TEST REPORT
(시험 성적서)

Report No.
시험성적서 번호 : **(8225)827-0010-001**

Date Issued
발행일자 : 2026. 01. 05

Company Name
신청기관 : Daeduck Electronics Co., Ltd
대덕전자 주식회사

Address
주소 : 230, Gangchon-ro, Danwon-gu, Ansan-si, Gyeonggi-do
경기도 안산시 강촌로 230

Sample Description

Name / Type of Product
제품명/형식 : Cu Plating

Item No. / Part No.
품번 : -

Material/Color
재질 : PCB

Manufacturer/Vendor
제품 생산자/공급자 : Daeduck Electronics Co., Ltd
대덕전자 주식회사

Date Received
시료접수일자 : 2025. 12. 24

Test Period
시험일자 : 2025. 12. 24 ~ 2026. 01. 05

Test Type : Wet chemical analysis for restricted substances.

Test Site : Fixed Test Lab (RM908~915 126, Beolmal-ro, Dongan-gu, Anyang-si)

Test Method(s)
시험방법 : For the detail, please the following page(s).
이 시험성적서의 다음 페이지 첨부

Test Results(s)
시험결과 : For the detail, please the following page(s).
이 시험성적서의 다음 페이지 첨부

Authorized by

Bureau Veritas Korea Co., Ltd.
Consumer Product Services

JIN KIM
Lab Manager / Bureau Veritas Korea CPS

Scan to see the Report

Bureau Veritas CPS Korea
RM409, 8F RM901~902, RM908~915
(O-Biz tower) 126, Beolmal-ro, Dongan-gu, Anyang-si, Gyeonggi-do, 14057, Republic of Korea
Tel :+82.31.688.8000 Fax: +82.31.360.0276
Website: www.bureauveritas.co.kr/cps

This report is governed by, and incorporates by reference, the Conditions of Testing as posted at the date of issuance of this report at http://www.bureauveritas.com/home/about-us/our-business/cps/about-us/terms-conditions/ and is intended for your exclusive use. Any copying or replication of this report to or for any other person or entity, or use of our name or trademark, is permitted only with our prior written permission. This report sets forth our findings solely with respect to the test samples identified herein. The results set forth in this report are not indicative or representative of the quality or characteristics of the lot from which a test sample was taken or any similar or identical product unless specifically and expressly noted. Our report includes all of the tests requested by you and the results thereof based upon the information that you provided to us. Measurement uncertainty is only provided upon request for accredited tests. Statements of conformity are based on simple acceptance criteria without taking measurement uncertainty into account, unless otherwise requested in writing. You have 60 days from date of issuance of this report to notify us of any material error or omission caused by our negligence or if you require measurement uncertainty; provided, however, that such notice shall be in writing and shall specifically address the issue you wish to raise. A failure to raise such issue within the prescribed time shall constitute your unqualified acceptance of the completeness of this report, the tests conducted and the correctness of the report contents. This report is independent of the KOLAS recognition criteria (KS Q ISO/IEC 17025) and KOLAS recognition. This report is independent of the accredited test results by Korea Laboratory Accreditation Scheme, which signed the ILAC-MRA.

TEST REPORT
(시험 성적서)

Report No. (시험성적서 번호) : **(8225)827-0010-001**

Date Issued (발행일자) : 2026. 01. 05

Name / Type of Product (제품명/형식) : Cu Plating

TEST RESULT

Heavy Metals

Test Item (시험 항목)	Test Method (분석 방법)	Unit (단위)	MDL (검출 한계)	Result (시험 결과)
Lead (Pb)	With reference to International Standard IEC 62321-5: 2013, Determined by ICP-OES.	mg/kg	5	ND
Cadmium (Cd)		mg/kg	0.5	ND
Mercury (Hg)	With reference to International Standard IEC 62321-4: 2013 +AMD1:2017CVS, Determined by ICP-OES.	mg/kg	2	ND
Chromium VI (Cr VI)*	With reference to International Standard IEC 62321-7-1 2015, Determined by UV-Vis.	$\mu g/cm^2$	-	Negative
Antimony(Sb)	With reference to US EPA3052, Determined by ICP-OES.	mg/kg	2	ND
Beryllium(Be)		mg/kg	2	ND
Arsenic (As)		mg/kg	2	ND

