



中国认可
国际互认
检测
TESTING
CNAS L6093

Test Report

Report No.: HLF22008082E

Date: Aug 8, 2022

Page 1 of 6

Applicant : Hengdian Group DMEGC Magnetics CO., LTD.

Address : Hengdian Industrial Zone, Dongyang, Zhejiang PEOPLE'S REPUBLIC OF CHINA

The following sample(s) and sample information was/were submitted and identified by/on behalf of the client

Sample Name : Rechargeable Li-ion Cell

Sample Model : INR18650-20P 3.7V

Sample Received Date : Aug 8, 2022

Test Completed Date : Aug 8, 2022

Test Method : Refer to the next page(s).

Test Results : Refer to the next page(s).

Test Requested	Conclusion
RoHS Directive (EU)2015/863 amending Annex II to Directive 2011/65/EU—Lead(Pb), Cadmium(Cd), Mercury(Hg), Hexavalent Chromium(CrVI), Polybrominated Biphenyls (PBBs), Polybrominated Biphenyl Ethers(PBDEs), Dibutyl phthalate (DBP), Butyl benzyl phthalate(BBP), Bis-(2-ethylhexyl)phthalate(DEHP), Di-iso-butyl ortho-phthalate(DIBP)	PASS

Reviewed by:

Lab Senior Engineer

Authorized Signature:

Technology Manager

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Pb,Cd,Hg, Cr(VI),PBBs, PBDEs Test Results:

Test Item	Test method/Instrument	MDL (mg/kg)	Result (mg/kg)	Limit (mg/kg)
			A	
Lead(Pb)	IEC62321-5:2013/ICP-OES	2	N.D.	1000
Cadmium(Cd)	IEC62321-5:2013/ICP-OES	2	N.D.	100
Mercury(Hg)	IEC62321-4:2013+A1:2017/ICP-OES	2	N.D.	1000
Hexavalent Chromium(CrVI)	IEC62321-7-2:2017/UV-VIS	8	N.D.	1000
Sum of PBBs	-	-	N.D.	1000
Monobromobiphenyl	IEC62321-6:2015/GC-MS	5	N.D.	--
Dibromobiphenyl	IEC62321-6:2015/GC-MS	5	N.D.	--
Tribromobiphenyl	IEC62321-6:2015/GC-MS	5	N.D.	--
Tetrabromobiphenyl	IEC62321-6:2015/GC-MS	5	N.D.	--
Pentabromodiphenyl	IEC62321-6:2015/GC-MS	5	N.D.	--
Hexabromobiphenyl	IEC62321-6:2015/GC-MS	5	N.D.	--
Heptabromobiphenyl	IEC62321-6:2015/GC-MS	5	N.D.	--
Octabromobiphenyl	IEC62321-6:2015/GC-MS	5	N.D.	--
Nonabromobiphenyl	IEC62321-6:2015/GC-MS	5	N.D.	--
Decabromobiphenyl	IEC62321-6:2015/GC-MS	5	N.D.	--
Sum of PBDEs		-	N.D.	1000
Monobromobiphenyl ether	IEC62321-6:2015/GC-MS	5	N.D.	--
Dibromobiphenyl ether	IEC62321-6:2015/GC-MS	5	N.D.	--
Tribromobiphenyl ether	IEC62321-6:2015/GC-MS	5	N.D.	--
Tetrabromobiphenyl ether	IEC62321-6:2015/GC-MS	5	N.D.	--
Pentabromobiphenyl ether	IEC62321-6:2015/GC-MS	5	N.D.	--
Hexabromobiphenyl ether	IEC62321-6:2015/GC-MS	5	N.D.	--
Heptabromobiphenyl ether	IEC62321-6:2015/GC-MS	5	N.D.	--
Octabromobiphenyl ether	IEC62321-6:2015/GC-MS	5	N.D.	--
Nonabromobiphenyl ether	IEC62321-6:2015/GC-MS	5	N.D.	--
Decabromobiphenyl ether	IEC62321-6:2015/GC-MS	5	N.D.	--

