



# SPECIFICATION

DATE:OCT 11 2020 REVISION:1.1 INTERNAL NO: 4062

CUSTOMER: Active Components

PART NO.: B301391

PARTNAME: POWER SUPPLY CORD (RCM)

DESCRIPTION: PHP-304 TO PHS-301 GTSA-3

3G1.0mm<sup>2</sup> BLACK 5m

NOTE: LEAD FREE

ISSUED BY	REVIEWED BY	APPROVAL SIGNATURE
王遠	劉興偉	



PHINO ELECTRICAL WIRE & CABLE  
CO., LTD



# 儀軍電線電纜有限公司

## PHINO ELECTRICAL WIRE & CABLE CO., LTD.

### 1. PVC flexible cord

This cord should be in accordance with AS/NZS 3191 standard.

#### 2.1 Cord specification:

Item	Unit	Specification
Product		GTSA-3
Conductor	Nominal Area	mm <sup>2</sup>
	Number	
	Material	
	Construction	No/mm
	Diameter	mm
Insulation	Material	
	Min. Thickness	mm
	Avg. Thickness	mm
	Diameter	mm
	Color	mm
Jacket	Material	
	Min. Thickness	mm
	Avg. Thickness	mm
	Diameter	mm

#### 2.2 Electrical Property:

Item	Unit	Specification	Standard
Conductor Resistance	Ω /km.	At 20°C	19.5 max
Dielectric Withstand	VAC/15min	2000	No Breakdown
Insulation Resistance	MΩ ·km	At 70 °C	0.01 min

### 3.2 Plug

Type No.: PHP-304

Rating:10A 250V

### 3.3 Connector

Type No.: PHS-301

Rating:10A 250V

### 3.4 Power supply cord

#### a. Appearance:

There shall be no damage on the surface of plug, connector and cord.

#### b. Continuity of conductor:

Open/Short circuit is not allowed.

#### c. Dielectric voltage withstand:

No breakdown of specimen with application of 2000VAC for 1minute. If the sample didn't fail in the test, a "dot" mark will be dented on the connector of it.

#### d. Insulation resistance:

Application of 500VDC between of the conductor and the grounding wire, its insulation resistance shall be not less than  $5M\Omega$ .

#### e. Insertion and withdraw force test:

Fix the connector to an apparatus with a test plug inserted into and withdraw from it for 10 time. The force necessary to withdraw test plug from the connector should be within the range from 10N~50N.

#### f. Flexing test:

The insulation layer of the flexible cord shall not be damaged after 10000 cycles, while being tested, the cord is hanged vertically with 10N. A cycle: a rotation of the sample from vertical position until  $45^\circ$  to one side, and back past the vertical position until  $45^\circ$  to the other side, and back to the vertical position, the rate of testing shall be 60 cycles per minute. Sample with circular section cables or cords are turned through  $90^\circ$  in the oscillating member after 5000 cycles. After 10000 cycles, the sample shall show no damage.

# 儀軍電線電纜有限公司

## PHINO ELECTRICAL WIRE & CABLE CO., LTD

g. Resistance heat:

The sample is kept for in a heating cabinet at temperature of  $100\pm 2^{\circ}\text{C}$  for 1 hour. The sample shall show no crack visible with normal, nor shall the material have become stick or greasy.

h. Cord bend:

No crack on the surface of cord sample which is wind round 6 turns on mandrel of 4~5 OD subjected to a temperature of  $-15\pm 2^{\circ}\text{C}$  for 4 hours.

