

# RE-USABLE DEVELOPERS FOR 35MM & ROLL FILMS

DEVELOPERS, ALL TYPES fine grain to high energy		GROUP 1, SLOW, FINEST GRAIN					GROUP 2, MEDIUM SPEED, FINE GRAIN			
figures in boxes are developing times in minutes; upper is for 35mm lower is for roll.  *means to use 1½-2X H.F.S.		ADOX KB-14, R-14 16-32	AGFA ISOPAN FF 16-32	AGFA ISOPAN F 32-64	ILFORD PAN F, 35MM 32-64	KODAK PANATOMIC-X 32-64 IMPROVED	ADOX KB-17, R-17 25-64	ANSCO ALL- WEATHER PAN 64-125	ADOX KB-21, R-21 80-160	AGFA ISOPAN SS 80-160
ACUFINE	70F	2 2½	2 3	3 3½	2	2 4½	2½ 3	—	3 4	—
AGFA ATOMAL NEW	68F	<u>7-10</u>	<u>7-10</u>	<u>10-12</u>	7-10	10-12	10-12	10-12	10-12	<u>10-12</u>
ANSCO HYFINOL	68F	—	—	—	—	—	—	<u>6-7</u>	—	—
B.P.I. PANTHERMIC 777	70F	M.F.S. 4	—	—	—	L.F.S. 7	L.F.S. 5	M.F.S. 15	L.F.S. 13¾	—
CLAYTON P60, DIL. 1+2	70F	2½ 5	3 4	8 <u>9½</u>	2½	M.F.S. 4½ 5½	—	—	7½ 11	10 14
DIAFINE; IMPROVED two solutions used in succession	70-75F	NR	2½, 2½ 3½, 3½	NR	NR	NR	NR	3½, 3½ 2½, 2½	2½, 2½ 3½, 3½	2½, 2½ 3½, 3½
EDWAL FG7, A&B two solutions used in suc- cession; dilution of A varies	70-75F	A, 1+3 1 B, 1+1, <u>2½</u>	A, 1+3, 1 B, 1+1, 2½	A, 1+3 1 B, 1+1 2½	A, 1+5 1 B, 1+1, 2½	A, 1+3, 1 A, 1+1, <u>2½</u>	A, 1+1, 1 B, 1+1, 2½	—	—	A, 1+3, 1 B, 1+1, 2½
ETHOL UFG	70F	—	2½	5½	2¼	3½ 3	—	3¼	5	3½
FR X-33C	70F	L.F.S. 8-10	—	—	—	L.F.S. 6-8	—	—	—	—
ILFORD MICROPHEN	68F	5-7	5.7	7.9	<u>5-7</u>	<u>5-6</u>	<u>8-10</u>	9-11	9-11	9-11
KODAK D-76 ILFORD ID-11	68F	—	—	<u>6-8</u>	<u>5-7</u>	6-8 75F <u>4½, 5½</u>	6-8	<u>9-11</u>	7-9	7-9
KODAK POLYDOL	68F	—	—	—	—	9 75F 6	—	—	—	—
KODAK MICRODOL-X	68F	—	—	—	—	L.F.S. 8-10 75F <u>5½-6½</u>	—	—	—	—
MAY & BAKER PROMICROL	68F	NR	NR	NR	NR	NR	NR	NR	NR	—
EDWAL SUPER 20	70F	10	10	15	10	12 15	15	—	18	22

