Datasheet for Gigabitfilm GTP and HDR-Chemistry

Gigabitfilms are for critical photographers who want the best gray-scale, dynamic range and outstanding resolution in a b&w film. These photographers are willing to process their own film to achieve these outstanding results.
The new GTP-Gigabitfilm is a ISO 32 film resulting from extensive research and development of the Gigagitfilm concept in conjunction with Agfa Gevaert N.V. and Gigabitfilm GmbH.

Dramatic new features of the GTP Gigabitfilm include:
- Extended red sensitivity out to 700 nanometers.
- Blue sensitivity has been reduced, so yellow filtration is no longer needed.
- The maximum density has been increased for excellent reversal slide production.
- The new HDR Chemistry allows a wide tolerance for over exposure up to 10 stops of overexposure.
- No-fail-technology for fool-proof development.
- High or ultrahigh contrast can be achieved with high contrast conventional developers.

Photographer's that miss the characteristics of Kodak's discontinued **Technical Pan TP 2415/6415 films** will welcome the improvements of the new **Gigabitfilm GTP ISO 32 film.**

Address:	Gigabitfilm GmbH, Heinrich Böll Straße 17, 52372 Kreuzau, Germany, Tel: 0049 2422 500461 Internet: www.gigabitfilm.com
Filmproduction:	ISO-certified by Agfa-Gevaert N.V., Mortsel, Belgium.
Film base:	Clear polyester (PET=Polyethyleneterephtalat). The base should only be cut using sharp scissors. The film base is completely clear and fogging by light piping will occur. For 35mm cassettes: always load and reload in subdued light conditions, avoiding direct sunlight. Always store the exposed film in the black container provided.
Backing:	The base has a highly antistatic backing to reduce dust problems.
Filter factors:	**yellow** Y (K2) + 2/3 stop, **orange** O (G) + 1 stop, **orange-2** (O2) + 2 stops, **green** G (X1) +2 1/3 st., **red** (R25) +2 1/3 stops., **yellowgreen** G (X0) +1 stop. Infrared photography is possible using an **R72** at +8 stops and a **R90** at +15 stops. Suggested daylight exposures (full sunlight without filter 5.6/ 1/500) with R72 filter: 2.8/ 1 sec. Please note ultrashort and reciprocity-values. Exposures in the red and infrared spectrum will exhibit little stronger gradation of tones from the chemical effects of the sensitizing dyes, to receive an identic gradation without using filters reduce developing time 5 – 10 %.
Reciprocity:	At ½ second add +1 stop, at **10 sec.** add +2 stops, at **100 sec**. add +3 stops.
Ultrashortexposure:	An ISO of 40-64 should be used at shutter speeds of 1/500 or more and by short-duration electronic flash.
Resolution:	900 line pairs/mm at 1:1000 contrast ratio, 340 lp/mm at 1:16 contrast ratio.
Graininess:	Extrem low at normal densities, very low at high densities.
Durability:	2 years minimum for the film, 2 years minimum for the chemistry.
Developing:	A normal gradation is possible **only in Gigabitfilm-Chemistry.**
Developer:	Use 23ml Gigabitfilm-Chemistry GTP as one-shot-developer.
Density:	Attention, Gigabitfilm negatives will appear to be much thinner / softer than usual negatives on the light desk, but in your enlarger the correct grade will appear. The reason is the asymmetric Callier-Effect (high quotient for low b/w- densities, normal quotient for high densities), the film speed can be used

full thanks this effect. For exact density measurement only ||S||- measuring geometry (Microdensitometer) is suitable.

How looks a negative: Gigabitfilm GTP negatives will look 1 ½ - 2 gradations softer and thinner than normal negatives on the light-table. Nevertheless you can print them into gradation normal. When your Gigabitfilm-negative will look like a normal one, you cannot enlarge it even in gradation 0.

Negative testing: After your first development of a Gigabitfilm-negative, you can only proof the gradation-quality with an enlargement on normal paper. When you will not get a sufficient result, start with 10 % reduced or enhanced developing time.

Enlarging: Enlarging systems like Splitgrade make darkroom work more comfortably. Please notice: Diffusor light will produce larger grain than condensor light with opal illumination! Remove at least the lower negative covering glass of the enlarger, cause otherwise all of the available enlargerlenses show considerable MTF losses. Recommendable is, at suitable, precise enlarging masks without glass. Do not go beyond f/stop 5,6. Anti-Newton glasses can produce larger grain.

Taking lens: Because of diffraction, you should try not to stop your lens down beyond f/5.6 getting the maximum of resolution. If you need depth of focus, you must stop down further. Many camera lenses are still designed to give better contrast, this can reduce considerably resolution.

Theoretical resolution values

for perfect optics at the wavelength of 590 nanometers

Complete angle of view	0°	20°	40°	60°	90°
f/stop	Tangential (Radial)				
2.8	492 (492)	470 (486)	408 (462)	320 (426)	174 (348)
4	348 (348)	332 (342)	290 (326)	226 (302)	122 (246)
5.6	246 (246)	235 (243)	204 (231)	160 (213)	87 (174)
8	174 (174)	166 (171)	145 (163)	113 (151)	61 (123)
11	123 (123)	117 (121)	102 (115)	80 (106)	43 (87)
16	87 (87)	83 (86)	72 (82)	56 (75)	31 (62)
22	61 (61)	59 (61)	51 (58)	40 (53)	22 (44)
32	43 (43)	41 (43)	36 (41)	28 (38)	15 (31

These resolution values apply to the high contrast of 1:1000 and represent line couples per mm. Low contrast values of 1:1.6 - please multiplicate x 0.22 .

Exposure: First-user: Please measure the shadow parts, ignore the highlights and develop for gamma 0,55. The gradation and the highlights will be reproduced exactly .

Shadows: A negative contains more information than is visible on the light table. To check the print quality of the shadows we recommend: Place the negative in front of a dark background and illuminate it directly from behind. Then the whole information will be visible. For printing these shadows completely, all paper developers of the world market will react differently.

Risks on health and side effects: Because the combination of the different substances in the Gigabitfilm chemistry can be different as their respective uncritical single effects at not predictable circumstances, Gigabitfilm GmbH recommends for the first proof-testing on the market, to keep the chemistry out of the reach of children, avoid unnecessary skin contact, to wash the eyes in case of contact thoroughly with water as well as the use of suitable protective gloves.

Limitation of liability: If this film is found defective in manufacture, packaging or labeling it will be replaced. Except for such replacement, this product bears no warranty or liability whatever, even though damage, defect or lost is caused by negligence or other fault.