

**TECHNICAL INFORMATION****FINEPRINT VC FB****FINEPRINT VC – VARIABLE CONTRAST BLACK AND WHITE PAPER, ON A FIBRE BASE.**

This product has unique alternatives for the discerning image maker seeking the aesthetic qualities of a fibre based paper, coupled with the convenience of a variable contrast emulsion.

Cool rich blacks, crisp bright whites, excellent sharpness in even the finest detail, and exceptional mid-tone detail characterise Fineprint VC Glossy and Fineprint Finegrain.

Note, within this FINEPRINT range, a FINEPRINT F.G Warmtone version exists, however this is now only available in limited stocks as the product has been discontinued. This Warmtone product still has all the same above mentioned properties, but with it additionally having warm rich whites and a subtle, warmer image rendition.

The Glossy, Finegrain and F.G Warmtone surfaces all respond well to many toning techniques allowing further manipulation of tone and contrast.

Whatever your needs, FINEPRINT VC is the perfect choice for portfolio, exhibition and commercial work where excellence is the criterion.

**Product Description**

The FINEPRINT VC range consists of black and white enlarging papers with a traditional fibre base in double weight, coated with a variable contrast emulsion.

Using standard colour filtration, contrast from grades 00 to 5 are achievable.

**Surfaces**

- **Glossy:** The traditional unglazed glossy surface is particularly suited to portrait, landscape and exhibition work. A very high gloss can be achieved by standard glazing techniques.

- **Finegrain:** A semi-matt surface coated on a Stipple / Lustre base paper. Note, there are currently limited stocks only of this specific surface.

Plus, limited stocks of:-

- **F.G Warmtone :** A warmtone semi-matt finegrain surface, giving a warm, rich image with subtle creamy highlights.

**Packaging**

Kentmere black and white photographic papers are packed in a black plastic bag, then an outer cardboard box or envelope and finally sealed with a label and tape. The plastic bag helps protect the paper from humidity and fumes as well as being light proof. Although the black plastic bag is light proof, we would recommend that it is also returned to the outer cardboard container before exposure to white light as small holes can develop in the plastic bag with use.

**Storage**

All Kentmere black and white photographic papers should be stored in their original packaging, including the black plastic bag. The plastic bag protects the paper from harmful darkroom fumes and humidity.

Ideally the paper should be stored in a cool dry environment preferably at temperatures below 20°C.

For prolonged storage a freezer can be used. In either case, allow sufficient time for warming up and do not allow condensation to form on the paper.

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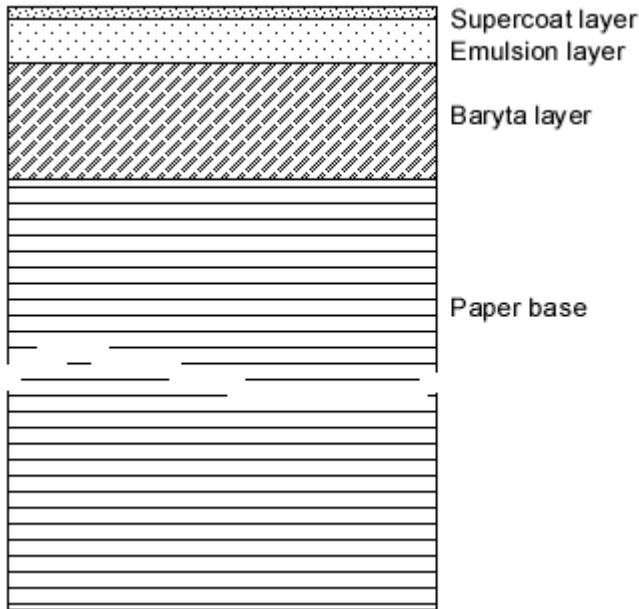
## Paper Structure

### Paper Base (double weight)

The paper is 240 g/m<sup>2</sup> coated on the front side with 36 g/m<sup>2</sup> of baryta giving a base weight of approximately 276 g/m<sup>2</sup> and a thickness of approximately 260 µm.