# SINGLE-SHOT DEVELOPERS FOR 35MM & ROLL FILMS

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AGFA RODINAL dilute as indicated	68F	1+100 <u>13-15</u>	1+100 <u>13-15</u>	1+75 <u>14-18</u>	1+75 11-13	1+75 11-13 <u>14-18</u>	1+75 14-18	1+75 11-13	1+75 14-18	1+75 <u>14-18</u>
ANSCO HYFINOL DIL. 1+1	68F	NR	NR	NR	NR	<u>6-8</u>	NR	9-11	—	—
EDWAL FG7 dilute as indicated	70F	1+15 <u>7-9</u>	1+15 <u>7-9</u>	1+15 <u>11-13</u>	1+15 <u>11-13</u>	1+15 9-11 <u>11-13</u>	1+15 11-13	1+15 15-17	1+15 <u>12-15</u>	1+15 12-15
EDWAL MINICOL 2 DIL. 1+4	75F	L.F.S. 10-12	L.F.S. 10-12	L.F.S. 16-19	L.F.S. 12-14	L.F.S. 10-12 16-19	L.F.S. 16-19	—	—	—
ETHOL TEC, DIL. 1+15	70F	8 <u>9½</u>	7½ <u>3%</u>	10 <u>12</u>	6½ <u>4%</u>	7½ <u>4%</u>	13 9%	—	M.F.S. 15½	17 15
ETHOL UFG dilute as indicated	70F	1+3 6½	1+6 9	—	1+5 4%	1+5 9 7	1+3 8	—	—	—
FR X-22 dilute as indicated	68F	1+19 <u>11-13</u>	1+19 <u>11-13</u>	1+15 <u>10-12</u>	1+19 <u>10-12</u>	1+15 <u>12-14</u>	1+15 <u>10-12</u>	—	1+9 <u>15-17</u>	—
FR X-44 dilute contents of 1¼ oz. bottle to make amount indicated	70F	NR	NR	NR	NR	NR	NR	—	16 oz. 3	16 oz. 3½
FR X-100 dilute as indicated	70F	1+19 6-9	1+19 6-8	1+19 8½ 10½	1+19 5-7	1+19 7-9	1+19 8-10	—	—	—
KODAK D-76, DIL. 1+1 ILFORD ID-11, DIL. 1+1	68F	<u>6-8</u>	<u>6-8</u>	<u>7-9</u>	<u>6-8</u>	8-10 75F <u>5½-6½</u>	<u>7-9</u>	9-13	9-11	9-11
KODAK DK-50 ANSCO ISODOL, DIL: as indi- cated for Kodak films use DK-50; for Ansco use Isodol	68F	M.F.S. 1+4 7-9	M.F.S. 1+4 7-9	—	—	M.F.S. 1-1, 3-4 1+4, 8-10	—	1+1 7-9	1+1 5-6	1+1 5-6
KODAK HC-110 dilute as indicated	68F	—	—	—	—	1+31 4½	—	—	—	—
KODAK MICRODOL-X, DIL. 1+3	75F	13-16	12-15	—	—	M.F.S. <u>10-12</u>	—	—	—	—

Two exposure meter film speed settings are given for each film. Unless otherwise noted, use the high one for best results. For some film/developer combinations a lower film speed/setting is suggested in the box. If it's L. F. S. use the low number; if it's M. F. S. use a setting midway between the high and low numbers. For

combinations with a star, set your meter to 1½-2X H. F. S. These recommendations are based upon accurate use of an exposure meter. An underline indicates a "very useful combination," a recommendation derived from tests and practical use.

				GROUP 3, FAST, MODERATE TO COARSE GRAIN								
ILFORD FP 3 80-160	ANSCO VERSAPAN 100-200	KODAK PLUS-X PAN 100-200	KODAK VERI- CHROME PAN, ROLL 100-200	AGFA ISOPAN U 200-400	ANSCO SUPER HYPAN 200-400	ILFORD HP3 200-400	ILFORD HP4 400-650	ILFORD HPS 400-800	KODAK TRI-X PAN 400-800	AGFA ISOPAN RECORD 650-1200	KODAK ROYAL-X PAN, ROLL 1250-2400	KODAK 2475 RECORDING FILM 800-4000
1+75 11-13	—	1+75 <u>11-13</u>	1+75 <u>11-13</u>	1+25 9-11	NR	NR	—	NR	NR	1+50 <u>15-18</u>	NR	—
—	<u>6-8</u>	<u>6-8</u>	9-11	12	11-13	—	12	—	9-12	<u>11-13</u>	M.F.S. <u>11-13</u>	—
1+15 9-11	1+15 <u>11-13</u>	1+15 <u>9-11</u>	1+15 <u>11-13</u>	1+7 8	1+15 <u>14-16</u>	1+15 <u>11-13</u>	1+15 11-13	1+15 14-16	* 1+15 <u>11-13</u>	1+7 <u>8-10</u>	M.F.S. 1+7 <u>12-14</u>	—
L.F.S. 10-12	—	L.F.S. 10-12	NR	—	NR	NR	—	NR	NR	NR	NR	—
NR	9 8½	6½ 7½	—	15	14 18	—	—	—	12 11½	—	NR	NR
1+5 10 8½	1+5 12	1+5 11 8½	—	—	1+5 20 16½	—	—	—	1+5 14 12	—	NR	—
1+15 <u>12-14</u>	1+15 <u>11-13</u>	1+15 <u>10-12</u>	—	—	NR	NR	—	NR	NR	NR	NR	—
32 oz. 4	16 oz. 3½ 32 oz. 7½	32 oz. 6½	16 oz. 4	16 oz. 6	16 oz. 4 32 oz. <u>6</u>	16 oz. 3½	—	16 oz. 4½	16 oz. 3½ 32 oz. <u>4½-5</u>	16 oz. 5-6	NR	—
1+15 5-7	1+15 <u>10-12</u>	1+15 <u>8-10</u>	1+15 <u>10-12</u>	—	1+15 10-12	1+15 8-10	—	1+15 10-12	* 1+15 <u>8-10</u>	—	NR	—
<u>7-9</u> ✓	—	7-9 75F <u>4½-5½</u>	8-10 75F <u>5-7</u>	—	11-13	<u>11-13</u>	11-13	—	10-12 75F <u>7-9</u>	NR	NR	NR
1+1 4-5 1+4 8-10	1+1 <u>4½-5½</u>	1+1 34 1+4 <u>8-10</u>	1+1 7-10	1+1 12	1+1 <u>7-9</u>	—	1+1 7-9	—	M.F.S. 1+1 4½-5½	1+1 <u>12-15</u>	UNDIL. M.F.S. <u>5½-6½</u> H.F.S. 9-11	UNDIL. 9
—	—	1+31 4	1+31 7-9	—	—	—	—	—	1+31 6-8	—	1+15 4½-5½ 1+31 9-11	1+3 5
M.F.S. 10-12	—	M.F.S. <u>10-12</u>	9-11	—	NR	NR	—	NR	M.F.S. <u>14-16</u>	NR	NR	—

