

## TECHNICAL INFORMATION

**ILFOSPEED  
RC DeLuxe****PREMIUM QUALITY GRADED PAPER  
ON A RESIN COATED BASE**

ILFORD ILFOSPEED RC DeLuxe is premium quality graded paper on a 190g/m<sup>2</sup> medium weight resin coated base. It has a bright white base tint and a neutral image colour whether viewed in daylight or fluorescent light. ILFOSPEED RC DeLuxe is suitable for a wide range of applications, including commercial, press, industrial, advertising, and display work.

There are three ILFOSPEED RC DeLuxe surfaces: 1M glossy, 24M semi-matt and 44M pearl. The full contrast range of six equally spaced grades is 0-5 available in the glossy surface. Pearl is available in five grades 1-5 whereas semi-matt is available in grades 1-4 only.

ILFOSPEED RC DeLuxe paper can be either dish/tray processed or machine processed in automatic processors designed for black and white paper processing. It is not suitable for activation type processing.

**EXPOSURE**

ILFOSPEED RC DeLuxe is designed for use with all enlargers. When using colour enlargers, always ensure that the paper is exposed using white light without filtration.

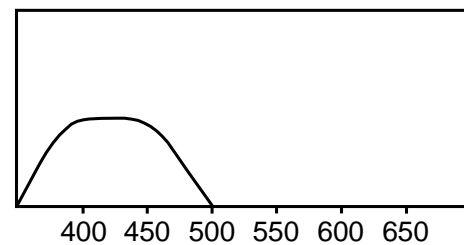
**Safelight recommendations**

ILFOSPEED RC DeLuxe can be used with virtually all safelights for black and white papers. The ILFORD safelights are especially recommended, however, as they generally allow darkrooms to be brighter, but completely safe, for ILFOSPEED RC DeLuxe and many black and white papers.

ILFORD safelights are the ILFORD SL1 darkroom safelight or the ILFORD 902 (light brown) safelight filter fitted in a darkroom lamp (for example, the ILFORD DL10 or DL20). A 15W bulb is recommended with these safelights.

For direct lighting, do not expose the paper to the safelight for more than 4 minutes, and the distance between the paper and the safelight should be a minimum of 1.2m/4ft. However, ILFOSPEED RC DeLuxe is extremely resistant to safelight fogging.

Other filters can be used, for example, the Kodak OC and the Agfa-Gevaert G7, or the Philips PF710 safelamp.

**SPECTRAL SENSITIVITY  
Wedge spectrogram to tungsten light  
(2850K)**

Wavelength (nm)

**Contrast range**

ILFOSPEED RC DeLuxe paper is available in six equally spaced contrast grades, sufficient to accommodate most negatives. The chart gives the ISO range figures (ISO standard 6846 – 1992) for ILFOSPEED RC DeLuxe. These figures give a guide to selecting the appropriate grade of paper for a given effective negative density range.

**ISO range**

Grade	0	1	2	3	4	5
Range (R)	140	120	100	80	60	40

The above values are representative of those obtained when dish/tray or machine processing the paper to ILFORD recommendations.

ISO range figures may be helpful to printers who have some means of measuring the effective density range of the image as projected on the enlarger baseboard – such as with a photometer. As an example, for a negative with an effective density range of 1.22 log exposure units, multiply this figure by 100 and choose the nearest ISO range figure from the table – in this case 120. Try printing this negative on grade 1 ILFOSPEED RC DeLuxe paper.

**ISO speed**

ILFOSPEED RC DeLuxe has a medium to high paper speed, which ensures short exposure times but it is not difficult to control.

ILFOSPEED RC DeLuxe grades 0–4 have a paper speed of ISO P500. Grade 5 is half this speed, ISO P250. These values are representative of those obtained when dish/tray or machine processing the paper to ILFORD recommendations.

**Latent image stability**

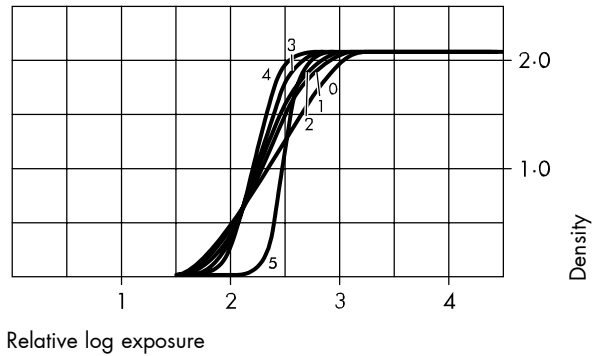
ILFOSPEED RC DeLuxe paper grades 0 to 3 can be recommended with confidence for use in all applications that require paper to be left for a reasonable time between exposure and processing. No significant change in picture quality will be seen on these grades when they are left for a period of 24 hours after exposure and before processing.

