

Introduction:

One of the properties of carbon paper is the transfer of the carbon to another substrate by writing or typing. This transfer must be sufficient. In this case the contrast between the carbon and the substrate is good enough so a text can be read well.

This leaflet describes a method to check the imaging of carbon.

Principle:

A strip of carbon paper is brought into contact with a standard paper under a very high pressure on an IGT printability tester. In this way it is imitated what happens by (type) writing. After this the contrast density of the carbon transferred to the standard paper is measured. The higher the contrast density, the more carbon has been transferred. The contrast density must be as high as possible

Method of operation:

- It is recommended to execute the test in the standard atmosphere; to most standards it is 23.0 ± 1.0 °C (73.4 ± 1.8 °F) and $50 \pm 2\%$ rh
- For the operation of the AIC2-5T2000 and Global Standard Tester follow the instructions of the manual, IGT information leaflet W100 and the display accurately.
- Handle the samples to be tested carefully.

Preparation

1. Condition the papers and the equipment during > 6 hours in the standard atmosphere.
2. Cut the carbon paper strips (preferable 55 x 340 mm, 5 strips per sample) and mark them with machine and/or cross direction and a code for the type of material.
3. For AIC2-5T2000 only:
 - 3.1. Mount the packing on the sector. See W100.
 - 3.2. Adjust the printing force for the upper printing disc shaft to 700 N and pay attention for the right backlash for both shafts. See W100.
 - 3.3. Adjust the printing speed to 0.2 m/s in the constant speed mode (□).
4. For GST 2/3/3H only:
 - 4.1. If not present, mount the sector with clamps. See W100.
 - 4.2. Mount the packing on the sector. See W100.
 - 4.3. Select the menu "Carbon Imaging" in the display.
5. Place the printing disc on the (upper) printing disc shaft of the tester.
6. Check the functioning of the tester following the instructions in the chapter "Execution".

Execution

1. Mount a strip of Ka paper with a carbon strip on it on the sector (the carbon side facing to the Ka paper and the Ka paper in contact with the packing).
2. Make a print. See W100.
3. Remove the strips of carbon and paper from the sector.
4. Measure the test result as explained in the chapter "Assessment".
5. Repeat point 1 thru 4 for every strip. It is recommended to perform the test at least 5 times per sample.
6. After having finished the tests, clean and store all parts as described in the manual.
7. Make an accurate record of the conditions and the test results of the test.

Assessment

1. Measure the contrast density of the carbon image of the Ka paper 10 times on every single strip.
2. Repeat the density measurements for every strip.
3. Calculate the average and if required the standard deviation.
4. Sometimes it can be useful to mention the highest and lowest values as well.

Materials / testing conditions

1	IGT AIC2-5T2000	710.000.000
	or IGT Global Standard Tester 2	412.000.000
	or IGT global Standard Tester 3	416.000.000
	or IGT Global Standard Tester 3H	467.000.000
2	Printing disc, metal, 5 mm	402.321
3	Packing, paper, 55 mm	404.001.005
4	Strips of Ka paper, 55 mm	404.009.025
5	Sector with clamps (for GST 2/3)	361.000.000
6	Strips of carbon to be tested, preferable 55 x 340 mm, 5 strips per sample.	
7	Densitometer	

Printing force	700 N
Printing speed	Constant, 0.2 m/s

- The numbers 1 thru 5 are available at IGT Testing Systems.
- The numbers 2 thru 4 can be obtained as Imaging Set for Carbon Paper for AIC2-5T2000 and GST 2/3/3H, article number 481.000.710.
- *This leaflet contains article numbers per January 1st, 2006* ◄.



Fig.1: Print of carbon paper

Notes:

1. The test results of the AIC2-5T2000, AIC2-5 and Global Standard Tester 2, 3 and 3-H compare well with one another, on the condition that they have been carried out under the same conditions.

► *In comparison to older IGT leaflets, this leaflet is valid for the AIC2-5T2000 and Global Standard Testers as mentioned*

This information leaflet has been compiled with the utmost care. However, may you find any inadequacies or if there are any comments, we kindly request you to send these to IGT Testing Systems, Sales Department.