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Report No.:HLF22008082E

Date:Aug 8,2022

Page 3 of 6

Test Item	Test method/Instrument	Unit	MDL	Result	Limit
				B	
Lead(Pb)	IEC62321-5:2013/ICP-OES	mg/kg	2	N.D.	1000
Cadmium(Cd)	IEC62321-5:2013/ICP-OES	mg/kg	2	N.D.	100
Mercury(Hg)	IEC62321-4:2013+A1:2017/ICP-OES	mg/kg	2	N.D.	1000
Hexavalent Chromium(CrVI)	IEC62321-7-2:2017/UV-VIS	µg/c m ²	0.1	N.D.	-
Sum of PBBs	-	mg/kg	-	N.D.	1000
Monobromobiphenyl	IEC62321-6:2015/GC-MS	mg/kg	5	N.D.	--
Dibromobiphenyl	IEC62321-6:2015/GC-MS	mg/kg	5	N.D.	--
Tribromobiphenyl	IEC62321-6:2015/GC-MS	mg/kg	5	N.D.	--
Tetrabromobiphenyl	IEC62321-6:2015/GC-MS	mg/kg	5	N.D.	--
Pentabromodiphenyl	IEC62321-6:2015/GC-MS	mg/kg	5	N.D.	--
Hexabromobiphenyl	IEC62321-6:2015/GC-MS	mg/kg	5	N.D.	--
Heptabromobiphenyl	IEC62321-6:2015/GC-MS	mg/kg	5	N.D.	--
Octabromobiphenyl	IEC62321-6:2015/GC-MS	mg/kg	5	N.D.	--
Nonabromobiphenyl	IEC62321-6:2015/GC-MS	mg/kg	5	N.D.	--
Decabromobiphenyl	IEC62321-6:2015/GC-MS	mg/kg	5	N.D.	--
Sum of PBDEs	-	mg/kg	-	N.D.	1000
Monobromobiphenyl ether	IEC62321-6:2015/GC-MS	mg/kg	5	N.D.	--
Dibromobiphenyl ether	IEC62321-6:2015/GC-MS	mg/kg	5	N.D.	--
Tribromobiphenyl ether	IEC62321-6:2015/GC-MS	mg/kg	5	N.D.	--
Tetrabromobiphenyl ether	IEC62321-6:2015/GC-MS	mg/kg	5	N.D.	--
Pentabromobiphenyl ether	IEC62321-6:2015/GC-MS	mg/kg	5	N.D.	--
Hexabromobiphenyl ether	IEC62321-6:2015/GC-MS	mg/kg	5	N.D.	--
Heptabromobiphenyl ether	IEC62321-6:2015/GC-MS	mg/kg	5	N.D.	--
Octabromobiphenyl ether	IEC62321-6:2015/GC-MS	mg/kg	5	N.D.	--
Nonabromobiphenyl ether	IEC62321-6:2015/GC-MS	mg/kg	5	N.D.	--
Decabromobiphenyl ether	IEC62321-6:2015/GC-MS	mg/kg	5	N.D.	--

Note:

(1)1mg/kg=1 ppm=0.0001%

(2) N.D. = Not Detected (less than MDL)

(3)MDL=Method Detection Limit

(4)"--"=Not Regulated

(5) = a. The sample is positive for CrVI if the CrVI concentration is greater than 0.13 µ g/c m².The sample coating is considered to contain CrVI

b. The sample is negative for CrVI if CrVI is ND (concentration less than 0.10 u g/c m²).The coating is considered a non-CrVI based coating

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Test Report

Report No.:HLF22008082E

Date:Aug 8,2022

Page 4 of 6

c. The result between $0.10 \mu\text{g}/\text{cm}^2$ $0.13 \mu\text{g}/\text{cm}^2$ is considered to be inconclusive-
unavoidable coating variations may influence the determination.

Information on storage conditions and production date of the tested sample is unavailable and thus CrVI results represent the status of the sample at the time of testing.

Phthalates Test Results:

Test Item	CAS No.	Test Method/Instrument	MDL (%)	Result (%)	Limit (%)
				A	
Dibutyl phthalate (DBP)	84-74-2	IEC 62321-8:2017/GC-MS	0.005	N.D.	0.1
Butyl benzyl phthalate (BBP)	85-68-7	IEC 62321-8:2017/GC-MS	0.005	N.D.	0.1
Bis-(2-ethylhexyl)phthalate (DEHP)	117-81-7	IEC 62321-8:2017/GC-MS	0.005	N.D.	0.1
Di-iso-butyl ortho-phthalate (DIBP)	84-69-5	IEC 62321-8:2017/GC-MS	0.005	N.D.	0.1

Note:

(1)1mg/kg=1 ppm=0.0001%

(2)N.D.=Not Detected (less than MDL)

(3)MDL=Method Detection Limit

Remark: The sample(s)was/were analyzed on behalf of the applicant as mixing sample in one testing. The test report is only used for the purpose of customer research, teaching, internal quality control,product development, etc., and is for internal reference only.