In common with other graded papers, ILFOSPEED RC DeLuxe grades 4 and 5 do show some very slight density increase if left for a period between exposure and processing. Even with these grades, however, the changes are very slight. To maintain optimum consistency when machine processing, always leave prints for the same time between exposure and processing, and process them in the same order as exposure.

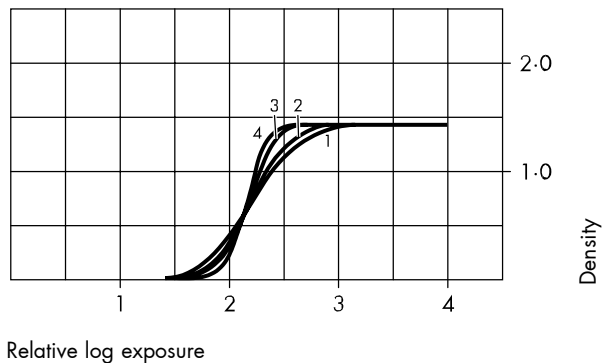
**Dimensional stability**

ILFOSPEED RC DeLuxe has a high dimensional stability. When processed as recommended, sheet size will not vary by more than 0.1% between before and after processing.

**Characteristic curves**



ILFOSPEED RC DeLuxe glossy or pearl paper grades 0 to 5. Developer: MULTIGRADE diluted 1+9. Development: 1 minute at 20°C/68°F.



ILFOSPEED RC DeLuxe semi-matt paper grades 1 to 4. Developer: MULTIGRADE diluted 1+9. Development: 1 minute at 20°C/68°F.

**DISH/TRAY PROCESSING**

ILFOSPEED RC DeLuxe is processed in the same way as other resin coated papers. Full details on processing resin coated papers are given in the fact sheet 'Processing B&W paper – RC papers'.

**Note** Photographic chemicals are not hazardous when used correctly. Always follow the health and safety recommendations on the packaging. Photochemicals material safety data sheets containing full details for the safe handling, disposal and transportation of ILFORD chemicals are available from ILFORD.

**Processing summary** (intermittent agitation)

ILFORD chemical	Dilution	°C/°F	Time (min:sec)
<b>Development</b>			
MULTIGRADE	1+9	20/68	1:00
or MULTIGRADE	1+14	20/68	1:30
or BROMOPHEN	1+3	20/68	2:00
or PQ UNIVERSAL	1+9	20/68	2:00
<b>Stop bath</b>			
ILFOSTOP	1+19	18–24/64–75	0:10
or ILFOSTOP PRO	1+19	18–24/64–75	0:10
<b>Fixation</b>			
ILFORD RAPID FIXER or HYPAM	1+4	18–24/64–75	0:30
	1+4	18–24/64–75	0:30
<b>Washing</b>			
Fresh, running water	–	Above 5/41	2:00

**Development**

See the 'Processing summary' for development recommendations.

On correctly exposed prints with MULTIGRADE developer 1+9, the image will begin to appear after 10 seconds. The minimum recommended development time for high quality prints is 45 seconds; after this time there is a more gradual image build-up. Overexposed prints developed for a minimum of 35 seconds are acceptable for those applications where the highest quality is not required.

**Stop bath**

See the 'Processing summary' for stop bath recommendations.

A stop bath stops development immediately, reduces the risk of staining and will extend the life of the fixer bath.

The use of a stop bath is strongly recommended.

**Fixation**

See the 'Processing summary' for fixing recommendations.

The use of a hardening fixer is not recommended as it reduces washing efficiency. ILFORD RAPID FIXER and ILFORD HYPAM are non-hardening fixers.

There is no benefit in extending fixation beyond the recommended time; some loss of print quality might be seen when long fixing times are given due to image etching.

**Washing**

See the 'Processing summary' for washing recommendations.

When it is important to obtain a print in the shortest possible time, vigorously wash ILFOSPEED RC DeLuxe paper for 30 seconds in running water.