Flame Retardants-PBBs/PBDEs

Monobromobiphenyl	With reference to International Standard IEC 62321-6: 2015, Determined by GC-MS.	mg/kg	5	ND
Dibromobiphenyl		mg/kg	5	ND
Tribromobiphenyl		mg/kg	5	ND
Tetrabromobiphenyl		mg/kg	5	ND
Pentabromobiphenyl		mg/kg	5	ND
Hexabromobiphenyl		mg/kg	5	ND
Heptabromobiphenyl		mg/kg	5	ND
Octabromobiphenyl		mg/kg	5	ND
Nonabromobiphenyl		mg/kg	5	ND
Decabromobiphenyl		mg/kg	5	ND
Monobromodiphenyl ether	With reference to International Standard IEC 62321-6: 2015, Determined by GC-MS.	mg/kg	5	ND
Dibromodiphenyl ether		mg/kg	5	ND
Tribromodiphenyl ether		mg/kg	5	ND
Tetrabromodiphenyl ether		mg/kg	5	ND
Pentabromodiphenyl ether		mg/kg	5	ND
Hexabromodiphenyl ether		mg/kg	5	ND
Heptabromodiphenyl ether		mg/kg	5	ND
Octabromodiphenyl ether		mg/kg	5	ND
Nonabromodiphenyl ether		mg/kg	5	ND
Decabromodiphenyl ether		mg/kg	5	ND

Note / Key :

mg/kg = milligram(s) per kilogram = ppm = part(s) per million
ug/cm^2 = Microgram per square centimeter
MDL = Method detection limit
ND = Not detected
NA = Not applicable

* a. The sample is positive for CrVI if the CrVI concentration is greater than 0.13 ug/cm2. The sample coating is considered to contain CrVI.
b. The sample is negative for CrVI if CrVI is N.D. (concentration less than 0.10ug/cm2). The coating is considered a non-CrVI based coating.
c. The result between 0.10ug/cm2 and 0.13 ug/cm2 is considered to be inconclusive – unavoidable coating variations may influence the determination.

The content of this PDF file is in accordance with the original issued reports for reference only.
This Test Report cannot be reproduced, except in full, without prior written permission of the company.

TEST REPORT
(시험 성적서)

Report No. (시험성적서 번호) : **(8225)827-0010-001**

Date Issued (발행일자) : 2026. 01. 05

Name / Type of Product (제품명/형식) : Cu Plating

TEST RESULT

Phthalates Content

Test Item (시험 항목)	Test Method (분석 방법)	Unit (단위)	MDL (검출 한계)	Result (시험 결과)
Dibutyl phthalate (DBP)	With reference to IEC 62321-8: 2017, Determined by GC-MS & LC-MS.	mg/kg	50	ND
Bis(2-ethylhexyl) phthalate (DEHP)		mg/kg	50	ND
Diisobutyl phthalate (DIBP)		mg/kg	50	ND
Benzyl butyl phthalate (BBP)		mg/kg	50	ND

Note / Key :

mg/kg = milligram(s) per kilogram = ppm = part(s) per million
MDL = Method detection limit
ND = Not detected
NA = Not applicable

List of Phthalates [European Parliament and Council Directive 2011/65/EU] :

No.	Name of Analyte(s)	CAS-No.
1	Dibutyl phthalate (DBP)	84-74-2
2	Bis(2-ethylhexyl) phthalate (DEHP)	117-81-7
3	Diisobutyl phthalate (DIBP)	84-69-5
4	Benzyl butyl phthalate (BBP)	85-68-7

The content of this PDF file is in accordance with the original issued reports for reference only.
This Test Report cannot be reproduced, except in full, without prior written permission of the company.

