

TEST REPORT



ÉMI-TÜV

Add value.
Inspire trust.

Name of the client: ROLAND DG EUROPE HOLDINGS B.V.

Address: Professor J.H.Bavincklaan 2
1183 AT Amstelveen
The Netherlands

ÉMI-TÜV SÜD Kft.
Central Laboratory
KERMI Department
Budapest, 30/04/2021
test report No.: R-1699676
1 / 5 pages

Date of application: 01/04/2021

Receipt date of samples: 01/04/2021

Subject of order: Testing of printing inks according to EN 71-3:2019 Safety of toys.
Part 3: Migration of certain elements.

Samples description: 7 printing ink cartridges
Reference: TEST EUV5. 1000100023_Various_90EMXXBD

Sample number	Ink type	EAN code
1.	WH, White, EUV5-WH INK, 220 ml	4 982978 706411
2.	CY, Cyan, EUV5-WH INK, 500 ml	4 982978 706374
3.	PR, PRIMER, EUV5-5PR INK, 500 ml	4 982978 706435
4.	BK, BLACK, EUV5-5BK INK, 500 ml	4 982978 706411
5.	YE, YELLOW, EUV5-5YE INK, 500 ml	4 982978 706398
6.	GL, GLOSS, EUV5-5GL INK, 500 ml	4 982978 706428
7.	MG, MAGENTA, EUV5-5MG INK	4 982978 706381

Producer of tested samples: Roland Digital Group Iberia S.L.

Testing period: 06/04/2021– 30/04/2021

Conclusion: Test pass

Remark: The result relates only to the items tested
No extract, abridgment or abstraction from a test report may be published or used to advertise a product without the written consent of the Director of ÉMI-TÜV SÜD Ltd KERMI Department. The results contained herein apply only to the particular sample tested and





ÉMI-TÜV
KERMI Department

to the specific test carried out and not to samples of the current production line.
Sample photo:





ÉMI-TÜV
KERMI Department



Test results:

Chemical properties

EN 71-3:2019 Safety of toys
Part 3: Migration of certain elements
 Determined by ICP-MS

Tested parameter	Result [mg/kg]			LOQ mg/kg	Limits [mg/kg]
	sample 1. WH, White	sample 2. CY, Cyan	sample 3 PR, PRIMER		II. category
Aluminium (Al)	6,69	10,7	5,4	0,25	1406
Antimony (Sb)	<0,025	<0,025	<0,025	0,025	11,3
Arsenic (As)	<0,05	<0,05	<0,05	0,05	0,9
Barium (Ba)	<0,15	0,18	<0,15	0,15	375
Boron (B)	<0,25	<0,25	<0,25	0,25	300
Cadmium (Cd)	<0,025	<0,025	<0,025	0,025	0,3
Chromium (III) (Cr)	<0,01	0,017	<0,01	0,01	9,4
Chromium (VI) (Cr)	<0,005	<0,005	<0,005	0,005	0,005
Cobalt (Co)	<0,025	<0,025	<0,025	0,025	2,6
Copper (Cu)	0,1	17,1	0,1	0,025	156
Lead (Pb)	<0,025	<0,025	<0,025	0,025	0,5
Manganese (Mn)	0,18	<0,025	<0,025	0,025	300
Mercury (Hg)	<0,025	<0,025	<0,025	0,025	1,9
Nickel (Ni)	0,05	<0,05	<0,05	0,05	18,8
Selenium (Se)	<0,05	<0,05	<0,05	0,05	9,4
Strontium (Sr)	2,6	0,08	0,06	0,05	1125
Tin (Sn)	<0,05	<0,05	<0,05	0,05	3750
Organic tin	<0,05	<0,05	<0,05	0,05	0,2
Zinc (Zn)	7,4	2,5	0,5	0,25	938



ÉMI-TÜV
KERMI Department



ÉMI-TÜV
KERMI Department

EN 71-3:2019 Safety of toys
Part 3: Migration of certain elements
Determined by ICP-MS

Tested parameter	Result [mg/kg]			LOQ mg/kg	Limits [mg/kg]
	sample 4. BK, Black	sample 5. YE, Yellow	sample 6. GL, Gloss		II. category
Aluminium (Al)	120,7	56,2	1,8	0,25	1406
Antimony (Sb)	<0,025	<0,025	<0,025	0,025	11,3
Arsenic (As)	<0,05	<0,05	<0,05	0,05	0,9
Barium (Ba)	<0,15	<0,15	<0,15	0,15	375
Boron (B)	<0,25	<0,25	<0,25	0,25	300
Cadmium (Cd)	<0,025	<0,025	<0,025	0,025	0,3
Chromium (III) (Cr)	0,02	<0,01	<0,01	0,025	9,4
Chromium (VI) (Cr)	<0,005	<0,005	<0,005	0,005	0,005
Cobalt (Co)	<0,025	<0,025	<0,025	0,025	2,6
Copper (Cu)	<0,025	<0,025	<0,025	0,025	156
Lead (Pb)	<0,025	<0,025	<0,025	0,025	0,5
Manganese (Mn)	<0,025	<0,025	<0,025	0,025	300
Mercury (Hg)	<0,025	<0,025	<0,025	0,025	1,9
Nickel (Ni)	<0,05	<0,05	<0,05	0,05	18,8
Selenium (Se)	<0,05	<0,05	<0,05	0,05	9,4
Strontium (Sr)	0,07	0,07	0,07	0,05	1125
Tin (Sn)	<0,05	<0,05	<0,05	0,05	3750
Organic tin	<0,05	<0,05	<0,05	0,05	0,2
Zinc (Zn)	0,75	<0,25	2,5	0,25	938



