

Teconyl	0.2%	1.0%	C.I. Acid	Xenonlicht Xenon lamp 1/12 RTT/SD 1/1 RTT/SD	Wasser Water streng/severe			Wäsche Washing 60 °C			Schweiss Perspiration alk./alk.			Meerwasser Sea water			Chlorbadewasser Chlorinated water 100 mg/l	
					N	PA	CO	N	PA	CO	N	PA	CO	N	PA	CO	N	
Gelb L-GL 200% Yellow L-GL 200%			Y 49	5	o.N./w.a.	4-5	3-4	4-5	4-5	5	5	4-5	3-4	4	5	3-4	4-5	4
				6-7	m.N./A	5	5	5	5	5	5	4-5	5	5	5	5	5	5
Gelb L-4R 250% Yellow L-4R 250%			Y 219:1	6	o.N./w.a.	4-5	4	4	4	4	4-5	5	3-4	3	5	3-4	3-4	4-5
				7	m.N./A	5	5	5	4-5	4-5	5	5	5	4-5	5	5	5	5
Rot L-2B 200% Red L-2B 200%			R 361	5-6	o.N./w.a.	4-5	4	4-5	4	4	4-5	4-5	3-4	4-5	4-5	4	4-5	4
				6-7	m.N./A	4-5	5	5	4-5	4-5	5	5	4-5	5	5	5	5	5
Rot L-2BS 200% Red L-2BS 200%			R 266	6	o.N./w.a.	4-5	4-5	4-5	4	4-5	4-5	4	4	4-5	4-5	4	4-5	3-4
				6-7	m.N./A	5	5	5	5	5	5	5	5	5	5	5	5	5
Rot L-3BL 200% Red L-3BL 200%			R 57	5-6	o.N./w.a.	5	3	4-5	4	4	5	4-5	3	4-5	5	3	4-5	3
				6-7	m.N./A	5	5	5	5	4-5	5	5	5	5	5	5	5	5
Blau L-4R 200% Blue L-4R 200%			B 277	5	o.N./w.a.	4-5	4	4-5	4	4	4-5	4-5	3	3-4	4-5	3-4	4	4
				6	m.N./A	4-5	5	5	4-5	4-5	5	4-5	4-5	5	4-5	5	5	5
Blau L-2R 200% Blue L-2R 200%			B 62	6	o.N./w.a.	4-5	3	5	3-4	4	4-5	4-5	3	4	4	3	4	2-3
				7	m.N./A	4-5	4-5	5	4	4-5	5	4-5	4-5	5	4-5	4-5	5	4-5
Blau L-2G 200% Blue L-2G 200%			B 40	6-7	o.N./w.a.	5	3-4	4	3-4	3-4	4	4-5	3	3-4	4	3-4	4	3-4
				7	m.N./A	5	5	5	4-5	4-5	5	5	5	5	5	4-5	5	5

o.N./w.a. = ohne Nachbehandlung/without aftertreatment  
m.N./A = mit Nachbehandlung/with aftertreatment