Prolonged immersion in water can cause edge penetration and print curl with resin coated papers: for this reason, avoid wet times longer than 15 minutes.

**Drying**

A final rinse in ILFORD ILFOTOL, diluted 1+200 with water, will aid even and rapid drying.

Optimum quality results will be obtained with the ILFORD series of dryers, for example, the ILFOLAB 1250RC.

When a dryer for resin coated papers is not available, remove surplus water from the prints and leave them to dry. At room temperature, prints will dry in 10–20 minutes.

**Note** ILFOSPEED RC DeLuxe paper, as with other resin coated papers, should not be glazed/ferrotyped or dried on a drum or flatbed glazer, as this can cause the polyethylene in the paper to stick to the glazing surface.

**MACHINE PROCESSING**

ILFOSPEED RC DeLuxe paper can be processed in all conventional machines for black and white resin coated papers. However it is not suitable for activation type processing. Full details on processing resin coated papers are given in the fact sheet 'Processing B&W paper – RC papers'.

**ILFORD processors**

ILFORD 2000RT developer/replenisher and fixer/replenisher are recommended for use with all ILFORD black & white processors.

For the ILFOLAB 2150RC table-top processor ILFORD 2150XL developer and fixer kits are recommended.

**Other processors**

This section is a guide to setting up processors for ILFORD resin coated papers using ILFORD 2000RT developer/replenisher and fixer/replenisher. These are diluted 1+4 to make tank or replenisher solution. These suggestions are only a guide, and the processing cycle should be checked in the processor. For further guidance, contact your local ILFORD company or distributor.

**Suggested development times**

The preferred temperature range is 20–30°C/68–86°F.

Temperature (°C/°F)	Development time (sec) including transfer time to next tank
20/68	46
25/77	32
30/86	22
35/95	15
40/104	12

These times are for non-replenished systems, with a maximum solution life of seven days. They are also for replenished systems with a solution life of up to three months. The suggested developer replenishment rate is 150–250ml/m<sup>2</sup> (14–23ml/ft<sup>2</sup>) paper processed.

**Suggested fixing times**

The same times and temperatures as for development can be used for fixing. The actual fixing time, however, is shorter, and 20 seconds is ample above 20°C/68°F. These recommendations are suitable for both replenished and non-replenished systems. In non-replenished systems, the maximum paper throughput is 4m<sup>2</sup>/l (44ft<sup>2</sup>/US quart) of working strength solution. The suggested fixer replenishment rate for replenished systems is 300–450ml/m<sup>2</sup> (28–41 ml/ft<sup>2</sup>) of paper processed. The maximum silver concentration in the fixer bath is 4–6g/l (US quart).

**Note** If fixing is not complete, then adequate washing is impossible.

**Washing times**

Wash for at least 15 seconds at temperatures above 5°C/41°F. Set the water flow so as to fill the wash tank in 4 minutes or less.

**Hot air drying**

Use temperatures up to 85°C/185°F.

**FINISHING**

ILFOSPEED RC DeLuxe responds in the same way as other resin coated papers to the usual techniques of toning, chemical reduction and retouching. It can be mounted using the standard techniques for resin coated papers. Full details on finishing resin coated papers are given in the fact sheet 'Processing B&W paper – RC papers'.

**STORAGE**

**Unprocessed paper**

Store unused ILFOSPEED RC DeLuxe paper in a cool, dry place in its original packaging. Avoid conditions of high temperature and/or high humidity. ILFOSPEED RC DeLuxe will keep in excellent condition for up to 3 years when stored as recommended.

**Prints**

ILFOSPEED RC DeLuxe prints which have been processed as recommended in this leaflet will have a more than adequate storage life for most purposes. Print life will be shortened, however, in adverse storage conditions, or if the print is exposed to oxidising gases.

It is recommended that prints made for display are toned to protect them from the oxidising gases that are found in many environments. Selenium toner is recommended as it has little effect on the image colour of ILFOSPEED RC DeLuxe, but other protection methods can be used including sulphide toning, silver image stabilisers and laminating. Full details on protecting prints made for display are given in the fact sheet 'Processing B&W paper – RC papers'.

A wide range of fact sheets is available which describe and give guidance on using ILFORD products. Some products in this fact sheet might not be available in your country.

**HARMAN technology Limited**, Ilford Way, Moberley, Knutsford, Cheshire WA16 7JL, England  
[www.ilfordphoto.com](http://www.ilfordphoto.com)