrylic based print paste by up to 40%, without excessive reduction in opacity. To reduce the viscosity whilst maintaining opacity the addition of a small percentage of water or acrylic binder is suggested.

To give a soft handle the addition of up to 3% FINISH S and/or 2% SOFTENER A/95 is recommended.

ELASTIL TRANSPARENT is used to achieve a stretch effect in matt, gloss and white on dark or light coloured backgrounds. This ready to use composition can be applied with the simple addition of the desired quantity (up to 150gms/Kg) of Minerprint colours or of ELASTIL WHITE (or both) when glossy/pastel effects are required on stretch fabrics.

ELASTIL STRETCH WHITE is a ready to use, solvent less printing paste especially for printing white or pastel colours on dark elastic fabrics.

ELASTIL OPAQUE COVERING is similar to OPAQUE BINDER KP but is much more elastic and is more suitable for use on stretch fabrics.

DISCHARGE BASE AB is a semi-emulsion acrylic printing paste for use on dischargeable dyed ground. Selected pigments may be used to produce coloured discharge prints. The discharge process is particularly useful for small motif designs where sharp definition and high brilliance can be obtained. The pigments chosen are those with a discharge rating of 4-5. All the inks are printed with the addition of 8% DECROLIN and be added to a discharge printing system immediately prior to use and used within 12 hours. After printing, fabrics should be dried and never be left in warm wet premises prior to steaming.

Steaming is carried out for 7-10 minutes at 102°C or dry curing can be used if steaming is not available.

MINERLUX PU is a ready to use phosphorescent printing paste for glow in the dark effects. To enhance the effect a small amount of Fluorescent pigment can be added.

MAGNAPRINT THICKENER M04 is a high efficiency thickener for pigment printing. Thickening is achieved normally in less than 1 minute, but optimum thickening time might vary according to the stirrer efficiency and formulation ingredients. Application: 20-30 gms by weight per 1000 of print paste.

PRINTOFIN SUPRA is a multi-purpose auxiliary which provides sharp, brilliant and uniform prints. It can be used in the preparation of cut-clears, where it is desired to have reduced penetration. The result is increased colour yield and more level grounds. It is markedly acid and therefore it is advisable to check the final pH of the print paste. This should be adjusted to pH 8-8.5 with 1-2 parts by weight of Ammonia if necessary.

VARIOTHERM COLOURS are a range of heat-sensitive colouring matter containing substances which show thermochromism (change of colour at different temperatures). At high-low temperature the colour disappears and reappears. Therefore, if the Variotherm colours are blended with general pigments a unique colour changing reaction can be obtained. They can be added to various bases and/or colours, dependent on the desired effect. Use 80-100 mesh screen printing, pre-dry and cure at 150°C for 4 minutes.
CAUTION: AVOID STEAM TREATMENT.

UVISENZ COLOURS are a range of light sensitive coloured pigments giving reversible colour change by light. When sunlight or UV radiation is applied the molecular structure of the colourant changes and exhibits colour which is reversible. It is possible to have a varying range by compounding with conventional pigment colours.

SCREEN CLEANER A60 is a special solvent free cleaning agent, preferably used undiluted and allowed to soak in for a period of time before cleaning off the contaminant. Residual product can be removed by washing with water.

SOFTENER A/95 is a stable emulsion consisting of several components for use with aqueous systems. It is particularly effective on lightweight cotton fabrics, Polyester cotton blends and non-wovens. Whilst the product provides a soft non-tacky handle it has the added advantage that it contributes towards improving the rub fastness properties of the print. Application: 5-15 by weight per 1000 of print paste.

FINISH S is a minerprint auxiliary which gives the pigment fabric a softer handle and at the same time substantially improves the rub fastness properties. The addition of FINISH S is particularly recommended for printing synthetic or blended fabrics in medium to dark shades, where excellent result can be obtained. Stir 10-50 parts by weight of FINISH S into the printing paste.

FIXATOR CM/F is used for crosslinking the various binders present in the pigment printing formula, providing excellent wash and rub fastness properties. Application: Normally 5-25 parts by weight per 1000 of print paste.