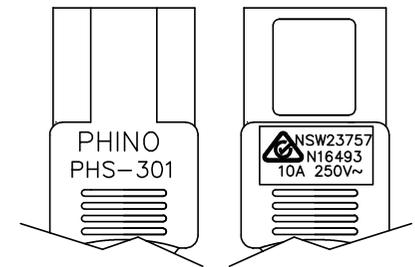
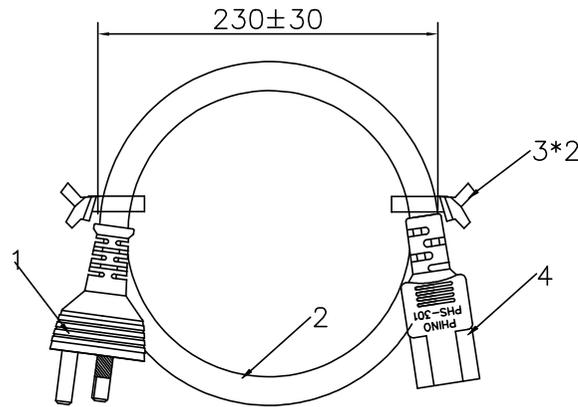
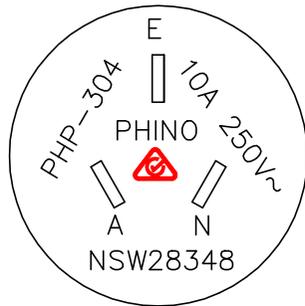
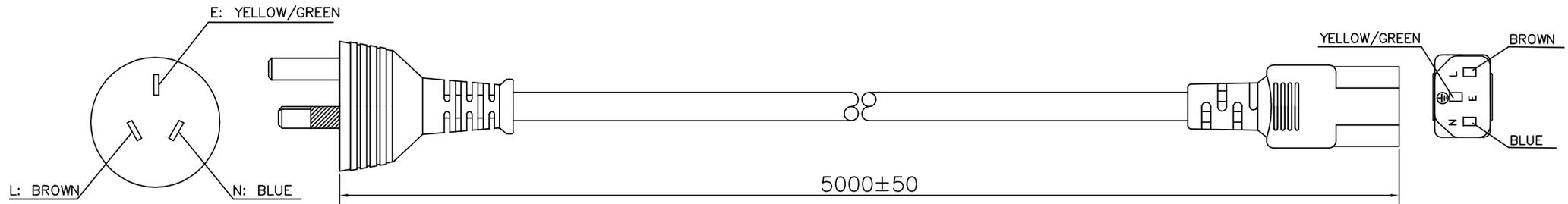
i. Flame resistance:

The sample is self-extinguishing after all burning has ceased.

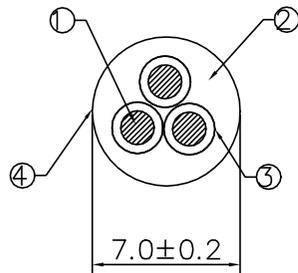
j. Aging test:

Item		Unit	Spec Value
Insulation	Original	Tensile Strength	Kgf/mm <sup>2</sup>
		Elongation	%
	After Aging $80\pm 2^{\circ}\text{C}$ For 168 hours	Tensile Strength	%
		Elongation	%
Sheath	Original	Tensile Strength	Kgf/mm <sup>2</sup>
		Elongation	%
	After Aging $80\pm 2^{\circ}\text{C}$ For 168 hours	Tensile Strength	%
		Elongation	%

THE RECORDS OF REVISION			
REV	DESCRIPTION	DRAWN	APPROVAL
A	插頭字板認證更新.	WY 2020/10/11	LXW 2020/10/11



- ① CONDUCTOR
- ② SHEATH
- ③ INSULATION
- ④ CORD MARKING:



TOLERANCE:  
 >20: ±2.0  
 <20: ±1.0  
 <10: ±0.5  
 <1.0: ±0.3

1. PVC MOLDED PLUG: PHP-304 (BLACK)
2. PVC FLEXIBLE CORD: GTSA-3 3X1.0 RCM 印字 (BLACK)
3. MINI TIE (BLACK)
4. PVC MOLDED CONNECTOR: PHS-301 (BLACK)

NOTES:

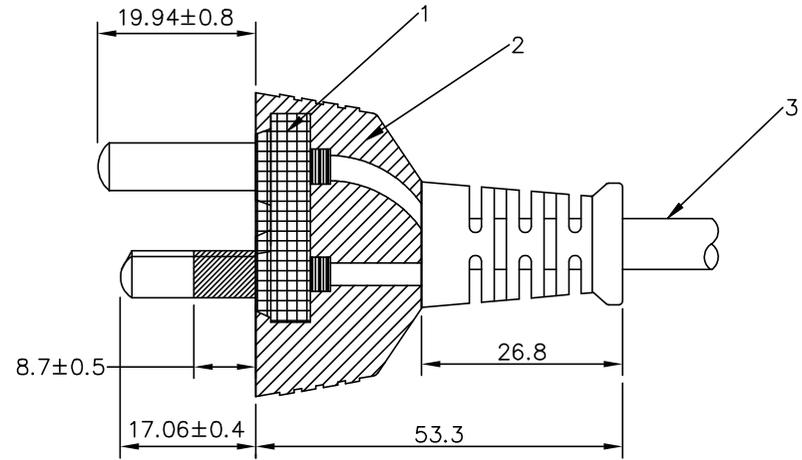
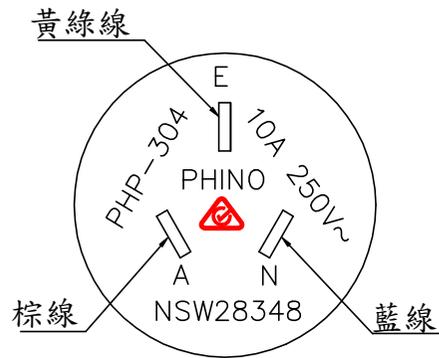
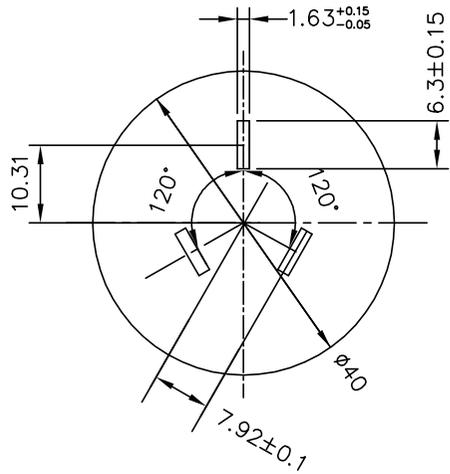
1. ALL COMPONENTS MUST BE LEAD FREE (PER RoHS REQUEST)

