

TETENAL

COLORTEC[®] E-6

E-6 3-BATH · E-6 3-BAD

E-6 3-BAINS · E-6 3-BANOS

E-6 3-BAGNI · E-6 3-BADEN

E-6 3-BADE · E-6 3-BAD

E-6 3-BADS · E-6 3-KĄPIELOWY

3-BATH TECHNOLOGY

Instruction for use · Gebrauchsanweisung · Mode d'emploi

Instruccion de empleo · Istruzioni per l'uso

Gebruiksaanwijzing · Brugsanvisning · Bruksanvisning

Bruksanvisning · Przepis użycia

TETENAL



PRODUCT DESCRIPTION · PRODUKTBESCHREIBUNG
DESCRIPTION DU PRODUIT · DESCRIPCIÓN DEL PRODUCTO
DESCRIZIONE DEL PRODOTTO · PRODUKTOMSCHRJVING
PRODUKTBEKRIVELSE · PRODUKTBEKRIVELSE
PRODUKTBEKRIVNING · OPIS PRODUKTU



APPLICATION · ANWENDUNG
APPLICATION · UTILIZACIÓ
UTILIZZO · TOEPASSING
ANVENDELSE · ANVENDELSE
HANDHAVANDE · SPORZĄDZANIE



GENERAL INSTRUCTIONS · ALLGEMEINE HINWEISE
GÉNÉRALITÉS · INSTRUCCIONES GENERALES
ISTRUZIONI GENERALI · ALGEMENE AANWIJZINGEN
ALMINDELIGE RETNINGSLINJER · GENERELLE OPPLYSNINGER
ALLMÄNNA INSTRUKTIONER · WSKAZÓWKI OGÓLNE



SAFETY GUIDELINES · SICHERHEITSINFORMATIONEN
CONSEILS DE SÉCURITÉ · NORMAS DE SEGURIDAD
INDICAZIONI DI SICUREZZA · VEILIGHEIDSADVIEZEN
SIKKERHEDSVEJLEDNING · SIKKERHETSANVISNINGER
SÄKERHETSÅD · ZALECENIA DOTYCZĄCE
BEZPIECZEŃSTWA UŻYTKOWANIA



DISPOSAL · ENTSORGUNG
ÉLIMINATION · ELIMINACION DE RESIDUOS
ELIMINAZIONE · AFVALVERWERKING
KASSERING · AVFALLSHANDTERING
AVYTTRANDE · POSTĘPOWANIE Z PRODUKTEM ZUŻYTYM

TETENAL



COLORTEC CHEMICALS · COLORTEC CHEMIKALIEN
AUTRES PRODUITS DE LA GAMME · OTROS PRODUCTOS
ALTRI PRODOTTI NELLA GAMMA · VERWIJZINGEN NAAR HET
ASSORTIMENT · SORTIMENTSHENVISNINGER
SORTIMENTSOVERSIKT · SORTIMENTS-HÄNVISNING
INFORMACJA O INNYCH PRODUKTACH W LINII

TETENAL

English	6
---------	---

Deutsch	14
---------	----

Français	22
----------	----

Español	31
---------	----

Italiano	41
----------	----

Nederlands	50
------------	----

Dansk	59
-------	----

Norsk	68
-------	----

Svensk	76
--------	----

Polski	85
--------	----



PRODUCT DESCRIPTION

The Tetenal COLORTEC® range offers you a high level of performance, quality, safety, convenience, environmental friendliness and service. COLORTEC® - the "best available technology" for colour chemicals.

COLORTEC® E-6 3-BATH is for the development of E-6 compatible colour slide films in rotary discard processors. With the "3-bath technology" the number of processing baths is reduced to three (+ stabilising bath). The film reversal takes place during the colour development. Bleaching and fixing are in a combined bleach fixer.

COLORTEC® E6 3-BATH for neutral colour balance and brilliant contrast.

PACKAGING

COLORTEC® E-6	3-BATH KIT		3-BATH
	for 1 litre	for 5 litres	for 15 litres
Art.No.	102031	102034	FD
102040,			CD
102042,			
			BX 102046
	ml conc.	ml conc.	ml conc.
First Developer FD	200	1000	3000
Colour Developer CD part 1	200	1000	3000
Colour Developer CD part 2	120	600	1800
Bleach Fix BX part 1	200	1000	3000
Bleach Fix BX part 2	200	1000	3000
Stabilizer STAB	100	500	

YIELD

Working solution	Slide films 135-36	Film rolls 120
1 litre	12	12
5 litres	60	60
15 litres	180	180

Maximum yield is achieved only by putting through at least two films at a time.

