

TEST REPORT

Applicant: Shenzhen Huafurui Technology Co., Ltd
Address: Unit 1401 & 1402, 14/F, Jinqi Zhigu Mansion (No. 4 Building of Chongwen Garden), Crossing of the Liuxian Street and Tangling Road, Taoyuan Street, Nanshan District, Shenzhen, P.R. China

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

Product name: Smartphone
Model: NOTE 8
Trade mark: CUBOT
Manufacturer: Shenzhen Huafurui Technology Co., Ltd
Address: Unit 1401 & 1402, 14/F, Jinqi Zhigu Mansion (No. 4 Building of Chongwen Garden), Crossing of the Liuxian Street and Tangling Road, Taoyuan Street, Nanshan District, Shenzhen, P.R. China

Sample Received Date: Mar. 21, 2022
Testing Period: Mar. 21, 2022~ Mar. 23, 2022

Test Requirement:

As specified by client, to assess the reuse/recycle/recovery of the submitted sample under article 11 and Annex V of Directive 2012/19/EU.

Test Result(s): Please refer to the following page(s);

Compiled by: Dora Reviewed by: Blmar

Approved by: Mark Liao Date: 2022-03-24

1. Product Description

Product Weight, g	222.9 (battery not included)
Category under the WEEE directive	Small IT and telecommunication equipment

2. Result of Reuse/Recycling/Recovery Assessments

Reuse/Recycling/Recovery	Reuse/Recycling Rate (%)	Recovery Rate (%)
Reuse/Recycling/Recovery Target of Products Under WEEE Directive	55	75
Result of Assessment	83.8	83.8
WEEE Compliance	Pass	Pass

3. Appearance of the Product

Item name		Photo
Product name	Smartphone	
Model	NOTE 8	
Marking	Shell	

	<p>Adapter 1</p>	
<p>Marking</p>	<p>Adapter 2</p>	
	<p>Battery</p>	

4. Disassembly Assessment

4.1 Disassembly Procedure

The product is disassembled into different parts and grouped by the type of material sharing common characteristic(such as plastic, metal, glass) based on the treatment requirements as set out in the WEEE Directive, followed by the current state of the art of recycling and recovery technology. In addition, the recycling is subject to the economic feasibility, disassembly tools, only bigger parts that can be easily separated are included in the recycling and reuse calculation. Other parts, respectively materials that cannot be separated by e.g. standard tools are classified as either unspecified materials or distributed to the relative waste fraction is expected with recovery rate.

4.2 Disassembly Time

35minutes







4.3 Disassembly tool

The disassembly tools used for this product show as following:



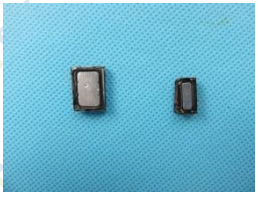
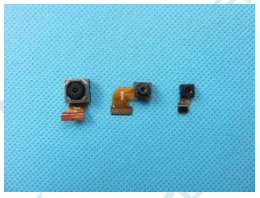
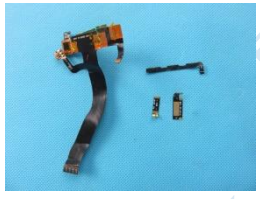


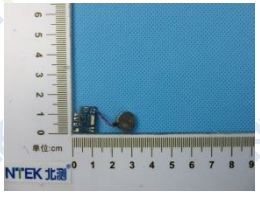
Disassembly Tool	Pictures
Screw driver tool set	
Cross screwdriver(s)	
Straight screwdriver(s)	
Scissor(s)	