H05VV-F 3G1.0mm<sup>2</sup> KTL SU01009-5001 60227 IEC 53 300/500V PHINO GTSA-3  
 4V-75 V-75(75°C) 250/440V ORDINARY DUTY N18895 XXXX CE Cn -LF-  
 YEAR NO: (2018,2019...) T-ROLL NO: (1.2.3...)

CUSTOMER	ACTIVE	TITLE	POWER SUPPLY CORD		
PART NO	B301391		PHP-304 TO PHS-301		
REVISION	A	DRAWING NO:			
DESIGNED	WY 2018/07/19	UNIT	MM	SCALE	
CHECKED	LXW 2018/07/19	MATERIAL			
APPROVED		PROJECTION			
			PHINO		

THE RECORDS OF REVISION

REV	DESCRIPTION	DRAWN	APPROVAL
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- 1. INNER HOUSING
- 2. PVC
- 3. FLEXIBLE CORD

TOLERANCE:

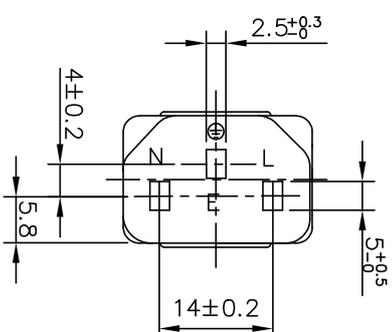
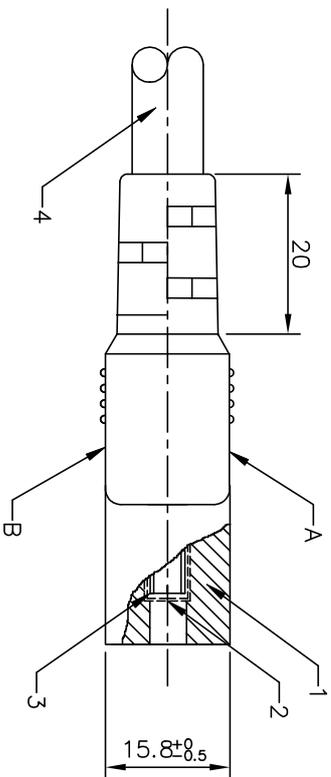
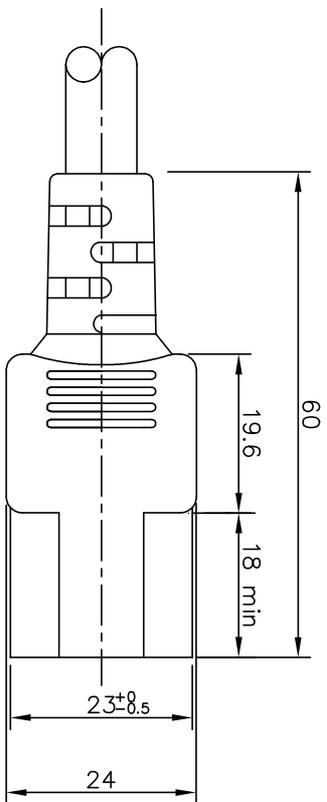
$>20: \pm 2.0$

$\leq 20: \pm 1.0$

$\leq 10: \pm 0.5$

$\leq 1.0: \pm 0.3$

		TITLE	PHP-304(SEMI-INSULATED)		
REVISION		DRAWING NO.	PHP-304(SEMI-INSULATED)		
DESIGNED	HJ 2020/09/08	UNIT	MM	SCALE	1:1
CHECKED	LXW 2020/09/08	MATERIAL			
APPROVED		PROJECTION		PHINO	