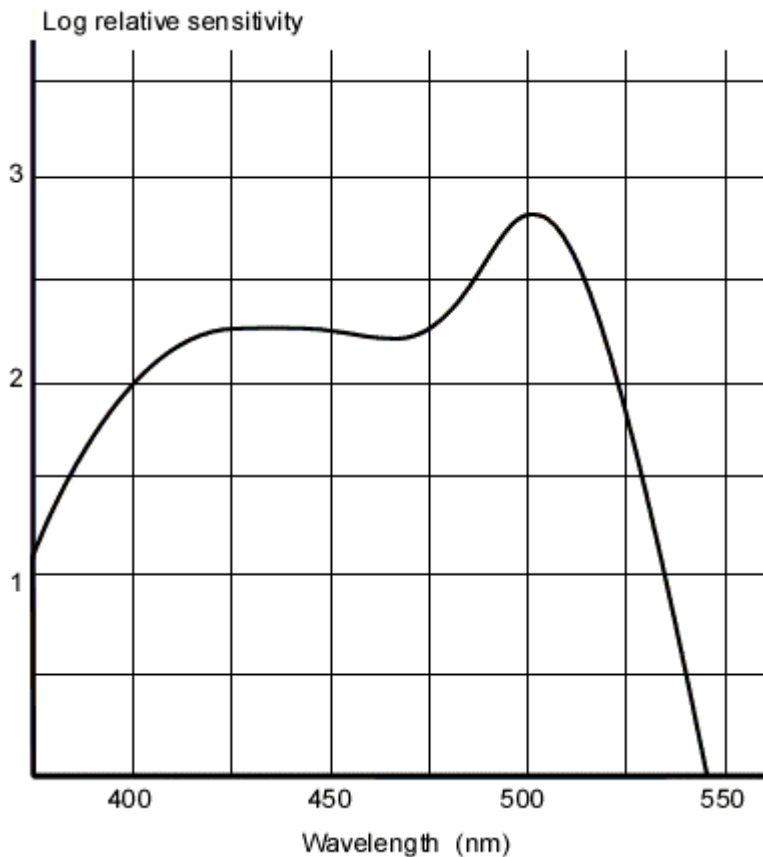
### Coated emulsion layer

The light-sensitive silver halide emulsion layer has a silver content of approximately 1.5 g/m<sup>2</sup>. This is covered with a gelatine supercoat which protects the emulsion from stress fogging and physical damage and also contains a small amount of developing agent.



(Not to scale, for information only)

## Spectral Sensitivity



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## Sensitivity

### ISO Paper Speed (ISO speed to ISO 6846 - 1992)

When exposed to unfiltered white light, FINEPRINT VC has a speed of ISO P 640 and a contrast of approx grade 2. When exposed using ILFORD Multigrade filters, grades 00 - 3½ have the same speed (ISO P 320) and grades 4 - 5 require approximately twice the exposure (ISO P 160).

## Exposure

FINEPRINT VC is designed for use with tungsten or tungsten halogen light sources.

Cold light source enlargers can be used, but they may limit the contrast range achievable.

## Contrast Control

Contrast as a range approximately equivalent to grades 00 to 5 is achievable from the FINEPRINT range by means of colour filters used in the enlarger. Proprietary filter sets such as ILFORD Multigrade or Kodak Polymax are suitable, as are modular and automatic enlarger heads featuring proprietary filters; otherwise the magenta and yellow filters of colour enlarging heads can be used.

Below and on page 4, are tables of enlarger colour filter settings recommended for use with the FINEPRINT range. Filter settings recommended by other manufacturers will also give a similar range of contrasts; there may be slight differences in grade spacings. The contrast of the paper is continuously variable so that the grades are fixed only by the filter settings used, and thus fractional grade changes can be achieved.

Filters of colour enlargers from different manufacturers fall into three categories as follows:-

**Durst:** Dunco, Durst, Kaiser, Keinzle, Leitz, Lupo.

**Kodak:** Beseler, De Vere, Chromega, Fujimoto, IFF, Jobo, LPL, Omega, Paterson, Vivitar, Simmard.

**Agfa:** Agfa, Krokus, Meopta.

**Table A** shows the single filtration settings to enable grade selection. Speeds of grades are not the same. These are guide settings only – some additional slight alterations to quoted values may be required.

<b>FILTER GRADE</b>	<b>DURST - for Gloss surface</b>	<b>DURST - for F.G Warmtone &amp; Finegrain</b>	<b>KODAK - for Gloss surface</b>	<b>KODAK - for F.G Warmtone &amp; Finegrain</b>	<b>AGFA - for Gloss surface</b>	<b>AGFA - for F.G Warmtone &amp; Finegrain</b>
<b>00</b>	<b>120Y</b>	<b>80Y</b>	<b>199Y</b>	<b>150Y</b>	<b>150Y</b>	<b>140Y</b>
<b>0</b>	<b>70Y</b>	<b>40Y</b>	<b>90Y</b>	<b>80Y</b>	<b>90Y</b>	<b>90Y</b>
<b>1</b>	<b>40Y</b>	<b>15Y</b>	<b>50Y</b>	<b>45Y</b>	<b>55Y</b>	<b>60Y</b>
<b>2</b>	<b>0Y</b>	<b>20M</b>	<b>0Y</b>	<b>10M</b>	<b>0Y</b>	<b>15Y</b>
<b>3</b>	<b>30M</b>	<b>40M</b>	<b>25M</b>	<b>45M</b>	<b>40M</b>	<b>45M</b>
<b>4</b>	<b>75M</b>	<b>60M</b>	<b>80M</b>	<b>75M</b>	<b>85M</b>	<b>75M</b>
<b>5</b>	<b>130M</b>	<b>130M</b>	<b>199M</b>	<b>130M</b>	<b>-</b>	<b>120M</b>

When exposed with no filter, the paper gives a contrast of approximately Grade 2 and is of high speed.