ÉMI-TÜV
KERMI Department

EN 71-3:2019 Safety of toys
Part 3: Migration of certain elements
Determined by ICP-MS

Tested parameter	Result [mg/kg]	LOQ mg/kg	Limits [mg/kg]
	Sample 7. MG, Magenta		II. category
Aluminium (Al)	12,9	0,25	1406
Antimony (Sb)	<0,025	0,025	11,3
Arsenic (As)	<0,05	0,05	0,9
Barium (Ba)	<0,15	0,15	375
Boron (B)	<0,25	0,25	300
Cadmium (Cd)	<0,025	0,025	0,3
Chromium (III) (Cr)	<0,01	0,025	9,4
Chromium (VI) (Cr)	<0,005	0,005	0,005
Cobalt (Co)	<0,025	0,025	2,6
Copper (Cu)	<0,025	0,025	156
Lead (Pb)	<0,025	0,025	0,5
Manganese (Mn)	<0,025	0,025	300
Mercury (Hg)	<0,025	0,025	1,9
Nickel (Ni)	<0,05	0,05	18,8
Selenium (Se)	<0,05	0,05	9,4
Strontium (Sr)	0,07	0,05	1125
Tin (Sn)	<0,05	0,05	3750
Organic tin	<0,05	0,05	0,2
Zinc (Zn)	4,0	0,25	938

The samples were used for tests.

Reviewed by:

Orsolya Molnár

Orsolya Molnár
Expert



ÉMI-TÜV SÜD Kft.
KERMI Osztály

András Varjú
András Varjú
Head of department

Authorised by:

Gizella Kókai

Gizella Kókai
Expert

TEST REPORT



ÉMI-TÜV

Add value.
Inspire trust.

Name of the client: Roland DG EMEA

Address: Bell-Telephonedlaan 2G
B-2440 Geel
Belgium

Date of application: 02/08/2022

Receipt date of samples: 02/08/2022

Subject of order: Testing of printing inks according to EN 71-3:2019+A1:2021
Safety of toys. Part 3: Migration of certain elements.

Samples description: 2 printing ink cartridges
ECO-UV, EUV5-5RE and ECO-UV, EUV5-5OR

Sample number	Ink type	EAN code
1.	EUV5-5RE, RED, INK, 500 ml	4 982978 706459
2.	EUV5-5OR, ORANGE, INK, 500 ml	4 982978 706442

Manufacturer: Roland DG Corporation

Testing period: 03/08/2022– 10/08/2022

Conclusion: Test pass

Remark: The result relates only to the items tested
No extract, abridgment or abstraction from a test report may be published or used to advertise a product without the written consent of the Director of ÉMI-TÜV SÜD Ltd KERMÍ Department. The results contained herein apply only to the particular sample tested and to the specific test carried out and not to samples of the current production line.



Rn.: 13-09-072640
VAT nr: 10687105-2-13
Bank: UniCredit Bank Hungary Zrt.
10918001-00000068-72970003

Managing Director
Miklós Cseresznyák

Phone: +36/1 210 9570

www.emi-tuv.hu
TÜV[®]

ÉMI-TÜV SÜD Kft.
TÜV SÜD Group
KERMÍ Department

H-1043 Budapest
Dugonics u. 11.



ÉMI-TÜV
KERMI Department

Sample photo:





ÉMI-TÜV
KERMI Department

Test results:

Migration of certain elements

According to EN 71-3:2019+A1:2021 Safety of toys, determined by ICP-MS

Tested parameter	Result [mg/kg]		LOQ mg/kg	Limits [mg/kg]
	sample 1. EUV5-5RE Red	sample 2. EUV5-5OR Orange		II. category
Aluminium (Al)	14,8	22,9	0,25	560
Antimony (Sb)	<0,025	<0.025	0,025	11,3
Arsenic (As)	<0,05	<0.05	0,05	0,9
Barium (Ba)	<0,15	<0.15	0,15	375
Boron (B)	1,1	0,5	0,25	300
Cadmium (Cd)	<0,025	<0.025	0,025	0,3
Chromium (III) (Cr)	<0,01	0,040	0,01	9,4
Chromium (VI) (Cr)	<0,005	<0,01	0,005	0,005
Cobalt (Co)	<0,025	<0,025	0,025	2,6
Copper (Cu)	<0,025	0,2	0,025	156
Lead (Pb)	<0,025	<0,025	0,025	0,5
Manganese (Mn)	<0,025	<0,025	0,025	300
Mercury (Hg)	<0,025	<0,025	0,025	1,9
Nickel (Ni)	<0,05	<0,05	0,05	18,8
Selenium (Se)	<0,05	<0,05	0,05	9,4
Strontium (Sr)	<0,05	<0,05	0,05	1125
Tin (Sn)	<0,05	<0,05	0,05	3750
Organic tin	<0,05	<0,05	0,05	0,2
Zinc (Zn)	0,5	<0,25	0,25	938

The samples were used for tests.

Reviewed by:

Orsolya Molnár

Orsolya Molnár
Expert



ÉMI-TÜV SÜD KR.
KERMI Osztály

András Varjú

András Varjú
Business unit manager

Authorised by:

Gizella Kókai

Gizella Kókai
Expert