1. PVC MOLDING
2. INSERT HOUSING
3. BLADE
4. FLEXIBLE CORD

TOLERANCE:

- >20: ±2.0
- ≤20: ±1.0
- ≤10: ±0.5
- ≤1.0: ±0.3

SIDE A: PHINO  
PHS-301

SIDE B:  
  
 NSM23757  
 N16493  
 TOA 250V~

REVISION		DRAWING NO.	PHS-301
DESIGNED	HJ 2016/01/11	UNIT	MM
CHECKED	LXW2016/01/11	MATERIAL	
APPROVED		PROJECTION	 
		TITLE	IEC60320 C13 PHS-301
		SCALE	1 : 1
		PHINO	

儀軍電線電纜有限公司

PHINO ELECTRICAL WIRE & CABLE CO., LTD

BILL OF MATERIALS

P/N:B301391

DATE: 2018/07/19

REF. NO.: N/A

PAGE: 1/1

NO.	PART NAME	DESCRIPTION	VENDOR	Q'TY/UNIT	MATERIALS P/N	REMARK
1	FLEXIBLE CORD	GTSA-3 3G1.0 BLACK	OPEN	5000MM	N/A	
2	BLADE(P304)	GEM 97658BS-1/KC 351204/WD 81016-1	GEM/KC/WD	2 PCS	MTP00008	
3	INSERT(P304)	GEM 98650BS-1/WD 81016	GEM/WD	1 PCS	MTP00010	
4	INSERT(P304)	IP-305A或-316A 黑色 ABS 94V-0	PHINO	1 PCS	HP000098	
5	BLADE(S301)	GEM 98740BS-0	GEM	3 PCS	MTS00012	
6	INSERT(S301)	S301內模 白色 PBT	PHINO	1 PCS	HS000026	
7	PVC	80 SHORE A, BLACK	YX/PH	51.9G	PVCK0091	
8	MINI TIE	140MM BLACK (PVC)	JIANGHAN	2 PCS	MFPM0010	
9	CARTON	420X330X225	LC	1 PCS	MFPA0055	

P.S.: N/A=NOT APPLICABLE

DRAWN BY:WY

AUDITED BY: LXW



Fair  
Trading

File Ref: NSW28348  
Contact: Admin Clerk  
Telephone: 02 9895 0722

Mr Hu Jianbing  
Phino Electric Co., Ltd.  
C/- QA Testing Certification Co., Ltd.  
Room B519, Building 1  
No. 134 East Section of Huancheng North Road,  
Jiangbei District, Ningbo, China 31500

Dear Sir/Madam

CERTIFICATE OF APPROVAL: NSW28348 AND MODIFICATION/S

Plug

Please find enclosed a Certificate of Approval and addendum as sought by your application.

Articles of the approved type may now be marketed provided they are marked with the mark (or alternate approval marks) shown on the Certificate.

THE APPROVAL EXPIRES ON THE DATE SHOWN ON THE CERTIFICATE unless it is renewed, extended, suspended or cancelled.

Yours faithfully,

24 September 2020

For Secretary, Department of Customer Service



Fair  
Trading

# Certificate of Approval Declared Article

Pursuant to Section 16 (1) of the Gas and Electricity  
(Consumer Safety) Act 2017

Certificate Number: **NSW28348**

Issued to:	Phino Electric Co., Ltd.	
Class of Article:	Plug	
Description of Article:	Plug (Non-rewirable, thermoplastic moulded, two-pin, flat-pin plug with insulated live pins integrally moulded to any <HAR> certified or Australian approved cord equivalent to LTSA-2F H03VVH2-F 2X0.75mm <sup>2</sup> or LTSA-2 H03VV-F 2X0.75mm <sup>2</sup> or GTSA-2F H05VVH2-F 2X0.75mm <sup>2</sup> or GTSA-2 H05VV-F 2X(0.75~1.0)mm <sup>2</sup> or H05RR-F 2X(0.75~1.0)mm <sup>2</sup> or H05RN-F 2X(0.75~1.0)mm <sup>2</sup> supply cord)	
Trade Name or Mark:	PHINO	
Ratings:	Volts: 250V Watts:	Amperes: 10A Hertz:
	Other Name Plate Particulars:	
Type Reference Code:	PHP-208	
Examined for Compliance With:	AS/NZS 3112: 2017	
Approval Mark:	Each electrical article of the abovementioned type shall be marked with Approval Number NSW28348 or approved alternate mark	
Date of Approval:	18/09/2020	
Approval Expires:	18/09/2025 unless suspended, cancelled, renewed or extended	

