

# ILFORD PHOTO

## FILM PROCESSING CHART

20°C / 68°F      TIME (mins):(secs)

Developer	Dilution	PANF PLUS		FP4 PLUS			HP5 PLUS						DELTA 100 PROFESSIONAL			DELTA 400 PROFESSIONAL						DELTA 3200 PROFESSIONAL					ORTHO PLUS	SFX 200			KENTMERE PAN 100			KENTMERE PAN 400							
		EI	25	50	50	125	200	200	250	320	400	800	1600	3200	50	100	200	200	250	320	400	500	800	1600	3200	400	800	1600	3200	6400	12500	80 (DAYLIGHT) 40 (TUNGSTEN)	200	400	800	50	100	200	320	400	800
ILFOTEC DD-X	1+4		07:00	08:00	08:00	10:00	12:00				09:00	10:00	13:00	20:00	08:00	10:30	12:30	06:00			08:00	09:30	10:30	13:30	18:00	06:00	07:00	08:00	09:30	12:30	17:00	10:30	10:00	14:00		08:30	10:30	12:30		11:30	13:00
ILFOTEC LC29	1+9				04:00	05:00				03:30	05:00	07:30	11:00						04:00			05:30	07:30	13:00			05:00	08:00	13:00		04:00	05:00	07:00	10:30		04:00	05:00		04:30	06:30	
	1+19		04:00	06:00	08:00	09:00				06:30	09:30	14:00		05:00	06:00	08:00	05:00			07:30		10:00	13:30		06:00	07:30	09:00	14:30		06:00	09:00	13:00	19:00	05:30	07:00	08:00		08:00	12:30		
	1+29		05:30	08:00	12:00					09:00				05:30	07:30	10:00	08:30			11:30		17:00										11:00			07:30	11:00			11:00		
ILFOTEC HC	1+15				04:00	05:00				03:30	05:00	07:30	11:00					04:00			05:30	07:30	13:00			05:00	08:00	13:00		04:00	05:00	07:00	10:30		04:00	05:00		04:30	06:30		
	1+31		04:00	06:00	08:00	09:00				06:30	09:30	14:00		05:00	06:00	08:00	05:00			07:30		10:00	13:30		06:00	07:30	09:00	14:30		06:00	09:00	13:00	19:00	05:00	06:30	08:00		08:00	12:30		
ILFOSOL 3	1+9				04:15		05:00			06:30	13:30			05:00		05:30			07:00		14:00			06:00	07:30	10:00	11:00	18:00		05:00	06:00	08:30		05:00			06:30	15:00			
	1+14		04:30		07:30		07:00			11:00	19:30			07:30		08:00			12:00		20:30			11:00	13:00	15:30	17:00	23:00		07:00	09:00	13:30		07:30			11:00	25:00			
ID11	Stock		04:30	06:30	06:30	08:30	10:00			07:30	10:30	14:00		07:00	08:30	10:30	07:00			09:30		11:30	14:30	19:00	07:00	08:00	09:30	10:30	13:00	17:00	08:00	10:00	14:00	18:00	07:00	09:00	11:00		09:30	13:00	
	1+1		06:00	08:30	08:00	11:00	15:00			13:00	16:30			10:00	11:00	13:00	10:00			14:00		17:30								10:30	17:00			08:30	11:30	15:30		16:30	20:30		
	1+3		12:30	15:00	17:00	20:00				20:00				15:00	20:00	18:00													16:00				17:30	21:00			25:30				
MICROPHEN	Stock		04:30		08:00	09:00				06:30	08:00	11:00	16:00		06:30	08:00	05:00			06:30	07:30	08:30	10:30	14:00	06:00	07:00	08:00	09:00	12:00	16:30	09:00	08:30	10:30	14:30		08:30	09:00		08:00	10:00	
	1+1		06:00		10:00	14:00				12:00	15:00				10:00	14:00	08:30			11:30	13:30	15:30	19:00							11:30	15:30	19:00			10:30	14:00		15:00	19:00		
	1+3		11:00		14:00	18:00				23:00					14:00	20:00	16:00													13:30				14:30							
PERCEPTOL	Stock		09:00	14:00	09:00	12:00				13:00				12:00	15:00		10:00	12:00							11:00	13:00	15:00	18:00		13:00	14:30			09:30	12:30						
	1+1		10:30	15:00	13:00	15:00				18:00				13:00	17:00		12:30	15:30													20:00			13:30	15:30		23:00				
	1+3		15:00	17:00	17:00	21:00				25:00				16:00	22:00		18:30																								

**CAUTION:** These times are intended as a **guide only**. Times shorter than 5 minutes may lead to uneven development

**AGITATION:** For manual processing in spiral tanks and deep tanks, the development times are based on intermittent agitation. With spiral tanks, invert the tank 4 times during the first 10 seconds, then invert a further 4 times during the first 10 seconds for each further minute. Where continuous agitation is used for manual processing (as in a dish/tray or with some types of developing tank), reduce these times by up to 15%. For use in rotary processors without a pre-rinse, reduce the spiral tank development times by up to 15%. A pre-rinse is not recommended as it can lead to uneven processing.

**FIXATION:** After development, rinse the film in water or ILFORD ILFOSTOP (1+19) for 10-30 seconds at 20°C/68°F and then fix in RAPID FIXER or HYPAM (1+4) for 2-5 minutes at 20°C/68°F.

**WASHING:** Where a non-hardening fixer such as RAPID FIXER or HYPAM has been used, wash the film in running water for 5-10 minutes at a temperature within 5°C/9°F of the processing temperature. To aid rapid, even drying, after washing fill the tank with water and add ILFORD ILFOTOL Wetting Agent (1+200) and give the tank a final 5 inversions.

\* We recommend using ILFORD developers with ILFORD films. For developing films with non-ILFORD developers we recommend using the Massive Dev Chart (<http://www.digitaltruth.com/devchart.php>) by Digitaltruth Photo. Nb. Development times with non-ILFORD products have not been verified by us.