

# INDUX R3

## INDUSTRIAL X-RAY FILM

### General information

INDUX R3 is an industrial radiographic film intended for non-destructive material testing using X- or gamma radiation.

INDUX R3 is a low-speed, high-contrast, extremely fine-grain film with excellent sharpness suitable for radiography with or without lead screens.

INDUX R3 corresponds with the class C2 classification according to EN 584-1 standard and according to ASTM E 1815 standard with class I.

### Applications

INDUX R3 is suitable for applications requiring exact resolution in details like inspection electrical components, ceramical particles, castings, nuclear components, in cosmic research, aircraft and shipping industry.

### Packaging forms

**daylight packaging (FOMAPAK)** – one-sheet vacuum-sealed packaging with lead screens of 0,025 or 0,1 mm thickness  
 Sizes: 6x10, 6x12, 6x16, 6x20, 6x24, 6x30, 6x40, 6x48, 10x10, 10x12, 10x16, 10x20, 10x24, 10x30, 10x40 and 10x48 cm in boxes of 50 sheets.

Sizes: 30x40 cm in boxes of 25 sheets.

The vacuum-sealed packaging FOMAPAK ensures optimum contact of film surface with lead screens, simple handling, and is light-tight, air-tight and waterproof.

### darkroom packaging (KB)

Sizes: 6x24, 6x40, 6x48, 10x12, 10x24, 10x40, 10x48 and 10x72 cm in boxes of 100 sheets.

Sizes: 10x20, 18x24, 24x30, 30x40 and 35x43 cm interleaved (IF, FW) in boxes of 50 sheets.

Other sizes are subject to be agreed with the manufacturer.

**MultiPack** – daily package containing 2 films INDUX with various speeds.

Dimensions and speeds of inserted films according to customer's individual requirements.

### Film base

INDUX R3 is manufactured on a dimensionally stable bluish polyester base of 0,175 mm thickness.

### Screens

Screens-packed kinds (FOMAPAK) content lead screens 0,025 or 0,1 mm thick, backed by a paper of 70 - 90 g/sq. m of basis weight, on both film sides.

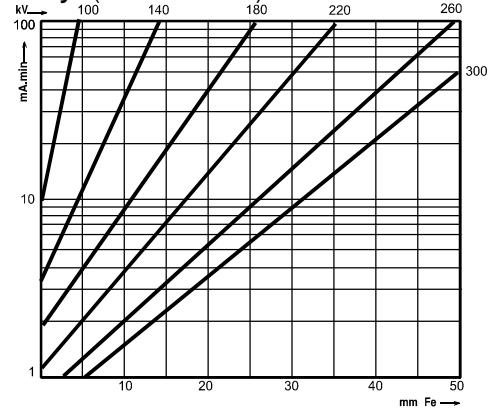
### Darkroom illumination

INDUX R3 should be handled and processed under indirect safelight illumination with a wavelength over 520 nm. Recommended are safelight filters Agfa R1 filter (dark red) or Agfa G7 filter (olive-green) in a safelight lamp with a 25 watt bulb and placed in a distance of minimum 75 cm between the reflective surface and the film, or LED light sources with a wavelength of 660 nm or 590 nm.

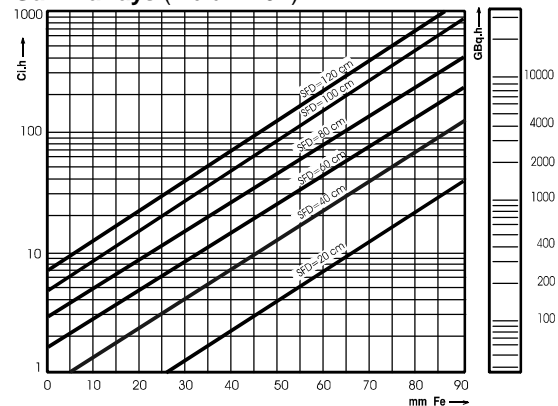
### Exposure charts for steel

For optical density D=2, front and back lead screens 0,025 mm thick, FOMADUX LP-T Developer 5 minutes at 20 °C).