TEST REPORT
(시험 성적서)

Report No. (시험성적서 번호) : **(8225)827-0010-001**

Date Issued (발행일자) : 2026. 01. 05

Name / Type of Product (제품명/형식) : Cu Plating

TEST RESULT

Halogen Content

Test Item (시험 항목)	Test Method (분석 방법)	Unit (단위)	MDL (검출 한계)	Result (시험 결과)
Bromine (Br)	With reference to EN14582:2016, Determined by IC.	mg/kg	30	ND
Chlorine (Cl)		mg/kg	30	ND
Fluorine (F)		mg/kg	30	ND
Iodine (I)		mg/kg	30	ND

Note / Key :

mg/kg = milligram(s) per kilogram = ppm = part(s) per million
MDL = Method detection limit
ND = Not detected
NA = Not applicable

The content of this PDF file is in accordance with the original issued reports for reference only.
This Test Report cannot be reproduced, except in full, without prior written permission of the company.

TEST REPORT
(시험 성적서)

Report No. (시험성적서 번호) : **(8225)827-0010-001**

Date Issued (발행일자) : 2026. 01. 05

Name / Type of Product (제품명/형식) : Cu Plating

TEST RESULT

Perfluorinated Compounds (PFC)

Test Item (시험 항목)	Test Method (분석 방법)	Unit (단위)	MDL (검출 한계)	Result (시험 결과)
Perfluorooctane sulfonate (PFOS)	With reference to EPA 3550C, Determined by LC-MS&LC-MS-MS.	mg/kg	0.01	ND
Perfluorooctanoic acid (PFOA)		mg/kg	0.01	ND

Note / Key :

mg/kg = milligram(s) per kilogram = ppm = part(s) per million
MDL = Method detection limit
ND = Not detected
NA = Not applicable

The content of this PDF file is in accordance with the original issued reports for reference only.
This Test Report cannot be reproduced, except in full, without prior written permission of the company.

TEST REPORT
(시험 성적서)

Report No. (시험성적서 번호) : **(8225)827-0010-001**

Date Issued (발행일자) : 2026. 01. 05

Name / Type of Product (제품명/형식) : Cu Plating

TEST RESULT

Other(s)

Test Item (시험 항목)	Test Method (분석 방법)	Unit (단위)	MDL (검출 한계)	Result (시험 결과)
Polychlorinated biphenyls (PCBs)	With reference to EPA 3550C, Determined by GC-MS.	mg/kg	1	ND

Note / Key :

mg/kg = milligram(s) per kilogram = ppm = part(s) per million
MDL = Method detection limit
ND = Not detected
NA = Not applicable

The content of this PDF file is in accordance with the original issued reports for reference only.
This Test Report cannot be reproduced, except in full, without prior written permission of the company.

TEST REPORT
(시험 성적서)