24 September 2020



On behalf of the Secretary, Department of Customer Service

For current information regarding currency of certificate, refer to the Fair Trading Website

## ADDENDUM TO CERTIFICATE OF APPROVAL: NSW28348 Particulars of Modification(s)

The addition of the following models:

- 1) PHP-304: 3-pin, 250V~, 10A, integrally moulded to any <HAR> certified or Australian approved cord equivalent to LTSA-2F H03VVH2-F 2X0.75mm<sup>2</sup> or LTSA-2 H03VV-F 2X0.75mm<sup>2</sup> or GTSA-2F H05VVH2-F 2X0.75mm<sup>2</sup> or GTSA-2 H05VV-F 2X(0.75~1.0)mm<sup>2</sup> or H05RR-F 2X(0.75~1.0)mm<sup>2</sup> or H05RN-F 2X(0.75~1.0)mm<sup>2</sup> or LTSA-3 H03VV-F 3G0.75mm<sup>2</sup> or GTSA-3 H05VV-F 3G(0.75~1.0)mm<sup>2</sup> or GTSA-3 H05VV-F 3G1.5mm<sup>2</sup> or H05RR-F 3G(0.75~1.5)mm<sup>2</sup> or H05RN-F 3G(0.75~1.5)mm<sup>2</sup> supply cord.
- 2) PHP-317: 3-pin, 250V~, 10A, integrally moulded to any <HAR> certified or Australian approved cord equivalent to LTSA-2F H03VVH2-F 2X0.75mm<sup>2</sup> or LTSA-2 H03VV-F 2X0.75mm<sup>2</sup> or GTSA-2F H05VVH2-F 2X0.75mm<sup>2</sup> or GTSA-3 H05VV-F 2X(0.75~1.0)mm<sup>2</sup> or H05RR-F 2X(0.75~1.0)mm<sup>2</sup> or H05RN-F 2X(0.75~1.0)mm<sup>2</sup> or LTSA-3 H03VV-F 3G0.75mm<sup>2</sup> or GTSA-3 H05VV-F 3G(0.75~1.0)mm<sup>2</sup> or H05RR-F 3G(0.75~1.0)mm<sup>2</sup> or H05RN-F 3G(0.75~1.5)mm<sup>2</sup> supply cord.
- 3) PHP-325: 3-pin, 250V~, 10A, integrally moulded to any <HAR> certified or Australian approved cord equivalent to LTSA-3 H03VV-F 3G0.75mm<sup>2</sup> or GTSA-3 H05VV-F 3G(0.75~1.0)mm<sup>2</sup> or H05RR-F 3G(0.75~1.0)mm<sup>2</sup> or H05RN-F 3G(0.75~1.5)mm<sup>2</sup> supply cord.

This certificate will expire on 18/09/2025

Approved pursuant to Clause 15 (1) of the Gas and Electricity (Consumer Safety) Regulation 2018:

24 September 2020



For Secretary, Department of Customer Service



## Fair Trading

File Ref: NSW23757/3  
Contact: Admin Clerk  
Telephone: 02 9895 0722

Mr Hu Jianbing  
Phino Electric Co Ltd  
C/- QA Testing Technology Co Ltd  
Room B505, 5th Fl, 134 Creative Pk  
134 East Sectn of Huancheng Nth Rd, Jiangbei District  
NINGBO, China 315020

Dear Sir/Madam

RENEWAL OF CERTIFICATE OF APPROVAL: NSW23757

Appliance Connector

Please find enclosed an addendum to the certificate as sought in your application.

THE APPROVAL NOW EXPIRES ON 21/05/2024 unless it is renewed, extended, suspended or cancelled.

Any sample/s held by this Office should be collected within fifteen (15) days of this letter or the sample/s will be destroyed.

Yours faithfully,

  
For Commissioner for Fair Trading



Fair  
Trading

Ref: NSW23757/3

## RENEWAL OF CERTIFICATE OF APPROVAL: NSW23757

### Particulars of Renewal

Approval of the original model no PHS-301 and approved modifications have been renewed for a period of FIVE (5) years.

The Approval expires on 21/05/2024 unless it is renewed, extended, suspended or cancelled.

