

Manufacturer (trade mark):	Clover Germany	Type/Model OEM:	CF280X
Lot/Part number:	CF280XXL	Toner color(s):	Monochrome
Main application:	To be used on the relevant printers according to remanufacturer instructions		
Intended yield:	10000		
Test device:	VNC6H03904 / PHKBD22681 / PHKBD22678	Take over value of existing test protocol :	(box) Yes, from ISO19752
Test climate:			
Temperature:	23	Relative humidity:	48
Deviations of the determined test conditions			
Tester 1):	Aleksandar Kojic	Test location 2):	CLOVER SERBIA
Test date:	23.5.2016		

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	11820	Yes	Sample 1
2	13418	Yes	Sample 2
3	11050	Yes	Sample 3
4	12855	Yes	Sample 4
5	12682	Yes	Sample 5
6	11936	Yes	Sample 6
7	12277	Yes	Sample 7
8	12137	Yes	Sample 8
9	12470	Yes	Sample 9

We use for A1 the MAX, for A2 the MEDIAN and for A3 the MIN value of the list at left

Comparing Sample (B)	Type	Used for valuation	Charge/Serial number
1	6900	Yes/no Yes	OEM Sample/Spec
2	6900	Yes/no Yes	OEM Sample/Spec
3	6900	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 (Ā or V)
	1	2	3	
Yield A: (A1+A2+A3)/3= Ā	13418	12277	11050	12248
Yield V: (V1+V2+V3)/3=V	6900	6900	6900	6900
Alternative:				
Yield A: Result of test after ISO/IEC 19752 Ā				
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=Ā/V				1,78
	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: 27

Average value of the 2 areas F comparing print V1: 26,4

Difference is not higher than Δ≤5 for Monochrome: 0,6

Color difference ΔE≤18 for Color: Not applicable

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

Average value of the 2 areas F test print A2:	23,5
Average value of the 2 areas F comparing print V2:	23,5
Difference is not higher than $\Delta \leq 5$ for Monochrome	0
Color difference $\Delta E \leq 18$ for Color	Not aplicable
Average value of the 2 areas F test print A3:	24
Average value of the 2 areas F comparing print V3:	24,8
Difference is not higher than $\Delta \leq 5$ for Monochrome	0,8
Color difference $\Delta E \leq 18$ for Color	Not aplicable

Yes/No/Not Aplicable	Yes
Yes/No/Not Aplicable	Not Aplicable
Yes/No/Not Aplicable	Yes
Yes/No/Not Aplicable	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	73,6	45,1	31,3
Color values 1 6 A F	1	6	A	F
The biggest deviation	1,9	6,4	3,6	5,9
Comparing print V1				
Color values 1 6 A F	1	6	A	F
after 50 pages	91,2	74,7	49,5	28,3
Color values 1 6 A F	1	6	A	F
The biggest deviation	1,5	5,8	5,8	2,6
Result determination				
Difference $\Delta L \leq 8$	1	6	A	F
	0,4	0,6	2,2	3,3
Difference within allowed parameters	YES	YES	YES	YES

Test print A2 Monochrome				
Color values 1 6 A F	1	6	A	F
after 50 pages	91,3	76,5	52,1	25,9
Color values 1 6 A F	1	6	A	F
The biggest deviation	0,6	3,8	5,2	3,9
Comparing print V2				
Color values 1 6 A F	1	6	A	F
after 50 pages	90,4	74,8	53,2	24,7
Color values 1 6 A F	1	6	A	F
The biggest deviation	1,1	4,9	5,3	1,9
Result determination				
Difference $\Delta L \leq 8$	1	6	A	F
	1	1,1	0,1	2
Difference within allowed parameters	YES	YES	YES	YES

Test print A3 Monochrome				
Color values 1 6 A F	1	6	A	F
after 50 pages	90,8	75,9	49,8	27
Color values 1 6 A F	1	6	A	F
The biggest deviation	1,9	5	4,8	4,3
Comparing print V2				
Color values 1 6 A F	1	6	A	F
after 50 pages	90,2	74,2	52,7	25,6
Color values 1 6 A F	1	6	A	F
The biggest deviation	0,3	3,8	5,2	1,8
Result determination				
Difference $\Delta L \leq 8$	1	6	A	F
	1,6	1,2	0,4	2,5
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)?
If not: Describe deviation

Yes

Checking toner miscibility (5.6.8)

Is the toner miscibility given?
If not: Describe deviation

N/A

OVERALL RESULT: Passed