APPLICATION



MIXING	Water	Part 1	Part 2	
First Developer FD	800	200		1,0 l
	4000	1000		5,0 l
	12000	3000		15,0 l
Colour Developer CD	680	200	120	1,0 l
	3400	1000	600	5,0 l
	10200	3000	1800	15,0 l
Bleach Fix BX	600	200	200	1,0 l
	3000	1000	1000	5,0 l
	9000	3000	3000	15,0 l
20-25 °C/68-77 °F				
Stabilizer STAB	900	100		1,0 l
	4500	500		5,0 l

Part preparation possible.

Notes on mixing:

- The first developer must be mixed first and the solution sealed in the container so that it is airtight in order to prevent contamination of the first developer from the colour developer.
- Measure out the part-concentrates of the colour developer precisely - the slightest deviations alter the film colour balance. The working solution is coloured blue-violet; eventually turning yellowish-brown when left to stand.

PROCESSING**Rotary discard: Standard development at 38 °C/100 °F**

Step	Temperature °F	Processing time					
		500 ml	1000 ml	500 ml	1000 ml	500 ml	1000 ml
		1-2 Films	1-4 Films	3-4 Films	5-8 Films	5-6 Films	9-12 Films
0 Pre-heat the developer can	100 ± 0,5			5' 00"			
1 First Developer	100 ± 0,5	6' 15"		6' 30"		6' 45"	
2 Washing	100 ± 1,0			2' 30"			
3 Colour Developer	100 ± 1,0	6' 00"		7' 00"		8' 00"	
4 Washing	97 ± 5,0			2' 30"			
5 Bleach Fix	97 ± 5,0	6' 00"		7' 00"		8' 00"	
6 Washing	97 ± 5,0			4' 00"			
7 Stabilizer	68 - 77			1' 00"			

Notes on processing steps:

- The times given represent the time from the first contact of the film with the relevant bath to the first contact with the following bath or rinse.
- Steps 0-2 to be carried out in complete darkness.
- First developer times must be adapted individually to suit the combination of developer machine, film make, speed of rotation and the proportion of film area to the quantity of first developer.
- Extended first-developer time (+ 25%) = brighter slides by one stop (approx.), reduced (- 25%) = darker slides by one stop (approx.)
- Carry out rinses with running water or change water every 30 secs. or rinse over longer periods.

- Agitation Step 1 (FD), 3 (CD), 5 (BX): constantly during first 15 secs, then once every 15 secs.
- Stabilising is performed outside the tank.
- For rotary processing equipment: pre heat to 39 °C/102 °F and first developer time = 7 mins.

Development at 38 °C/100 °F leading to changes in sensitivity

Under-exposed or over-exposed slide films can be influenced by changes during the first developer time:

2 stops	Push 2	+ 5' 30"
1 stop	Push 1	+ 2' 00"
1 stop	Pull 1	- 2' 00"
2 stops	Pull 2	FD time unchanged, reduce temperature to 30,6 °C
3 stops	Pull 3	FD time unchanged, reduce temperature to 28,6 °C

GENERAL INSTRUCTIONS**PROCESSING**

- In rotary processors, drum, cover and film reeds are to be cleaned thoroughly with warm water after each development process. Before each new process they must be absolutely dry.
- Certain plastics absorb traces of the colour developer strongly and permanently. Consequently, rotary equipment with trays and other parts made of plastics are not suitable for this process.
- The first developer is the critical phase of the process. Time, temperature and agitation must be constantly monitored. Deviations from these conditions will impact on veiling (minimum density) and loss of sensitivity (density). Any contamination of the first developer with even the slightest traces of the colour developer (including vapour) results in lower final densities (maximum density).

- Used and unused solutions should not be mixed because of possible contamination.

INFLUENCE ON COLOUR BALANCE

The colour balance can be affected by a change in the pH value of the colour developer.

Reduction of pH value → addition of 20% sulphuric acid (H₂SO₄), abt. 4-6 ml per litre.

Increase in pH value → addition of 20% sodium hydroxide solution (NaOH), abt. 4-6 ml per litre.

