

Manufacturer (trade mark): **Clover Germany** Type/Model OEM: **TK-5150M**  
 Lot/Part number: **DPCTK5150ME** Toner color(s): **MAGENTA**  
 Main application: To be used on the relevant printers according to remanufacturer instructions  
 Intended yield: 10000  
 Test device: V5U5Z08029 / V5U5Z08682 / V5U5Z08347  
 Test climate: Temperature: 25  
 Deviations of the determined test conditions  
 Tester 1): Aleksandar Kojic  
 Test date: 6.12.2017

Take over value of existing test protocol : (box) Yes, from ISO19798

Relative humidity: 43

Test location 2): **CLOVER SERBIA**

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  |
|-----------------|-------|
| 1               | 11426 |
| 2               | 11693 |
| 3               | 12710 |
| 4               | 13350 |
| 5               | 12471 |
| 6               | 11900 |
| 7               | 12677 |
| 8               | 12756 |
| 9               | 12804 |

| Used for valuation           | Charge/Serial number |
|------------------------------|----------------------|
| Yes                          | Sample 1             |
| Yes                          | Sample 2             |
| Yes We use for A1 the        | Sample 3             |
| Yes MAX, for A2 the          | Sample 4             |
| Yes MEDIAN and for A3 the    | Sample 5             |
| Yes MIN value of the list at | Sample 6             |
| Yes left                     | Sample 7             |
| Yes                          | Sample 8             |
| Yes                          | Sample 9             |

| Comparing Sample (B) | Type  |
|----------------------|-------|
| 1                    | 10000 |
| 2                    | 10000 |
| 3                    | 10000 |
| 4                    |       |
| 5                    |       |

| Used for valuation | Charge/Serial number |
|--------------------|----------------------|
| Yes/no Yes         | OEM Sample/Spec      |
| Yes/no Yes         | OEM Sample/Spec      |
| Yes/no Yes         | OEM Sample/Spec      |
| Yes/no             |                      |
| 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)**

**MAGENTA**

|                          | 1     | 2     | 3     | Average (Å or V) |
|--------------------------|-------|-------|-------|------------------|
| Yield A: (A1+A2+A3)/3= Å | 13350 | 12677 | 11426 | 12484            |
| Yield V: (V1+V2+V3)/3=V  | 10000 | 10000 | 10000 | 10000            |

**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                                | 1,25 |

|                                     | 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:      | 48,3                 |                      |                      |
| Average value of the 2 areas F comparing print V1: | 46                   |                      |                      |
| Difference is not higher than Δ≤5 for Monochrom    | <b>Not Aplicable</b> | Yes/No/Not Aplicable | <b>Not Aplicable</b> |
| Color difference ΔE≤18 for Color                   | <b>2,3</b>           | Yes/No/Not Aplicable | <b>Yes</b>           |
| Average value of the 2 areas F test print A2:      | 48,1                 |                      |                      |
| Average value of the 2 areas F comparing print V2: | 46,7                 |                      |                      |
| Difference is not higher than Δ≤5 for Monochrom    | <b>Not Aplicable</b> | Yes/No/Not Aplicable | <b>Not Aplicable</b> |
| Color difference ΔE≤18 for Color                   | <b>1,4</b>           | Yes/No/Not Aplicable | <b>Yes</b>           |
| Average value of the 2 areas F test print A3:      | 47,6                 |                      |                      |
| Average value of the 2 areas F comparing print V3: | 46,2                 |                      |                      |

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

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

**Checking the fade (5.6.3)**

**MAGENTA**

| Test print A1                        |      |      |      |      |
|--------------------------------------|------|------|------|------|
| Color values 1 6 A F                 | 1    | 6    | A    | F    |
| after 50 pages                       | 91,7 | 80,8 | 69   | 48,5 |
| Color values 1 6 A F                 | 1    | 6    | A    | F    |
| The biggest deviation                | 1,1  | 1,6  | 4,4  | 1,7  |
| Comparing print V1                   |      |      |      |      |
| Color values 1 6 A F                 | 1    | 6    | A    | F    |
| after 50 pages                       | 91,1 | 78,9 | 68,7 | 48   |
| Color values 1 6 A F                 | 1    | 6    | A    | F    |
| The biggest deviation                | 0,7  | 1,4  | 1,4  | 3,9  |
| Result determination                 |      |      |      |      |
| Difference $\Delta L \leq 8$         | 0,4  | 0,2  | 3    | 2,2  |
| Difference within allowed parameters | YES  | YES  | YES  | YES  |

| Test print A2 MAGENTA                |      |      |      |      |
|--------------------------------------|------|------|------|------|
| Color values 1 6 A F                 | 1    | 6    | A    | F    |
| after 50 pages                       | 91,2 | 82   | 69,9 | 48,6 |
| Color values 1 6 A F                 | 1    | 6    | A    | F    |
| The biggest deviation                | 2    | 3,4  | 5,4  | 1,7  |
| Comparing print V2                   |      |      |      |      |
| Color values 1 6 A F                 | 1    | 6    | A    | F    |
| after 50 pages                       | 91,9 | 80,9 | 71,3 | 46,6 |
| Color values 1 6 A F                 | 1    | 6    | A    | F    |
| The biggest deviation                | 2,4  | 3    | 2,9  | 1,9  |
| Result determination                 |      |      |      |      |
| Difference $\Delta L \leq 8$         | 0    | 0,4  | 2,5  | 0,2  |
| Difference within allowed parameters | YES  | YES  | YES  | YES  |

| Test print A3 MAGENTA                |      |      |      |      |
|--------------------------------------|------|------|------|------|
| Color values 1 6 A F                 | 1    | 6    | A    | F    |
| after 50 pages                       | 91,4 | 79,8 | 69,3 | 48,2 |
| Color values 1 6 A F                 | 1    | 6    | A    | F    |
| The biggest deviation                | 0,3  | 0,5  | 0,9  | 1,1  |
| Comparing print V2                   |      |      |      |      |
| Color values 1 6 A F                 | 1    | 6    | A    | F    |
| after 50 pages                       | 91,8 | 80,5 | 71   | 45,9 |
| Color values 1 6 A F                 | 1    | 6    | A    | F    |
| The biggest deviation                | 1,1  | 2    | 2,6  | 1,7  |
| Result determination                 |      |      |      |      |
| Difference $\Delta L \leq 8$         | 0,8  | 1,5  | 1,7  | 0,6  |
| 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 color differences in between the acceptable parameters (pattern B2-B5)  $\Delta E \leq 8$  ? Yes  
 If not: Describe deviation

**Checking the background (5.6.6)**

Is the background smudge between the acceptable parameters (pattern B1-B5)? 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-B5)? Yes  
 If not: Describe deviation

**Checking toner miscibility (5.6.8)**

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

**OVERALL RESULT: Passed**