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3½ 6	* 3½ 6	* 4 4	* 4½	—	* 7 8	4½ 6	—	7 8	* 4¾ 6	7 7	10	—
<u>10-12</u>	—	<u>10-12</u>	10-12	<u>10-12</u>	10-12	10-12	10-12	12-14	10-12	<u>10-12</u>	NR	—
—	<u>4-4½</u>	4-5	6-7	—	<u>7-9</u>	—	—	—	5-7	<u>7-9</u>	M.F.S. 8	NR
—	—	M.F.S. 10	L.F.S. 15¾	—	M.F.S. 14	NR	—	NR	M.F.S. 12	—	NR	—
M.F.S. 5 6	7½ 8½	5 6½	11 75F 7½	—	7 8	75F 8½ 11	—	75F 11½ 17	6 7	75F 10½ 15	NR	—
2½, 2½, 3½, 3½		* 2½, 2½ 3½, 3½	* 3½, 3½	—	* 2½, 2½ 3½, 3½	2½, 2½ 3½, 3½	2½, 2½ 3½, 3½	2½, 2½ 3½, 3½	* 2½, 2½ 3½, 3½	2½, 2½ 3½, 3½	3½, 3½	NR
A, 1+5 1 B, 1+1, 2½	A, 1+1 1 B, 1+1 2½*	A, 1+3, 1 B, 1+1, 2½*	A, 1+1 1 B, 1+1 2½	—	A, 1+1 1 B, 1+1, 2½*	A, 1+1, 1 B, 1+1, 2½	A, 1+1 1 B, 1+1 2½	—	A, 1+1, 1 B, 1+1, 2½*	—	NR	—
3½ 3¾	4 3½	3¾ 2¾	2½	5½	7¾ 5¾	3¾ 3¾	—	6½ 5¾	4¾ 4	NR	NR	—
M.F.S. 10-12½	M.F.S. 11-14	M.F.S. 8-10	M.F.S. 11-14	NR	M.F.S. 16-18	M.F.S. 16-18	—	M.F.S. 16-18	M.F.S. 14-17	NR	NR	—
<u>6-7½</u>	5-6	<u>6-7</u>	11-13	10-12	10-12	<u>12-14</u>	6	<u>12-14</u>	* 5-6	12-14	NR	—
<u>8-10</u> 6½-8½	<u>6-8</u>	4½-6	6-8 75F 4½-5½	7-9	<u>7-9</u>	<u>9-11</u>	9	12-15	8 75F 5½	12-15	10	NR
—	4½-5½	7 75F 5	10 75F 7	—	—	—	—	—	8 75F 6	—	9 75F 6	—
—	M.F.S. 7-9	M.F.S. 8-10 75F 5½-6½	M.F.S. 8-10 75F 5½-6½	—	—	—	—	—	M.F.S. 11 75F 8	—	NR	NR
* 5-6	NR	* 6-7	7-8	—	* 8-10	* 9-11	8	<u>13-15</u>	* 6-8	9-11	NR	—
12	22	12	15	22	22	15	—	22	15	22	—	—