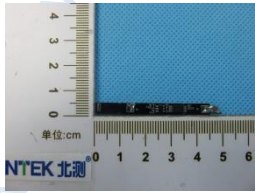
4.4 Disassembly Tree



			
A	B	C	D
		/	/
E	Battery	/	/



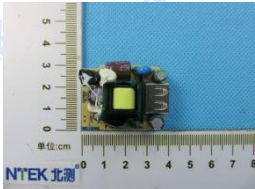


↓ A			
			
A1	A2	A3	A4
			
A5	A6	A7	A8

	/	/	/
A9	/	/	/



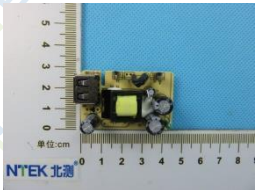


B

			/
B1	B2	B3	/




C

			/
C1	C2	C3	/




D

	/	/	/
D	/	/	/



E

	/	/	/
E	/	/	/

5. Selective Treatment for Materials and Components

According to Article 8(2) and the Annex VII of the WEEE Directive, this product contains components and materials items are described in the following table.

Component/Material	Photo No.	Size/Model	Quantity	Weight (g)
Liquid Crystal Display	A6	13.5cm×6.5cm	1.0	28.7
Printed circuit board assembly	A7	6cm×4.5cm	1.0	8.3
Printed circuit board assembly	A8	1cm×1.5cm	1.0	1.4
Printed circuit board assembly	A9	4.5cm×0.5cm	1.0	0.7
Printed circuit board assembly	B3	3.7cm×3cm	1.0	13.4
Printed circuit board assembly	C3	4.5cm×2.9cm	1.0	13.2

6. Material and Recycling Information

6.1 Material Reuse/Recycling and Recovery Table

Photo No.	Component / Material Composition	Weight (g)	Percent Weight (%)	Reuse / Recycling Rate(%)	Energy Recovery Rate(%)	Recovery Rate(%)
A1	Plastic parts	52.2	23.4	20.8	/	20.8
A2	Metal parts	14.8	6.6	6.3	/	6.3
A3	Horn	2.6	1.2	0.9	/	0.9
A4	Camera	1.7	0.8	0.6	/	0.6
A5	Flexible Printed Circuit Board	2.5	1.1	0.7	/	0.7
A6	Liquid Crystal Display	28.7	12.9	10.2	/	10.2
A7	Printed circuit board assembly	8.3	3.7	2.8	/	2.8
A8	Printed circuit board assembly	1.4	0.6	0.4	/	0.4
A9	Printed circuit board assembly	0.7	0.3	0.2	/	0.2
B1	Plastic parts	22.0	9.9	8.8	/	8.8
B2	Metal parts	7.1	3.2	3.0	/	3.0
B3	Printed circuit board assembly	13.4	6.0	4.4	/	4.4
C1	Plastic parts	18.6	8.3	7.4	/	7.4
C2	Metal parts	3.1	1.4	1.3	/	1.3
C3	Printed circuit board assembly	13.2	5.9	4.4	/	4.4
D1	Wire	21.3	9.6	7.6	/	7.6
E1	Wire	11.3	5.1	4.0	/	4.0
Total		222.9	100	83.8	/	83.8

Note: Plastic containing brominated flame retardants is not assessed in the list

6.2 Reuse/Recycling and Recovery Rate Calculation

Calculation Method	
Product total weight	a (g)
Weight of components, sub-assemblies and consumables which are reused for their original purpose or recycled.	b (g)
Weight of materials or components where energy is recovered through incineration.	c (g)
Reuse / Recycling Rate	$b/a * 100$ (%)
Recovery Rate	$(b+c)/a * 100$ (%)

7. Requirement of WEEE Directive (2012/19/EU)

7.1 ANNEX VII of WEEE Directive

Selective treatment for materials and components of waste electrical and electronic equipment referred to in Article 8(2)

As a minimum the following substances, mixtures and components have to be removed from any separately collected WEEE