  
For Commissioner for Fair Trading

The Manager  
Phino Electric Co Ltd  
C/- Mr J Diong  
Testing & Certification Australia  
14 Nelson Street  
CHATSWOOD 2067

File Ref: 23757/1  
Contact: Admin Clerk  
Telephone: 02 9895 0722  
Fax: 02 9895 0735

Dear Sir/Madam

**CERTIFICATE OF APPROVAL: 23757 AND MODIFICATION/S**

**Appliance Connector**

---

Please find enclosed a Certificate of Approval and addendum as sought by your application.

Articles of the approved type/s may now be marketed in any State or Territory of Australia, provided they are marked with-

- (a) the mark (or marks) shown on the Certificate; or
- (b) the Regulatory Compliance Mark (RCM) provided that the requirements of all relevant parts of AS/NZS 4417 applicable to the article are fulfilled.

**THE APPROVAL EXPIRES ON THE DATE SHOWN ON THE CERTIFICATE** unless it is renewed, extended, suspended or cancelled.

Any sample/s held by the Office should be collected within fifteen (15) days of this letter or the sample/s will be destroyed.

Yours faithfully



for Commissioner for Fair Trading  
21 May 2009

Certificate Number: 23757

# CERTIFICATE OF APPROVAL

ISSUED PURSUANT TO THE ELECTRICITY (CONSUMER SAFETY) ACT 2004

**ISSUED TO:**

Phino Electric Co Ltd

**CLASS OF ARTICLE:**

Appliance Connector

**DESCRIPTION OF ARTICLE:**

Appliance Connector  
(Non-rewirable, thermoplastic moulded, straight-entry C13 appliance connector for cold conditions for class I equipment, integrally moulded to any <HAR> certified H05VV-F 3G1.5mm<sup>2</sup> or equivalent Australian approved three-core, 1.5mm<sup>2</sup>, PVC insulated and sheathed ordinary duty circular flexible cord)  
Trade Name: 'Phino'  
250V, ac, 10A

**EXAMINED FOR COMPLIANCE WITH:** AS/NZS 60320.1 : 2004

**TYPE REFERENCE CODE:** Model No. PHS-301

**APPROVAL MARK:**

Each electrical article of the abovementioned type shall be marked with Approval Number NSW23757 or N16493, or the Regulatory Compliance Mark (RCM) provided that the requirements of all relevant parts of AS/NZS 4417 applicable to the article are fulfilled.

**DATE OF APPROVAL:** 21 May 2009

This approval expires 21 May 2014 unless suspended, cancelled, renewed or extended.



for Commissioner for Fair Trading

**ADDENDUM TO CERTIFICATE OF APPROVAL 23757**

**Particulars of Modification(s)**

1. Model No. PHS-301 alternatively moulded to:-
  - (a) Any <HAR> certified H05VV-F 3G1.0mm<sup>2</sup> or equivalent Australian approved flexible cord.
  - (b) Any <HAR> certified H05VV-F 3G0.75mm<sup>2</sup> or equivalent Australian approved flexible cord not exceeding two metres in length.
2. Model No. PHS-301RR being similar to original Model No. PHS-301 except right-hand side entry in lieu of straight entry.
3. Model No. PHS-301RL being similar to original Model No. PHS-301 except left-hand side entry in lieu of straight entry.

Approved: 21 May 2009



for Commissioner for Fair Trading



Fair  
Trading

Ref: NSW18895/4

## RENEWAL OF CERTIFICATE OF APPROVAL: NSW18895

### Particulars of Renewal

The approval of Supply Flexible Cord Model No. GTSA-3 3X1.0 sq mm and all approved modifications has been renewed for a period of FIVE years.

The Approval expires on 24/12/2022 unless it is renewed, extended, suspended or cancelled.

  
For Commissioner for Fair Trading



Fair  
Trading

File Ref: NSW18895/4  
Contact: Admin Clerk  
Telephone: 02 9895 0722

Week Zhou  
Phino Electric Co Ltd  
Floor 6, No. 50, Zhou-Z Street  
Nei-Hu Area, Taipei  
Taiwan 114

Dear Sir/Madam

RENEWAL OF CERTIFICATE OF APPROVAL: NSW18895

Supply Flexible Cord

Please find enclosed an addendum to the certificate as sought in your application.

THE APPROVAL NOW EXPIRES ON 24/12/2022 unless it is renewed, extended, suspended or cancelled.

Any sample/s held by this Office should be collected within fifteen (15) days of this letter or the sample/s will be destroyed.

