

Report No.: HC20028/2013

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Date: March 18, 2013

TWINHEAD INTERNATIONAL CORP. 10F, NO. 550, RUEIGUANG ROAD, NEIHU, TAIPEI, TAIWAN, R.O.C.

The following merchandise was submitted and identified by the vendor as:

**Product Description: DURABOOK** 

Style/Item No.: SA14iT/ No.1, No.2

**Quantity**: Total 2 sets

Mar. 14, 2013 to Mar. 15, 2013 Testing Period:

We have tested the submitted sample(s) as requested and the following results were obtained:

(According to client's test specification, please see following sheets in detail.) Test Required:

1. Dust test

2. Waterproof Test

Test Results: -PLEASE SEE ATTACHED SHEETS-

> Signed for and on behalf of SGS TAIWAN Ltd.

Winson Tseng Asst. Manager

No.31, No.33, No.35, Wu Chyuan Road, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan/新北市五股區新北產業園區五權路 31 號, 33 號, 35 號

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t (886-2) 2299-3279 f (886-2) 2299-9558

No.134, Wu Kung Road, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan/新北市五股區新北產業園區五工路 134 號 www.tw.sas.com

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#### 1. Dust test

#### Test Equipment:

Name	Brand	Model	Serial No.
Dust Tester	T-MACHINE	TMJ-9723C	T-23-050411

#### Lab Environmental Conditions:

(25 ± 3) °C Ambient temperature: Ambient humidity:  $(55 \pm 20) \% RH$ 

### <u>Test Method/ Specification:</u>

Test method: IEC 60529 Edition 2.1: 2001--IP5X (Dust test)

Sample condition: Non-Operating Type of dust: Talcum powder

The amount of dust: 2 kg The chamber size:  $1 \text{ m}^3$ Test duration: 8 hours

- Perform functional check after this test.
- Functional check: Turn on the power of specimen then execute test program "Burn-in" while performing functional check.

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Specimen:

Style/ Item No.: SA14iT/No.1

Quantity: Total 1 set

Test Result:

Check Item	
	Functional check
Style/ Item No.	
SA14iT/ No.1	Normal

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## 2. Waterproof Test

## Test Equipment:

Name	Brand	Model	Serial No.
Waterproof Test Chamber	T-MACHINE	TMJ-9710A	T-10-120304

#### Lab Environmental Conditions:

Ambient temperature: (25 ± 3) °C  $(55 \pm 20) \% RH$ Ambient humidity:

#### Test Method/ Specification:

Test method: IEC 60529 Edition 2.1: 2001--IPX3

The specimen is under Non-operating condition during this test. Sample condition:

Oscillating angle:  $\sim 120^{\circ} (\sim 60^{\circ}/ \text{ side})$ 

Oscillating speed: 4 seconds / cycle ( $\sim 2 \times 120^{\circ}$ )

Tube radius and

Number of open holes: See below items marked "

",

Test condition used:		•						
Tube radius (mm)	200	400	600	800	1000	1200	1400	1600
Number of open holes	8	16	25	33	41	50	58	67

Water flow rate:  $0.07 \ell / \text{minute } \pm 5\% / \text{hole}$ 

Specimen orientation: (1) Test specimen be placed at the center point of the test device, defined as

Test orientation I (see photo 5, 6)

(2) Test specimen be turned through an horizontal angle of 90°, defined as

<u>Test orientation II (see photo 7, 8)</u>

Test duration: 5 minutes / orientation

- Examine the protection against ingress water of specimen and perform functional check after this test.
- Functional check: Turn on the power of specimen then execute test program "Burn-in" while performing functional check.

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Specimen:

SA14iT/No.2 Style/ Item No.:

Quantity: Total 1 set

### Test Result:

Check Item Style/ Item No.	Does any water permeate into the panel of the specimen?	Functional check
SA14iT/ No.2	No	Normal

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# **Test Photos:**



1. Appearance of specimen: SA14iT



2. Appearance of specimen: SA14iT



Test for protection against solid foreign objects (Dust test)



Test for protection against solid foreign objects (Dust test)



Test for protection against water



Test for protection against water

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## Test Photos--Continued:



Test for protection against water



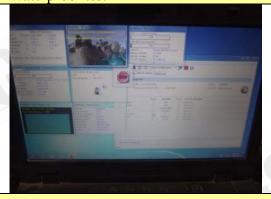
Test for protection against water



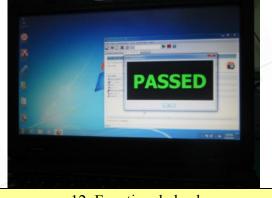
Appearance of the interior of specimen after waterproof test



10. Appearance of the interior of specimen after waterproof test



11. Functional check



12. Functional check

## - The End of Test Report -

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