- polychlorinated biphenyls (PCB) containing capacitors in accordance with Council Directive 96/59/EC of 16 September 1996 on the disposal of polychlorinated biphenyls and polychlorinated terphenyls (PCB/PCT),
- mercury containing components, such as switches or backlighting lamps,
- batteries,
- printed circuit boards of mobile phones generally, and of other devices if the surface of the printed circuit board is greater than 10 square centimetres,
- toner cartridges, liquid and paste, as well as colour toner,
- plastic containing brominated flame retardants,
- asbestos waste and components which contain asbestos,
- cathode ray tubes,
- chlorofluorocarbons (CFC), hydrochlorofluorocarbons (HCFC) or hydrofluorocarbons (HFC), hydrocarbons (HC),
- gas discharge lamps,
- liquid crystal displays (together with their casing where appropriate) of a surface greater than 100 square centimeters and all those back-lighted with gas discharge lamps,
- external electric cables,

- components containing refractory ceramic fibres as described in Commission Directive 97/69/EC of 5 December 1997 adapting to technical progress for the 23rd time Council Directive 67/548/EEC on the approximation of the laws, regulations and administrative provisions relating to the classification, packaging and labelling of dangerous substances,
- components containing radioactive substances with the exception of components that are below the exemption thresholds set in Article 3 of and Annex I to Council Directive 96/29/Euratom of 13 May 1996 laying down basic safety standards for the protection of the health of workers and the general public against the dangers arising from ionizing radiation,
- electrolyte capacitors containing substances of concern (height > 25 mm, diameter > 25 mm or proportionately similar volume). These substances, mixtures and components shall be disposed of or recovered in compliance with Directive 2008/98/EC.

7.2 Requirement of Reuse / Recycling Rate and Recovery Rate

According to article 11 and Annex V part 3 Minimum targets applicable by category from 15 August 2018 with reference to the categories listed in Annex III:

Categories of WEEE	Minimum Reuse / Recycling Rate	Minimum Recovery Rate
1. Temperature exchange equipment	80%	85%
2. Screens, monitors, and equipment containing screens having a surface greater than 100 cm ²	70%	80%
3. Lamps	80%	/
4. Large equipment (any external dimension more than 50 cm) including, but not limited to: Household appliances; IT and telecommunication equipment; consumer equipment; luminaires; equipment reproducing sound or images, musical equipment; electrical and electronic tools; toys, leisure and sports equipment; medical devices; monitoring and control instruments; automatic dispensers; equipment for the generation of electric currents. This category does not include equipment included in categories 1 to 3.	80%	85%
5. Small equipment (no external dimension more than 50 cm) including, but not limited to: Household appliances; consumer equipment; luminaires; equipment reproducing sound or images, musical equipment; electrical and electronic tools; toys, leisure and sports equipment; medical devices; monitoring and control instruments; automatic dispensers; equipment for the generation of electric currents. This category does not include equipment included in categories 1 to 3 and 6.	55%	75%
6. Small IT and telecommunication equipment (no external dimension more than 50 cm)	55%	75%

8. Recommendations for WEEE Directive Compliance

- (1) To make the product comply with the reuse/recycling/recovery target required under WEEE Directive (2012/19/EU) and other EU waste regulation, the applicant company should consider the product they design can be easily reused and recycled by selecting recyclable materials and components.
- (2) To make the product easily dismantled, less the disassembling time, the applicant company should design the product for easy disassembly by choosing easy separate techniques, avoiding the utilizing embedded components, designing the separable procedure.
- (3) The product should be subjected to the RoHS Directive (2011/65/EU), restricting using hazardous substance. In addition, the materials selected to design should consider the dangerous substance regulated or list under other environmental specifications, as Regulation (EC) 1907/2006(REACH), 67/548/EEC, etc.
- (4) In case that a product have new design, or employ materials or components, then the product should need to be reassessed and retested in accordance with the WEEE Directive for reuse/recycle/recycling target and RoHS for restricted substances requirement.
- (5) The applicant company should take attention to the future possible update concerning the WEEE Directive and related requirement.

****End of Report****

The test results or data in this report will be used only for education, scientific research, enterprise product development and internal quality control or other purposes.

The test report is effective only with both signature and specialized stamp, The result(s) shown in this report refer only to the sample(s) tested. Without written approval of NTEK, this report can't be reproduced except in full.