Yours faithfully,

  
For Commissioner for Fair Trading 23 November 2017

Energy & Utilities Unit, NSW Fair Trading,  
PO Box 972, Parramatta NSW 2124  
02 9895 0722

Email: [energyapprovals@finance.nsw.gov.au](mailto:energyapprovals@finance.nsw.gov.au)  
Website: [www.fairtrading.nsw.gov.au](http://www.fairtrading.nsw.gov.au)

DUPLICATED IS PROHIBITED  
PHINO ELECTRIC CO., LTD  
印  
無  
效

## Test Report

No. CANEC2002114201

Date: 16 Mar 2020

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PHINO ELECTRICAL WIRE & CABLE (HUI ZHOU)CO., LTD

NO.86, NORTH OF LIANFA RD,TONGQIAO INDUSTRY BASE,ZHONGKAI HIGHTECH DISTRICT,HUIZHOU CITY, GUANGDONG,CHINA

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

SGS Job No. : CP20-004485 - SZ  
Model No. : PHP-301+PHS-301  
Client Ref. Info. : Please see REMARK  
Supplier : PHINO  
Date of Sample Received : 04 Mar 2020  
Testing Period : 04 Mar 2020 - 10 Mar 2020  
Test Requested : Selected test(s) as requested by client.  
Test Method : Please refer to next page(s).  
Test Results : Please refer to next page(s).

Signed for and on behalf of  
SGS-CSTC Standards Technical Services Co., Ltd. Guangzhou Branch



Violet,Shi  
Approved Signatory



Test Results :

Test Part Description :

Specimen No.	SGS Sample ID	Description
SN1	CAN20-021142.001	Black plastic jacket w/ white printing 1#
SN2	CAN20-021142.002	Blue plastic jacket 2A+Yellow/green plastic jacket 2B+Brown plastic jacket 2C
SN3	CAN20-021142.003	Silvery metal 3#
SN4	CAN20-021142.004	Black plastic 4#
SN5	CAN20-021142.005	White plastic 5#

Remarks :

- (1) 1 mg/kg = 1 ppm = 0.0001%
- (2) MDL = Method Detection Limit
- (3) ND = Not Detected ( < MDL )
- (4) "-" = Not Regulated

**Elementary Analysis, Flame Retardants & Phthalate(s)**

Test Method : With reference to IEC 62321-4:2013+A1:2017, IEC 62321-5:2013, IEC 62321-7-2:2017 , IEC 62321-6:2015 and IEC 62321-8:2017, analyzed by ICP-OES , UV-Vis and GC-MS .

<u>Test Item(s)</u>	<u>Unit</u>	<u>MDL</u>	<u>001</u>	<u>002</u>	<u>004</u>
Cadmium (Cd)	mg/kg	2	ND	ND	ND
Lead (Pb)	mg/kg	2	ND	3	ND
Mercury (Hg)	mg/kg	2	ND	ND	ND
Hexavalent Chromium (CrVI)	mg/kg	8	ND	ND	ND
Sum of PBBs	mg/kg	-	ND	ND	ND
Monobromobiphenyl	mg/kg	5	ND	ND	ND
Dibromobiphenyl	mg/kg	5	ND	ND	ND
Tribromobiphenyl	mg/kg	5	ND	ND	ND
Tetrabromobiphenyl	mg/kg	5	ND	ND	ND
Pentabromobiphenyl	mg/kg	5	ND	ND	ND
Hexabromobiphenyl	mg/kg	5	ND	ND	ND
Heptabromobiphenyl	mg/kg	5	ND	ND	ND
Octabromobiphenyl	mg/kg	5	ND	ND	ND
Nonabromobiphenyl	mg/kg	5	ND	ND	ND
Decabromobiphenyl	mg/kg	5	ND	ND	ND
Sum of PBDEs	mg/kg	-	ND	ND	ND



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Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: [CN\\_Doccheck@sgs.com](mailto:CN_Doccheck@sgs.com)

# Test Report

No. CANEC2002114201

Date: 16 Mar 2020

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<u>Test Item(s)</u>	<u>Unit</u>	<u>MDL</u>	<u>001</u>	<u>002</u>	<u>004</u>
Monobromodiphenyl ether	mg/kg	5	ND	ND	ND
Dibromodiphenyl ether	mg/kg	5	ND	ND	ND
Tribromodiphenyl ether	mg/kg	5	ND	ND	ND
Tetrabromodiphenyl ether	mg/kg	5	ND	ND	ND
Pentabromodiphenyl ether	mg/kg	5	ND	ND	ND
Hexabromodiphenyl ether	mg/kg	5	ND	ND	ND
Heptabromodiphenyl ether	mg/kg	5	ND	ND	ND
Octabromodiphenyl ether	mg/kg	5	ND	ND	ND
Nonabromodiphenyl ether	mg/kg	5	ND	ND	ND
Decabromodiphenyl ether	mg/kg	5	ND	ND	ND
Dibutyl phthalate (DBP)	mg/kg	50	ND	ND	ND
Butyl benzyl phthalate (BBP)	mg/kg	50	ND	ND	ND
Bis (2-ethylhexyl) phthalate (DEHP)	mg/kg	50	ND	ND	ND
Diisobutyl Phthalates (DIBP)	mg/kg	50	ND	ND	ND

