

Manufacturer (trade mark): **Clover Germany** Type/Model OEM: **TK-3100**  
 Lot/Part number: **DPCTK3100E** Toner color(s): **Monochrome**  
 Main application: To be used on the relevant printers according to remanufacturer instructions  
 Intended yield: 12500  
 V1N3Y04540 /  
 V1N5X00237 /  
 Test device: V1N5X00236 Take over value of existing test protocol : (box) **Yes, from ISO19752**  
 Test climate: Temperature: 24 Relative humidity: 42  
 Deviations of the determined test conditions  
 Tester 1): Aleksandar Kojic Test location 2): **CLOVER SERBIA**  
 Test date: **06.11.2018**

1) If values are taken over from test protocol, the signing person is responsible, that the protocols, from which the values have been taken off, are plausible and correct.  
 2) Either testing place or place where the protocol is made

Test sample (A)	Type	Used for valuation	Charge/Serial number
1	14615	Yes	Sample 1
2	14591	Yes	Sample 2
3	13633	Yes We use for A1 the	Sample 3
4	12658	Yes MAX, for A2 the	Sample 4
5	12636	Yes MEDIAN and for A3 the	Sample 5
6	12965	Yes MIN value of the list at	Sample 6
7	14790	Yes left	Sample 7
8	13031	Yes	Sample 8
9	13050	Yes	Sample 9
Comparing Sample (B)	Type	Used for valuation	Charge/Serial number
1	12500	Yes/no Yes	OEM Sample/Spec
2	12500	Yes/no Yes	OEM Sample/Spec
3	12500	Yes/no Yes	OEM Sample/Spec
4		Yes/no	
5		Yes/no	

OEM data taken from OEMs own ISO19752 or ISO19798 declarations of yield

**Administrative checking of health related attributes (5.2)**

Is there an EG- Safety Data Sheet of the used toner? Yes/no **Yes**  
 If there are no information of the AMES test in the EG Safety Data Sheet  
 Is there a test report about the AMES test of the used toner? Yes/no **Not Aplicable**  
 If not: Description **All MSDSs mention Ames test**

**Checking the influence of the toner module on the printer (5.3)**

Is the toner leaking less than the original? Yes/no **Yes**  
 Is the interaction between printer and toner module acceptable? Yes/no **Yes**  
 If not: Description

**Checking the initialization (5.4)**

Is the print out acceptable right after the toner module has been inserted? Yes/no **Yes**  
 If not: Describe fault

**Checking the yield number (5.5)**

	Monochrome			Average (Å or V)
	1	2	3	
Yield A: (A1+A2+A3)/3= Å	14790	13050	12636	13492
Yield V: (V1+V2+V3)/3=V	12500	12500	12500	12500

**Alternative:**

Yield A: Result of test after ISO/IEC 19752 Å  
 Reference to the test protocol:  
 Test date:  
 Yield V: Result of test after ISO/IEC 19752 V  
 Reference to the test protocol:  
 Test date:  
 Result: EZ=Å/V **1.08**

	Yes	No	Not Aplicable
Is the expected yield (EZ) reached?	YES		
Is the expected page yield reached?	YES		

**Checking the black print/Color reproduction (5.6.2)**

Average value of the 2 areas F test print A1:	29.6		
Average value of the 2 areas F comparing print V1:	33.6		
Difference is not higher than Δ≤5 for Monochrome	<b>4</b>	Yes/No/Not Aplicable	<b>Yes</b>
Color difference ΔE≤18 for Color	<b>Not applicable</b>	Yes/No/Not Aplicable	<b>Not Aplicable</b>
Average value of the 2 areas F test print A2:	30.3		
Average value of the 2 areas F comparing print V2:	34.9		
Difference is not higher than Δ≤5 for Monochrome	<b>4.6</b>	Yes/No/Not Aplicable	<b>Yes</b>
Color difference ΔE≤18 for Color	<b>Not applicable</b>	Yes/No/Not Aplicable	<b>Not Aplicable</b>
Average value of the 2 areas F test print A3:	30.9		
Average value of the 2 areas F comparing print V3:	34.8		

Difference is not higher than  $\Delta \leq 5$  for Monochrome  
 Color difference  $\Delta E \leq 18$  for Color 3.9  
Not aplicable

Yes/No/Not Aplicable Yes  
 Yes/No/Not Aplicable Not Aplicable

**Checking the fade (5.6.3)**

**Monochrome**

<b>Test print A1</b>				
Color values 1 6 A F	1	6	A	F
after 50 pages	91	77.3	58.2	35.5
Color values 1 6 A F	1	6	A	F
The biggest deviation	1.2	3.3	8.6	8.4
<b>Comparing print V1</b>				
Color values 1 6 A F	1	6	A	F
after 50 pages	90.7	72	54	33.8
Color values 1 6 A F	1	6	A	F
The biggest deviation	0.5	1.2	1	1.5
<b>Result determination</b>				
Difference $\Delta L \leq 8$	1	6	A	F
	0.7	2.1	7.6	6.9
Difference within allowed parameters	YES	YES	YES	YES

<b>Test print A2 Monochrome</b>				
Color values 1 6 A F	1	6	A	F
after 50 pages	92.3	73.9	51.5	26.2
Color values 1 6 A F	1	6	A	F
The biggest deviation	1.1	1	1.6	7.1
<b>Comparing print V2</b>				
Color values 1 6 A F	1	6	A	F
after 50 pages	89.3	72.8	53.1	35.1
Color values 1 6 A F	1	6	A	F
The biggest deviation	2.1	0.7	1.4	1.4
<b>Result determination</b>				
Difference $\Delta L \leq 8$	1	6	A	F
	1	0.3	0.2	5.7
Difference within allowed parameters	YES	YES	YES	YES

<b>Test print A3 Monochrome</b>				
Color values 1 6 A F	1	6	A	F
after 50 pages	91.8	77.4	57.3	35.2
Color values 1 6 A F	1	6	A	F
The biggest deviation	0.7	3.7	7.2	6.6
<b>Comparing print V2</b>				
Color values 1 6 A F	1	6	A	F
after 50 pages	91.8	72.7	54.7	34.8
Color values 1 6 A F	1	6	A	F
The biggest deviation	2	1	1.3	1.5
<b>Result determination</b>				
Difference $\Delta L \leq 8$	1	6	A	F
	1.3	2.7	5.9	5.1
Difference within allowed parameters	YES	YES	YES	YES

**Checking toner adhesion**

Test process: visual (tape method):

Is the resistance in between the acceptable parameters? Yes  
 If not: Describe deviation

**Checking the grey page/color uniformity (5.6.5)**

Are the differences in brightness between the acceptable parameters (pattern B2)  $\Delta L \leq 5$ ? Yes  
 If not: Describe deviation

**Checking the background (5.6.6)**

Is the background smudge between the acceptable parameters (pattern B1)? Yes  
 If not: Describe deviation

**Checking the ghosting (5.6.7)**

Is the repeating of the back rectangles in between the acceptable parameters (pattern B2)? Yes  
 If not: Describe deviation

**Checking toner miscibility (5.6.8)**

Is the toner miscibility given? Yes  
 If not: Describe deviation

**OVERALL RESULT: Passed**