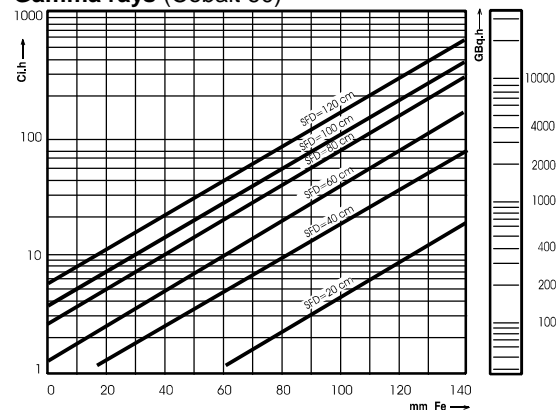
#### X-rays (FDD = 100 cm)



#### Gamma rays (Iridium 192)



#### Gamma rays (Cobalt 60)



## Processing

INDUX R3 is intended both for the manual and automatic processing.

### Recommended chemicals for the manual processing:

FOMADUX LP-T Developer and Developer-Replenisher  
(5 minutes of developing time at 20 °C, 1 + 3)  
FOMADUX FIX Rapid Fixer  
FOTONAL Wetting Agent

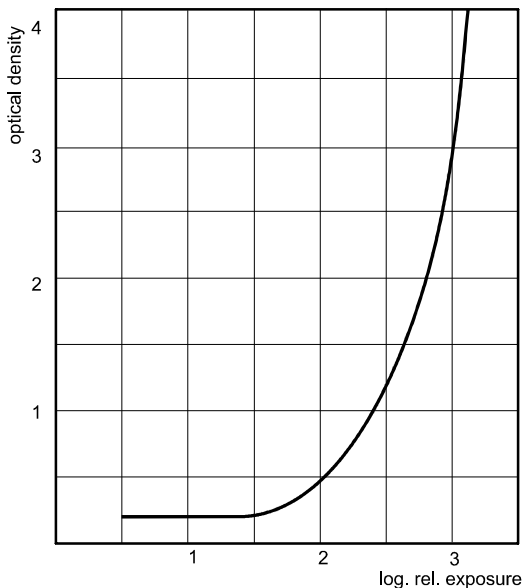
### Recommended chemicals for the automatic processing:

FOMADUX LP-D Developer-Replenisher  
(120 seconds of developer immersion time at 28 °C)  
FOMA LP-DS Developer Starter  
FOMADUX FIX-Set Hardening Rapid Fixer (Fomadux Fix + Fomafix H)

INDUX R3 can also be processed in corresponding processing chemicals of other manufacturers, for example developer Agfa G135 for automatic processing 100 seconds of developer immersion time at 28 °C or for manual processing 5 minutes of developing time at 20 °C.

### Sensitometric characteristic

Source ISO 2 (220 kV/10 mA/8 mm Cu), automatic processing, FOMADUX LP-D Developer, 8 minutes of processing time at 28 °C (corresponds with 120 seconds developer immersion time)



### Archiving of processed films

The manufacturer guarantees the archival permanence of minimum 50 years when complying with conditions following:

- films must be perfectly fixed and washed
- films must be stored at a relative humidity of 30 to 60% out of reach of harmful gases.

### Storage of unexposed films

Unexposed films should be stored in the vertical position in the original packaging in a dry and cool place at a temperature of 5 to 21 °C and at a relative humidity of 40 to 60 %, out of reach of harmful gases and any ionizing radiation.

Exposed films should be processed as soon as possible.

*By using and processing of the product Indux R3 arise wastes, which is necessary to environmentally liquidate according to valid legislation.*

### Wastes:

- packaging foil : PET / AL / PE or PAPER / AL / PE
- Pb foil
- waste developers
- waste fixers

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The product has been produced and marketed in conformity with a quality system according to the international standard EN ISO 9001.