Teconyl	0.5%	2.0%	C.I. Acid	Xenonlicht Xenon lamp 1/12 RTT/SD 1/1 RTT/SD	Wasser Water streng/severe			Wäsche Washing 60 °C			Schweiss Perspiration alk./alk.			Meerwasser Sea water			Chlorbadewasser Chlorinated water 100 mg/l			
					N	PA	CO	N	PA	CO	N	PA	CO	N	PA	CO	N			
Gelb N-5GW Yellow N-5GW			Y 127	5-6	o.N./w.a.	5	4-5	5	5	4-5	5	5	4-5	5	4-5	4-5	5	4-5	4-5	4
				7	m.N./A	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Gelb N-3RL Yellow N-3RL			O 67	4-5	o.N./w.a.	5	4-5	5	4-5	4-5	5	5	4	4-5	5	4	4-5	3-4		
				6-7	m.N./A	5	5	5	5	5	5	5	5	5	5	5	5	5	5	4
Orange N-GL 200% Orange N-GL 200%			O 116	4-5	o.N./w.a.	4-5	4	4-5	4-5	5	5	4-5	4	4-5	4-5	4	4-5	4		
				6	m.N./A	5	5	5	5	5	5	5	5	5	5	5	5	5	5	4
Scharlach N-3GL Scarlet N-3GL			R 111	4	o.N./w.a.	5	4-5	5	5	4-5	4-5	5	4-5	4-5	5	4-5	5	3-4		
				5	m.N./A	5	5	5	5	5	5	5	5	5	5	5	5	5	4	
Rot N-2RF Red N-2RF			R 151	3	o.N./w.a.	5	4-5	4-5	4-5	3	3-4	5	4	4-5	5	4-5	4-5	4		
				4-5	m.N./A	5	5	5	4-5	4-5	4-5	5	5	5	5	5	5	5	5	4-5
Rot N-2B Red N-2B			R 249	3	o.N./w.a.	4-5	4-5	5	4	3-4	4	4-5	3-4	4-5	4-5	3-4	4	3		
				4-5	m.N./A	5	5	5	4-5	4-5	5	5	4-5	5	5	4-5	5	4-5	5	3-4
Rubin N-5B 200% Rubine N-5B 200%			R 299	4-5	o.N./w.a.	5	4-5	4-5	5	4	4-5	5	5	4-5	5	5	5	1-2		
				5-6	m.N./A	5	5	5	5	5	5	5	5	5	5	5	5	5	5	2-3
Violett N-FBL 200% Violet N-FBL 200%			V 48	5	o.N./w.a.	5	4	4-5	5	5	5	5	4	5	5	4	4-5	2		
				6-7	m.N./A	5	5	5	5	5	5	5	5	5	5	5	5	5	5	3

o.N./w.a. = ohne Nachbehandlung/without aftertreatment  
m.N./A = mit Nachbehandlung/with aftertreatment

Teconyl	0.5%	2.0%	C.I. Acid	Xenonlicht Xenon lamp 1/12 RTT/SD 1/1 RTT/SD		Wasser Water streng/severe			Wäsche Washing 60 °C			Schweiss Perspiration alk./alk.			Meerwasser Sea water			Chlorbadewasser Chlorinated water 100 mg/l N
						N	PA	CO	N	PA	CO	N	PA	CO	N	PA	CO	
Blau N-BLF 200% Blue N-BLF 200%			B 281	5	o.N./w.a.	4-5	4	4-5	4-5	4-5	5	4-5	4-5	5	4-5	4	4-5	2-3
				6	m.N./A	5	5	5	5	5	5	5	5	5	5	5	5	5
Blau N-2GL Blue N-2GL			B 80	5-6	o.N./w.a.	5	3-4	4	4-5	4-5	5	5	3-4	3-4	4-5	3-4	3	2
				6-7	m.N./A	5	5	5	5	5	5	5	5	5	5	5	5	5
Grün N-G Green N-G			Gr 25	5-6	o.N./w.a.	4-5	4	4-5	4-5	4-5	5	5	3-4	4-5	4-5	3-4	4-5	4
				6-7	m.N./A	5	5	5	5	5	5	5	5	5	5	5	5	5
Marineblau N-5R 200% Navy N-5R 200%			B 113	-	o.N./w.a.	5	3-4	5	4-5	3	4-5	5	4-5	5	5	4-5	5	2-3
				4-5	m.N./A	5	5	5	5	5	5	5	5	5	5	5	5	5

Teconyl	2.0%	4.0%	C.I. Acid	Xenonlicht Xenon lamp Schwarz Black		Wasser Water streng/severe			Wäsche Washing 60 °C			Schweiss Perspiration alk./alk.			Meerwasser Sea water			Chlorbadewasser Chlorinated water 100 mg/l N
						N	PA	CO	N	PA	CO	N	PA	CO	N	PA	CO	
Schwarz N-ME Black N-ME			Blk. Mix	6-7	o.N./w.a.	5	4	5	5	4-5	4-5	5	4-5	5	5	4-5	4-5	2-3
					m.N./A	5	5	5	5	5	5	5	5	5	5	5	5	5

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m.N./A = mit Nachbehandlung/with aftertreatment