Report No. (시험성적서 번호) : **(8225)827-0010-001**

Date Issued (발행일자) : 2026. 01. 05

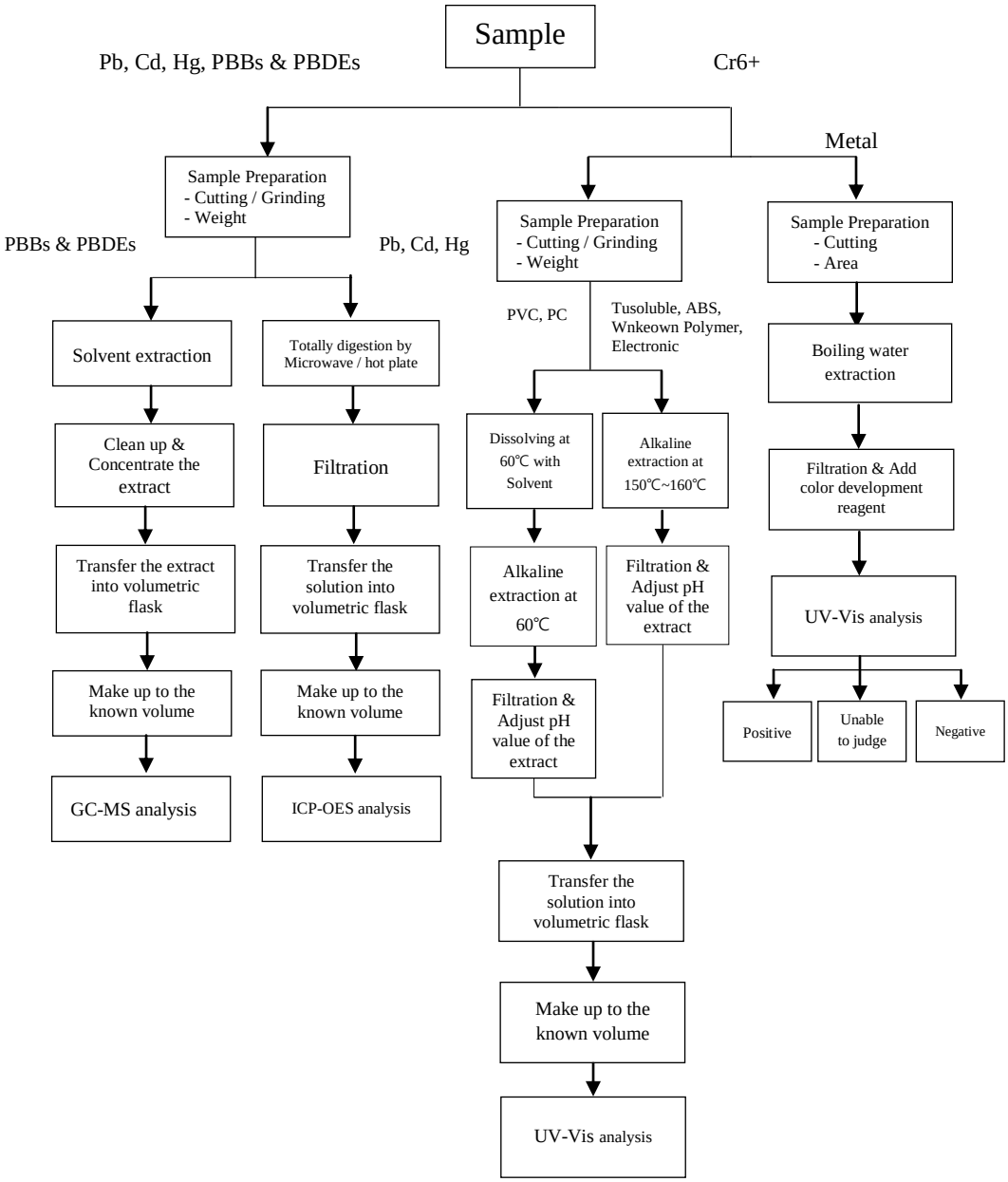
Name / Type of Product (제품명/형식) : Cu Plating

Photo of the Submitted Sample
(시료 접수 시 시료 상태)



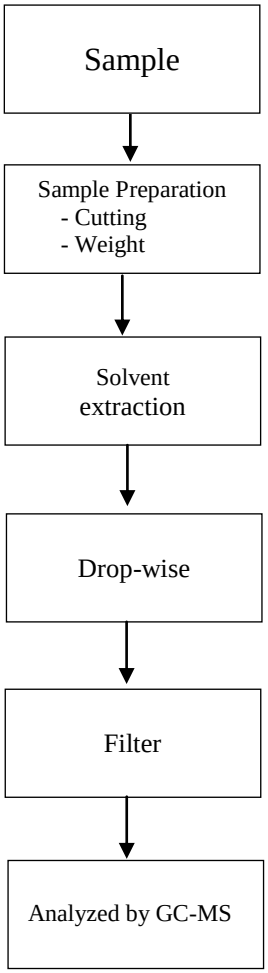
The content of this PDF file is in accordance with the original issued reports for reference only.
This Test Report cannot be reproduced, except in full, without prior written permission of the company.

Test Flowchart of Heavy Metals and Flame Retardants Content [European Parliament and Council Directive 2011/65/EU] :



