

Manufacturer (trade mark):	Clover Germany	Type/Model OEM:	TN-3480
Lot/Part number:	DPC-TN3480E	Toner color(s):	Monochrome
Main application:	To be used on the relevant printers according to remanufacturer instructions		
Intended yield:	8000		
	E75337M5N129768 / E75337M5N129757 / E75337M5N129775	Take over value of existing test protocol :	(box) Yes, from ISO19752
Test device:			
Test climate:		Relative humidity:	44
Temperature:	23		
Deviations of the determined test conditions		Test location 2):	CLOVER SERBIA
Tester 1):	Aleksandar Kojic		
Test date:	7/11/2018		

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	8003	Yes	Sample 1
2	8001	Yes	Sample 2
3	8002	Yes We use for A1 the	Sample 3
4	8005	Yes MAX, for A2 the	Sample 4
5	8005	Yes MEDIAN and for A3 the	Sample 5
6	8002	Yes MIN value of the list at	Sample 6
7	8003	Yes left	Sample 7
8	8002	Yes	Sample 8
9	8003	Yes	Sample 9
Comparing Sample (B)	Type	Used for valuation	Charge/Serial number
1	8000	Yes/no Yes	OEM Sample/Spec
2	8000	Yes/no Yes	OEM Sample/Spec
3	8000	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

	1	2	3	Average ($\bar{A}$ or $\bar{V}$)
Yield A: $(A1+A2+A3)/3=\bar{A}$	8005	8003	8001	8003
Yield V: $(V1+V2+V3)/3=\bar{V}$	8000	8000	8000	8000

Alternative:

Yield A: Result of test after ISO/IEC 19752 $\bar{A}$

Reference to the test protocol:

Test date:

Yield V: Result of test after ISO/IEC 19752 $\bar{V}$

Reference to the test protocol:

Test date:

Result: $EZ=\bar{A}/\bar{V}$

Is the expected yield (EZ) reached?

Is the expected page yield reached?

Yes	No	Not Aplicable
YES		
YES		

Checking the black print/Color reproduction (5.6.2)

Average value of the 2 areas F test print A1: 30

Average value of the 2 areas F comparing print V1: 27.1

Difference is not higher than $\Delta \leq 5$ for Monochrome **2.9**

Color difference $\Delta E \leq 18$ for Color **Not applicable**

Average value of the 2 areas F test print A2: 28.6

Average value of the 2 areas F comparing print V2: 28.1

Difference is not higher than $\Delta \leq 5$ for Monochrome **0.5**

Color difference $\Delta E \leq 18$ for Color **Not applicable**

Average value of the 2 areas F test print A3: 31.9

Average value of the 2 areas F comparing print V3: 28

Yes/No/Not Aplicable **Yes**

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

Yes/No/Not Aplicable **Yes**

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

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

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

Checking the fade (5.6.3)**Monochrome**

Test print A1				
Color values 1 6 A F	1	6	A	F
after 50 pages	90.9	72.6	48.9	29.6
Color values 1 6 A F	1	6	A	F
The biggest deviation	0.7	2.3	4.9	2.3
Comparing print V1				
Color values 1 6 A F	1	6	A	F
after 50 pages	91.3	74.6	52.1	27.1
Color values 1 6 A F	1	6	A	F
The biggest deviation	0.5	0.6	1.3	0.3
Result determination				
Difference $\Delta L \leq 8$	1	6	A	F
Difference within allowed parameters	0.2	1.7	3.6	2
YES	YES	YES	YES	YES

Test print A2 Monochrome

Color values 1 6 A F	1	6	A	F
after 50 pages	90.3	74.8	51.5	28.3
Color values 1 6 A F	1	6	A	F
The biggest deviation	0.8	0.9	3	1.7
Comparing print V2				
Color values 1 6 A F	1	6	A	F
after 50 pages	90.8	73.8	51	28.3
Color values 1 6 A F	1	6	A	F
The biggest deviation	1	0.7	2.3	1
Result determination				
Difference $\Delta L \leq 8$	1	6	A	F
Difference within allowed parameters	0	0.2	0.7	0.7
YES	YES	YES	YES	YES

Test print A3 Monochrome

Color values 1 6 A F	1	6	A	F
after 50 pages	89.4	73.4	50.6	29.4
Color values 1 6 A F	1	6	A	F
The biggest deviation	1.9	1.9	4.3	5
Comparing print V2				
Color values 1 6 A F	1	6	A	F
after 50 pages	91.2	75.4	53	29.7
Color values 1 6 A F	1	6	A	F
The biggest deviation	1.6	2.5	2.8	2.3
Result determination				
Difference $\Delta L \leq 8$	1	6	A	F
Difference within allowed parameters	0.3	0.6	1.5	2.7
YES	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? N/A
 If not: Describe deviation

OVERALL RESULT: Passed