Teconyl	0.2%	1.0%	Xenonlicht Xenon lamp 1/12 RTT/SD 1/1 RTT/SD		Wasser Water streng/severe			Wäsche Washing 60 °C			Schweiss Perspiration alk./alk.			Meerwasser Sea water			Chlorbadewasser Chlorinated water 100 mg/l
					N	PA	CO	N	PA	CO	N	PA	CO	N	PA	CO	N
Gelb F-RS Yellow F-RS			5	o.N./w.a.	4-5	4-5	4-5	4-5	4-5	4-5	4-5	4-5	4-5	4-5	4	5	4-5
			6	m.N./A	4-5	5	4-5	4-5	5	5	4-5	4-5	5	4-5	4-5	5	4-5
Scharlach F-GS Scarlet F-GS			3-4	o.N./w.a.	4-5	4-5	4-5	4-5	4-5	5	4-5	4	4-5	4-5	4-5	4-5	4-5
			4-5	m.N./A	4-5	5	5	4-5	5	5	4-5	4-5	4-5	4-5	4-5	5	4-5
Rot F-MS Red F-MS			3-4	o.N./w.a.	5	5	5	4-5	4-5	3	4-5	4-5	4-5	4-5	4-5	4-5	5
			4-5	m.N./A	5	5	5	5	5	4	4-5	5	5	4-5	4-5	4-5	5
Rot F-LBS Red F-LBS			3-4	o.N./w.a.	5	5	5	4-5	4-5	3-4	4-5	4-5	4-5	4-5	4-5	4-5	5
			4-5	m.N./A	5	5	5	4-5	5	4	4-5	5	4-5	4-5	4-5	4-5	5
Rot F-3B Red F-3B			3-4	o.N./w.a.	5	5	5	4-5	5	5	4-5	3-4	4	4-5	3-4	4	5
			4	m.N./A	5	5	5	4-5	5	5	4-5	4	4	4-5	4	4-5	5
Türkis F-BGL Turquoise F-BGL			3	o.N./w.a.	4-5R	3-4	4-5	3-4R	3-4	3	4-5	4-5	3	4-5	4	4	4
			3-4	m.N./A	4-5R	4-5	4-5	4R	4	3-4	4-5	4-5	4	4-5	4-5	4-5	4-5
Brillantblau F-BGS Brilliant Blue F-BGS			5	o.N./w.a.	4-5	5	4-5	4-5	5	4-5	4-5	4	4-5	4	4-5	4-5	4
			6-7	m.N./A	4-5	5	4-5	4-5	5	5	4-5	4-5	4-5	4-5	5	5	4-5

Teconyl	2.0%	4.0%	Xenonlicht Xenon lamp Schwarz Black		Wasser Water streng/severe			Wäsche Washing 60 °C			Schweiss Perspiration alk./alk.			Meerwasser Sea water			Chlorbadewasser Chlorinated water 100 mg/l
					N	PA	CO	N	PA	CO	N	PA	CO	N	PA	CO	N
Schwarz F-SF Black F-SF			4	o.N./w.a.	4-5	3	4	4-5	4-5	3-4	4-5	4-5	4-5	4-5	3	4	4-5
				m.N./A	4-5	5	4-5	4-5	5	4	4-5	4-5	4-5	4-5	4-5	4-5	4-5

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**Teconyl dyes** are selected acid dyes for dyeing polyamide fibres.

They are divided into 3 groups:

### **Teconyl L dyes**

Teconyl L dyes show very good levelling properties and compensate differences in affinity caused by the material to a large extent, especially when combined with Alviron CNF. Defined elements of the Teconyl L range achieve very high light fastness also in pale shades and are therefore suitable for dyeing carpets and upholstery fabrics.

Due to their limited build-up behaviour and their limited wet fastness in dark shades, the application of Teconyl L dyes are recommended only up to medium shades.

### **Teconyl N dyes**

Dyes with a distinct neutral affinity and high build-up behaviour. Dyeings with Teconyl N dyes show good to very good wet fastness rates. Due to their dyeing behaviour they are especially recommended for dark shades.

### **Teconyl F dyes**

Dyes with highest wet fastness level and brilliant shade spectrum. They are suitable for many fields of application, especially for sports and leisure wear. Due to their dyeing behaviour these dyes are preferably used as single dyestuffs; working with trichromaticities is not recommendable because the dyes would block each other.