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**Table B** shows the dual filtration settings to enable grade selection. Speeds of grades are not the same. These are guide settings only – some additional slight alterations to quoted values may be required.

<b>FILTER GRADE</b>	<b>DURST – for Gloss surface</b>	<b>DURST – for F.G Warmtone &amp; Finegrain</b>	<b>KODAK – for Gloss surface</b>	<b>Kodak- for F.G Warmtone &amp; Finegrain</b>	<b>AGFA - for Gloss surface</b>	<b>AGFA - for F.G Warmtone &amp; Finegrain</b>
<b>0</b>	<b>88Y/0M</b>	<b>40Y</b>	<b>90Y/0M</b>	<b>80Y</b>	<b>105Y/12M</b>	<b>90Y</b>
<b>1</b>	<b>64Y/12M</b>	<b>25Y/20M</b>	<b>68Y/10M</b>	<b>60Y/15M</b>	<b>67Y/17M</b>	<b>75Y/15M</b>
<b>2</b>	<b>45Y/24M</b>	<b>10Y/45M</b>	<b>41Y/32M</b>	<b>35Y/50M</b>	<b>39Y/43M</b>	<b>50Y/40M</b>
<b>3</b>	<b>24Y/42M</b>	<b>24Y/42M</b>		<b>23Y/56M</b>		<b>23Y/62M</b>
<b>4</b>		<b>10Y/69M</b>		<b>6Y/102M</b>		<b>10Y/95M</b>
<b>5</b>		<b>0Y/130M</b>		<b>-</b>		<b>0Y/200M</b>

**Contrast Range** (ISO range to ISO 6846 - 1992)

<b>Filter</b>	00	0	1	2	3	4	5
<b>ISO Range</b>	150	130	110	95	80	70	60

These figures represent an average of the achievable results. A small amount of production tolerance is included. Actual results achieved may differ depending on processing, paper age and storage conditions.

### Maximum density

The FINEPRINT range can achieve the following maximum densities:-

Glossy 2.00 – 2.20

Finegrain 1.60

F.G Warmtone 1.60

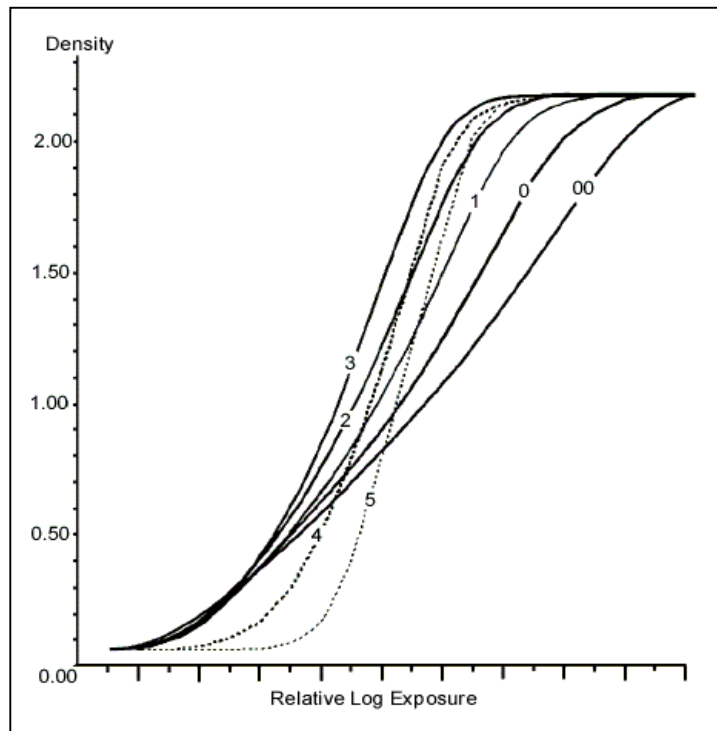
(The Finegrain surfaces contain matting agents which reduce the maximum density achievable)

Results achieved using ILFORD Multigrade Developer at 1 + 9 at 20°C, as recommended under processing instructions. Other developers and fixers should give comparable results.

