

Manufacturer (trade mark):	Clover Germany	Type/Model OEM:	DR2300
Lot/Part number:	DPCDR2300E	Toner color(s):	Monochrome
Main application:	To be used on the relevant printers according to remanufacturer instructions		
Intended yield:	12000		
	E73860H5N136798 / E73860G5N956678 / E73860G4N317797	Take over value of existing test protocol :	(box) Yes, from ISO19752
Test device:			
Test climate:			
Temperature:	25	Relative humidity:	55
Deviations of the determined test conditions			
Tester 1):	Aleksandar Kojic	Test location 2):	CLOVER SERBIA
Test date:	8.7.2016		

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	14152	Yes	Sample 1
2	14714	Yes	Sample 2
3	13850	Yes We use for A1 the	Sample 3
4	14007	Yes MAX, for A2 the	Sample 4
5	14635	Yes MEDIAN and for A3 the	Sample 5
6	14825	Yes MIN value of the list at	Sample 6
7	15003	Yes left	Sample 7
8	14962	Yes	Sample 8
9	14111	Yes	Sample 9
Comparing Sample (B)	Type	Used for valuation	Charge/Serial number
1	12000	Yes/no Yes	OEM Sample/Spec
2	12000	Yes/no Yes	OEM Sample/Spec
3	12000	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: $(A1+A2+A3)/3=\bar{A}$	15003	14635	13850	14496
Yield V: $(V1+V2+V3)/3=\bar{V}$	12000	12000	12000	12000

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

1,21

Is the expected yield (EZ) reached?

Yes	No	Not Aplicable
YES		
YES		

Is the expected page yield reached?

Checking the black print/Color reproduction (5.6.2)

Average value of the 2 areas F test print A1: 21,4

Average value of the 2 areas F comparing print V1: 22

Difference is not higher than $\Delta \leq 5$ for Monochrome 0,6

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

Average value of the 2 areas F test print A2: 21,4

Average value of the 2 areas F comparing print V2: 22,6

Difference is not higher than $\Delta \leq 5$ for Monochrome 1,2

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

Average value of the 2 areas F test print A3: 21,7

Average value of the 2 areas F comparing print V3: 23,1

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	90,2	77	53,7	20,8
Color values 1 6 A F	1	6	A	F
The biggest deviation	4,9	11,6	9,8	1,4
Comparing print V1				
Color values 1 6 A F	1	6	A	F
after 50 pages	87,1	67,6	41,9	22,3
Color values 1 6 A F	1	6	A	F
The biggest deviation	2,6	4,1	6,7	1,1
Result determination				
Difference $\Delta L \leq 8$	1	6	A	F
	2,3	7,5	3,1	0,3
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	90	76,8	54,4	20,4
Color values 1 6 A F	1	6	A	F
The biggest deviation	3,6	12	12,4	1,6
Comparing print V2				
Color values 1 6 A F	1	6	A	F
after 50 pages	88,4	71,9	46,6	24,5
Color values 1 6 A F	1	6	A	F
The biggest deviation	3,7	9,3	7	3,3
Result determination				
Difference $\Delta L \leq 8$	1	6	A	F
	0	2,7	5,4	1,7
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	90,5	76	50,8	21,4
Color values 1 6 A F	1	6	A	F
The biggest deviation	3,8	10	9,2	0,7
Comparing print V2				
Color values 1 6 A F	1	6	A	F
after 50 pages	87,8	68,4	44,1	24,7
Color values 1 6 A F	1	6	A	F
The biggest deviation	5,8	8	6,4	2,9
Result determination				
Difference $\Delta L \leq 8$	1	6	A	F
	2	2	2,8	2,2
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? N/A
 If not: Describe deviation

OVERALL RESULT: Passed