The wet fastness of Teconyl dyes can be improved by an aftertreatment with Sevofix P 2000.

### **Explanation to the fastness**

Light fastness:	ISO 105 B02	N = change of shade
Fastness to water:	ISO 105 E01	PA = staining of polyamide
Wash fastness 60 °C:	ISO 105 C03	CO = staining of cotton
Fastness to perspiration:	ISO 105 E04	
Sea water:	ISO 105 E02	
Fastness to chlorinated water:	ISO 105 E03	

Regarding the light fastness the fastness rates refer to the stated standard depth (1/12 or 1/1 standard depth). All wet fastness rates were tested with dyeings in 1/1 standard depth.

### **Recommended chemicals**

#### **Losin OCB**

Washing, cleaning and wet stain removing agent to treat all kind of fibres and appearances, nonionic

#### **Lavan JET**

Extremely low foaming washing agent, especially suitable for application in jet machines for all kinds of fibres, nonionic

#### **Alviron P 96**

Levelling agent for wool and polyamide dyeing, anionic

#### **Alviron CNF**

Levelling agent for polyamide dyeing to level out stripiness caused by the material, anionic

#### **TC-Säuresprender SWP**

Acid donor for dyeing polyamide and wool, nonionic

#### **Sevofix P 2000**

Aftertreatment agent for polyamide and wool fibres to achieve very high wet and wash fastness rates, anionic

### **Pretreatment**

Polyamide fibres have usually added watersoluble preparations, thus in many cases prewashing is not necessary anymore.

With other soiling or for example if piece goods are set before dyeing, prewashing with Losin OCB or Lavan JET is recommended. Regarding piece goods they are mostly washed continuously in width, then rinsed and subsequently set.

### **Dissolving the dyes**

Teconyl dyes are dissolved by pouring over boiling hot water and stirring. Where necessary boil with the steam pipe.

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## Dyeing procedure

In principle two different methods are possible:

- All-in method in weakly acidic to neutral pH range
- Method with pH value lowering (especially suitable in case of levelling problems)

### All-in method

- start bath at 40 - 50 °C with:  
1 - 3 % Alviron P 96 and  
sodium acetate/acetic acid (pH 4 - 8 depending on the colour depth and on the dyestuff group)
- after good mixing add the predissolved Teconyl dyes
- run for 5 - 10 min
- heat at 1 - 2 °C/min up to the dyeing temperature
- run for 45 - 60 min
- cool down to 60 - 70 °C
- drain bath
- rinse warm and cold

### *Remarks:*

- Optimale pH values when dyeing:

	<b><i>Teconyl L</i></b>	<b><i>Teconyl N / F</i></b>
<b>light</b>	6 - 7	7 - 8
<b>medium</b>	5 - 6	6 - 7
<b>dark</b>	4 - 5	5 - 6

For pH values below 6 the pH value adjustment of the dyeing bath is preferably carried out with a combination of sodium acetate/acetic acid; higher pH values are achieved with a combination of mono and dibasic sodium phosphate, ammonia or soda.

With TC-Ökostabil 100 stable, slightly acidic pH values can be adjusted advantageously. But the amounts have to be adjusted to the industrial water on site.

- Recommended dyeing temperatures:  
PA 6: 98 – 105 °C  
PA 6.6: up to max. 120 °C

### Method with pH value lowering

- start bath at 30 - 40 °C with:  
add 1 - 2 % Alviron P 96 and  
0.5 up to 1.5 ml/l TC-Säurespender SWP  
adjust pH value 8 - 9 with soda
- 10 min prerunning
- then add the predissolved Teconyl dyestuff
- run for 5 - 10 min
- heat at 1 - 2 °C/min up to boiling point
- run for 45 - 60 min
- cool down slowly to 60 - 70 °C
- drain bath
- rinse warm and cold

### *Remarks:*

With big levelling problems add TC-Säurespender SWP 15 - 20 min after achieving the dyeing temperature.

### Improvement of the fastness

The treatment is carried out most appropriately after good rinsing from a fresh bath with:

2.0 - 4.0 % Sevofix P 2000  
adjust pH value 3 - 4 with formic acid  
75 - 85 °C, 20 - 30 min

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