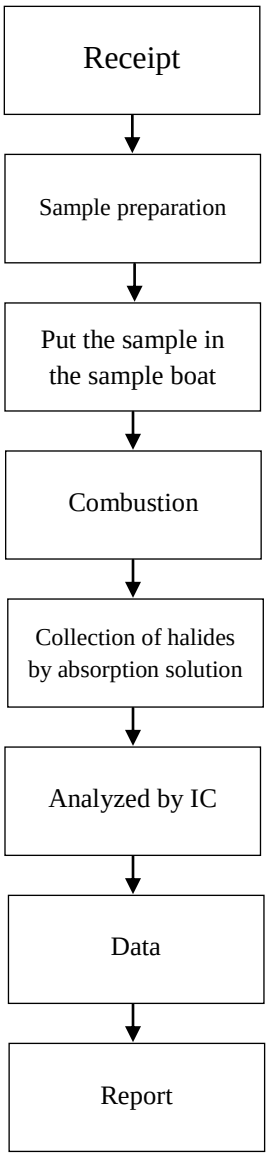
The content of this PDF file is in accordance with the original issued reports for reference only.
This Test Report cannot be reproduced, except in full, without prior written permission of the company.

Test Flowchart of Phthalates Content



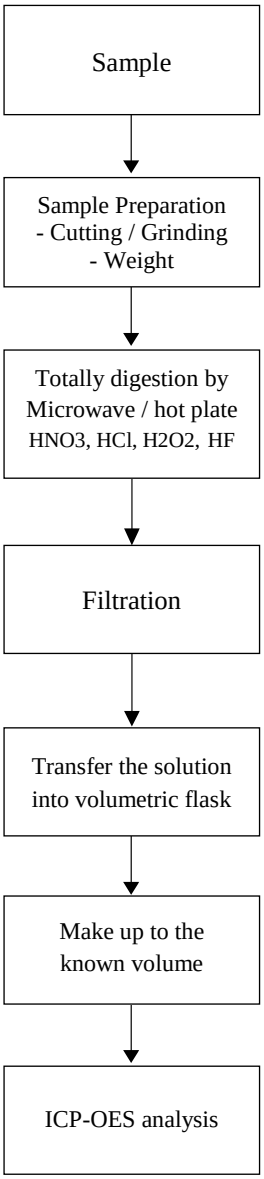
The content of this PDF file is in accordance with the original issued reports for reference only.
This Test Report cannot be reproduced, except in full, without prior written permission of the company.

Test Flowchart of Halogen Content



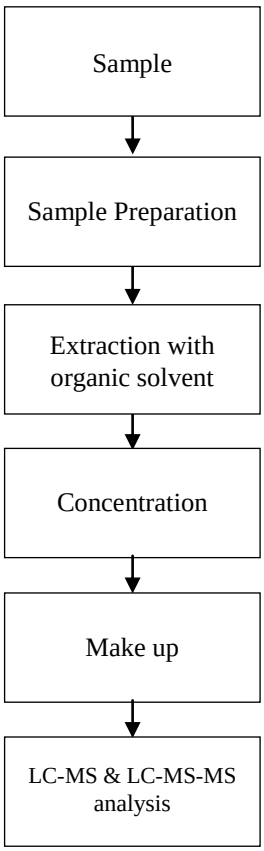
The content of this PDF file is in accordance with the original issued reports for reference only.
This Test Report cannot be reproduced, except in full, without prior written permission of the company.

Test Flowchart of Inorganic Element Content



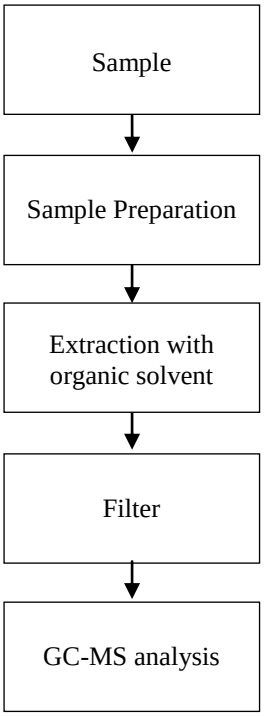
The content of this PDF file is in accordance with the original issued reports for reference only.
This Test Report cannot be reproduced, except in full, without prior written permission of the company.

Test Flowchart of PFOA & PFOS Content



The content of this PDF file is in accordance with the original issued reports for reference only.
This Test Report cannot be reproduced, except in full, without prior written permission of the company.

Test Flowchart of PCB Content



- End of Report -

The content of this PDF file is in accordance with the original issued reports for reference only.
This Test Report cannot be reproduced, except in full, without prior written permission of the company.