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### Density / Characteristic curves

(Glossy surface)



Results achieved using ILFORD Multigrade Developer at 1 + 9 at 20°C, as recommended under processing instructions.

Other recommended developers and fixers should give comparable results.

Note, the above curves are based on a  $d_{max}$  of 2.20 being achievable, but as shown from the  $d_{max}$  values quoted on page 4 - dependent on the product surface being used, the  $d_{max}$  value can be lower.

### Safelighting

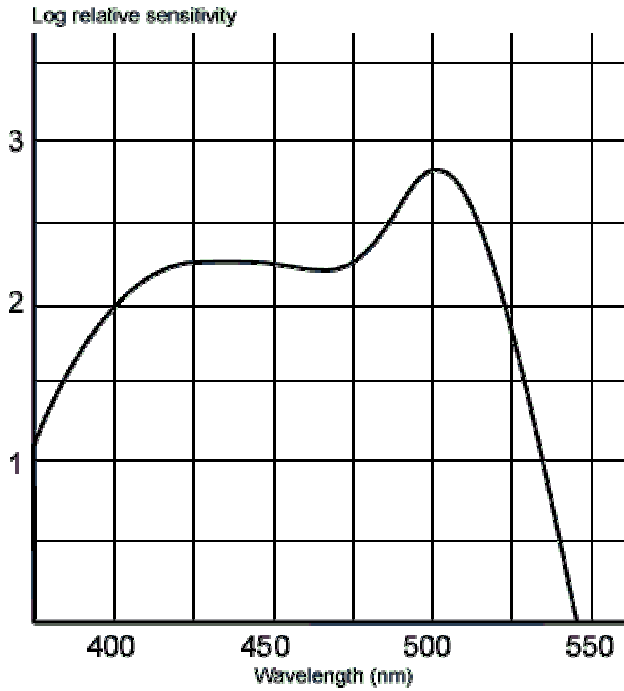
The FINEPRINT range have orthochromatic emulsion; this requires a dark orange/brown or red safelight to be used. All variable contrast papers are more sensitive to safelights than conventional graded printing papers. Good darkroom practices should be adopted by keeping safelight exposure to a minimum and returning unused paper to the original packaging.

Box/lantern type safelights using glass filters should only be used with a 15 W bulb or less and should be positioned at least 1 metre from the paper. Safelight filters which are suitable for use with FINEPRINT are :-  
ILFORD 904, ILFORD 902 and Kodak OC or 1A.

Fluorescent safelights are also safe and suitable, these give a brighter, overall more even lighting. Fluorescent safelights should be positioned at least 1.5 metres from the paper.

Other safelights can be used, but tests should always be carried out first.

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## PROCESSING

To maximise d.max, grade spacing and tonal rendition, and to enhance the characteristics of variable contrast emulsions, a developer and fixer such as ILFORD Multigrade Developer and ILFORD Hypam Fixer are recommended. Equivalent products from other manufacturers should give similar results.

The below table shows recommended dish processing conditions for use with ILFORD Multigrade developer and ILFORD Hypam/Rapid fixer.

If using another manufacturer's chemistry, refer to their instructions for recommended processing conditions, to achieve similar results.

Chemistry	Dilution	Temp.	Time (seconds)
ILFORD Multigrade Developer	1 + 9	20oC	90 - 180 s
ILFORD Multigrade Developer	1 + 14	20oC	120 - 300 s
ILFORD Ilfostop bath	1 + 19	20oC	10 s
ILFORD Hypam or Rapid Fixer	1 + 4	20oC	60 s
Wash in running water	-	-	60 minutes

## **FINEPRINT FB**

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### **Drying**

FINEPRINT VC can be dried using any standard fibre base paper drying methods, these include; Atmospheric drying, either at room temperature or using warm air, having removed excess surface water using a suitable print squeegee.

Prints will dry flatter if hung back to back in pairs.

Print drying racks or plastic mesh screens can also be used to hold prints flat during drying.

Rotary glazing/drying drums or flat bed glazing/drying presses.

The use of a wetting agent in the final washing will help to produce a better contact between the print face and the heated glazing surface.

If using a heated glazing surface for drying prints, the back of the print should be in contact to the glazing surface. Excessive temperatures should not be used, as this can cause the emulsion to melt and adhere to the glazer blanket.

### **Toning**

The FINEPRINT range tones well with a variety of toners dependent on dilution and times used.

Prints to be toned should be thoroughly fixed and washed prior to any toning.

Follow the instructions as supplied by the toner manufacturer.

### **Mounting**

The FINEPRINT range can be mounted using any of the standard methods for fibre based papers.

- Cold adhesive films/cold mounting
- Hot adhesive films/dry mounting
- Spray adhesives (such as those from the 3M range)