Changes in alkalinity of colour developer when using E-6 control strip

Film-manufacturer	Colour deviation from reference standard	Density variation in colour step (the maximum spread of 0,13 is exceeded)	Suitable amount of acid or base added	Approximate change in density values in colour step
Kodak	To blue-magenta	Blue density is under red density, green density is under red density	1 ml diluted sodium hydroxide solution per litre colour developer	+ 0,05 to yellow-green
	To yellow-green	Blue density is over red density, green density is under red density	1 ml diluted sulphuric acid per litre colour developer	+ 0,05 to blue-magenta
Fuji	To red	Red density is under blue and green density	1 ml diluted sodium hydroxide solution per litre colour developer	+ 0,05 to cyan
	To cyan	Red density is over blue and green density	1 ml diluted sulphuric acid per litre colour developer	+ 0,05 to red
Agfa	To red	Red density is under blue and green density	2,5 ml diluted sodium hydroxide solution per litre colour developer	+ 0,05 to cyan
	To cyan	Is above blue and green density	1,5 ml diluted sulphuric acid per litre colour developer	+ 0,05 to red

DEVIATIONS IN RESULTS

Results	Possible causes	Measure
Slides too light	Over-exposure	Check camera resp. exposure
	Temperature of the first developer too high	
	First developing time too long	Shorten first development time by 15 to 30 s
	Agitation at the first developing too intensive	
Slides too dark	Contamination of the first developer with bleach-fixing bath	Rinse equipment and spiral thoroughly.
	Under-exposure	Check camera resp. exposure
	Temperature of the first developer too low	
	Prewarming of the processor resp. tank has been omitted	
Max. densities green	First developing time too short	Lengthen first development time by 15 to 30 s
	Agitation at the developing too slow	
D-max too light, appearance from reddish-brown to green, depending on the contamination ratio.	Contamination of the colour developer resp. first developer with the stabilizing bath	Clean developing kit and spirals immediately after stabilizing
	contamination of the first developer with colour developer (refer to mixing instruction)	refer to the hint given under mixing instruction
Uneven colour areas, streaks and stripes	insufficient or uneven agitation	fill in first developer quickly, begin agitation at once
	no constant temperature of the developing equipment	use insert with fewer vanes
	overlapping insert (for Colenta)	

Results	Possible causes	Measure
Colour fog, wrong colours	not clean developing tank or mixing vessels contamination of one developer with another	
Drying spots on the dry film	too hard tap water when preparing the stabilizing bath	mix tap water with distilled or demineralized water in the proportion 1:2 In addition use a soft film wiper

DURABILITY

	freshly applied solution	50 % used solution	opened concentrations
First Developer	8 weeks	2 weeks	24 weeks
Colour Developer	12 weeks	6 weeks	24 weeks
Bleach Fix and Stabilizer	12 weeks	12 weeks	24 weeks

After partial removal protect concentrates in totally sealed original bottles using Protectan. Keep working solutions in completely full and well sealed glass or plastic bottles.

SERVICE

Technischer Service
TETENAL AG & CO. KG
Schützenwall 31-35 · D-22844 Norderstedt
Tel.: ++49 (0)40/521 45-333 · Fax: ++49 (0)40/521 45-132
eMail: technicalservice@tetenal.com

SAFETY NOTES



The usual safety measures regarding care in the handling of chemicals should be observed when using these products. Use a protective barrier cream before commencing work. Wash your hands thoroughly after work, and apply a skin-care cream. Always use adequate means of protection (safety goggles, gloves, overalls), and ensure sufficient ventilation in the workplace at all times. Avoid contact with skin and eyes. Do not ingest chemicals. Keep these products out of reach of children and store away from foodstuffs at all times. Label all storage containers in a clear, permanent and unambiguous manner.

First aid measures in the event of:

Skin contact: Wash with ample water and soap; consult a doctor if necessary.
Eye contact: Rinse for 15 minutes with water; consult an eye specialist. Swallowing: Keep packaging and consult a doctor immediately.

Further details can be obtained from the safety data sheets or from the indications on the packaging.

DISPOSAL



Rinse out concentrate residues with some of the water used for the solution and add to the solution in question. Return the containers for recycling without concentrate residues. For further information on waste management techniques for photographic chemicals please contact the local environmental authorities.