CROSSLINKER M is used to reduce considerably the times or temperatures of curing of pigment prints. It is compatible with all pigment printing paste systems but should be avoided where discharge prints are being produced with decolin. It is used particularly where the printer wishes to avoid a passage through a curing unit. Curing can be achieved in the dryer at temperatures of at least 160°C for 30 seconds. On fabrics to be air dried, the curing reaction is only partially complete. It is therefore effective where it is not possible to achieve a full cure. CROSSLINKER M is used in addition to FIXATOR CM/F. The concentration to be used is variable dependent on the product into which it is to be added. Between 10-20 gms per litre of print paste is sufficient. Once added to a print paste, the CROSSLINKER will remain active for 2 days.

UREA Under dry conditions screen blockage can occur if the print paste is left on the screens for too long a period. To overcome this problem it is recommended to add up to 30 gms per Kilo UREA solution. (Dissolved 1:2 in warm water, then allowed to cool).

The information contained in this leaflet is given in good faith. This information is accurate to the best of our knowledge and represents the most up to date information available to us. Products should be handled and used in accordance with the advice given.

DYESTUFF PRINTING & DYEING

QUALITY COLOURS (LONDON) LTD offers a comprehensive range of dyestuffs suitable for COTTON, SILK, WOOL, POLYESTER, NYLON and most natural fabrics. Specific details on recipes and prices are available upon request.

THE FOLLOWING COLOURS ARE AVAILABLE IN THE MINERPRINT PIGMENT PRINTING RANGE

STANDARD COLOURS

		<u>DISCHARGE RATING</u>
		<small>(WHEN USING WITH DISCHARGE BASE AB)</small>
QPRINT YELLOW 2G	(Lemon)	5
QPRINT GOLDEN YELLOW RF	(Gold)	5
QPRINT YELLOW K	(Ochre)	1
QPRINT ORANGE G	(Yellow Orange)	5
QPRINT RED BTL	(Cherry)	4
QPRINT RED GRL	(Pillar Box)	1
QPRINT SCARLET TRL	(Scarlet Red)	1
QPRINT RED R	(Bright Red)	3
QPRINT BORDEAUX RN	(Burgundy)	1
QPRINT ROYAL BLUE R	(Royal Blue)	5
QPRINT BLUE 5RF	(Royal Navy Blue)	5
QPRINT BLUE B	(Ultramarine)	5
QPRINT BLUE 3G	(Green Blue)	5
QPRINT TURQUOISE 4G	(Aquamarine)	5
QPRINT NAVY RM/N	(Navy Blue)	2
QPRINT GREEN B	(Bottle Green)	5
QPRINT GREEN GGY	(Emerald)	5
QPRINT OLIVE GREEN 2K	(Olive Green)	1
QPRINT BROWN RBT	(Hazel)	2
QPRINT BROWN RRT	(Tan)	4
QPRINT DARK BROWN GTM	(Chocolate)	4
QPRINT YELLOW BROWN RM	(Rust)	1
QPRINT BLACK BM	(Black)	1
QPRINT WHITE RT	(White)	

MINERPRINT BRILLIANT/HIGH CONC.COLOURS

QPRINT YELLOW 10GTL	(Bright Yellow)	5
QPRINT YELLOW 3R	(Egg Yellow)	5
QPRINT RED 3GRT	(Fiery Red)	5
QPRINT RED BB	(Bluish Red)	5
QPRINT PINK BT	(Rose)	4
QPRINT PINK 5BTL	(Deep Pink)	5
QPRINT ORANGE OL Special	(Reddish Orange)	5
QPRINT VIOLET 2BTL	(Blue Violet)	5
QPRINT GREY BT	(Blue Grey)	4

FLUORESCENT COLOURS

FLUORESCENT YELLOW 10G
FLUORESCENT ORANGE 2G
FLUORESCENT RED G
FLUORESCENT PINK FB
FLUORESCENT GREEN B

VARIO THERM COLOURS

MAGENTA AQ Conc 25 FAST BLUE AQ Conc 25 GOLD ORANGE AQ Conc 25
BRILL GREEN AQ Conc 25 BLACK AQ Conc 25

UVISENZ COLOURS

YELLOW AQ Conc 25 PURPLE AQ Conc 25

OTHER QPRINT COLOURS MAY BE AVAILABLE UPON REQUEST

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