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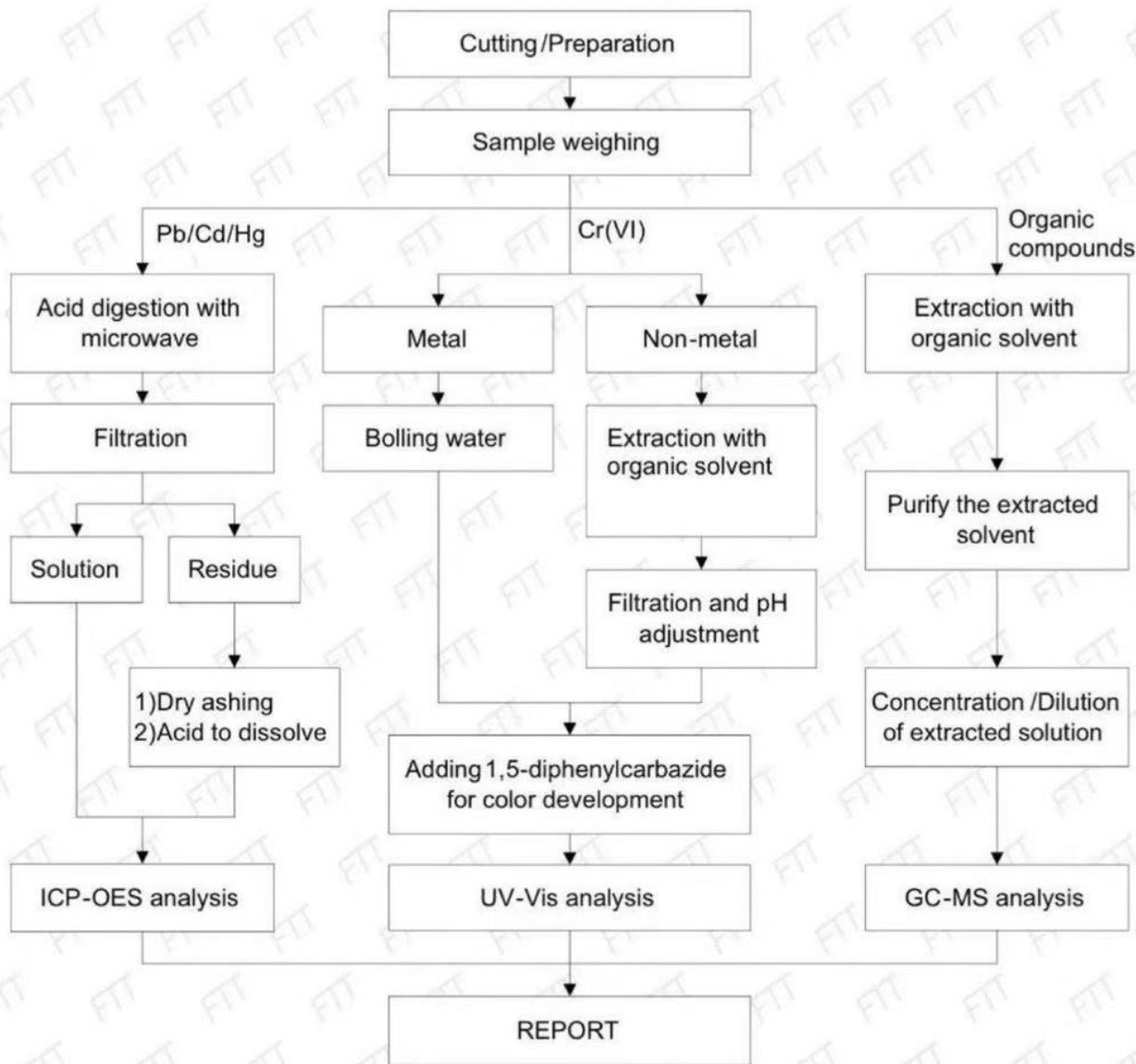


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Pb, Cd, Hg, Cr(VI), Organic compounds Testing Flow Chart:



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CNAS L6093

Report No.:HLF22008082E

Date:Aug 8,2022

Page 6 of 6

Test Part Description:

A:Nonmetal parts

B:Metal parts

Sample Photo



Note: The results shown in this report refer only to the sample(s) tested.

*****End of Report*****

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