<u>Test Item(s)</u>	<u>Unit</u>	<u>MDL</u>	<u>005</u>
Cadmium (Cd)	mg/kg	2	ND
Lead (Pb)	mg/kg	2	12
Mercury (Hg)	mg/kg	2	ND
Hexavalent Chromium (CrVI)	mg/kg	8	ND
Sum of PBBs	mg/kg	-	ND
Monobromobiphenyl	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
Sum of PBDEs	mg/kg	-	ND
Monobromodiphenyl ether	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



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<u>Test Item(s)</u>	<u>Unit</u>	<u>MDL</u>	<u>005</u>
Octabromodiphenyl ether	mg/kg	5	ND
Nonabromodiphenyl ether	mg/kg	5	ND
Decabromodiphenyl ether	mg/kg	5	ND
Dibutyl phthalate (DBP)	mg/kg	50	ND
Butyl benzyl phthalate (BBP)	mg/kg	50	ND
Bis (2-ethylhexyl) phthalate (DEHP)	mg/kg	50	ND
Diisobutyl Phthalates (DIBP)	mg/kg	50	ND

### Notes :

- (1) IEC 62321 series is equivalent to EN 62321 series  
[https://www.cenelec.eu/dyn/www/f?p=104:30:1742232870351101:::FSP\\_ORG\\_ID,FSP\\_LANG\\_ID:1258637,25](https://www.cenelec.eu/dyn/www/f?p=104:30:1742232870351101:::FSP_ORG_ID,FSP_LANG_ID:1258637,25)
- (2) The restriction of DEHP, BBP, DBP and DIBP shall apply to medical devices, including in vitro medical devices, and monitoring and control instruments, including industrial monitoring and control instruments, from 22 July 2021.
- (3) The restriction of DEHP, BBP, DBP and DIBP shall not apply to toys which are already subject to the restriction of DEHP, BBP, DBP and DIBP through entry 51 of Annex XVII to Regulation (EC) No 1907/2006.

### Elementary Analysis

Test Method : With reference to IEC 62321-4:2013+A1:2017, IEC 62321-5:2013, IEC 62321-7-1:2015, analyzed by ICP-OES and UV-Vis .

<u>Test Item(s)</u>	<u>Unit</u>	<u>MDL</u>	<u>003</u>
Cadmium (Cd)	mg/kg	2	ND
Lead (Pb)	mg/kg	2	14
Mercury (Hg)	mg/kg	2	ND
Hexavalent Chromium (Cr(VI))▼	µg/cm <sup>2</sup>	0.10	ND

### Notes :

- (1) IEC 62321 series is equivalent to EN 62321 series  
[https://www.cenelec.eu/dyn/www/f?p=104:30:1742232870351101:::FSP\\_ORG\\_ID,FSP\\_LANG\\_ID:1258637,25](https://www.cenelec.eu/dyn/www/f?p=104:30:1742232870351101:::FSP_ORG_ID,FSP_LANG_ID:1258637,25)
- (2) ▼= a. The sample is positive for CrVI if the CrVI concentration is greater than 0.13 µg/cm<sup>2</sup>. The sample coating is considered to contain CrVI  
 b. The sample is negative for CrVI if CrVI is ND (concentration less than 0.10 µg/cm<sup>2</sup>). The coating is considered a non-CrVI based coating  
 c. The result between 0.10 µg/cm<sup>2</sup> and 0.13 µg/cm<sup>2</sup> 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 Cr(VI) results represent status of the sample at the time of testing.

**Dimethyl Fumarate (DMF)**

Test Method : SGS In-house method(GZTC CHEM-TOP-095), analysis was performed by GC-MS.

Test Item(s)	Limit	Unit	MDL	001
Dimethyl fumarate(DMF)	0.1	mg/kg	0.1	ND
<b>Comment</b>				<b>PASS</b>

Notes :

(1) The maximum permissible limit is quoted from the document Commission Regulation (EU) No 412/2012 amending Annex XVII of REACH Regulation (EC) No 1907/2006 (previously restricted under Commission Decision 2012/48/EU)

**Hexabromocyclododecane (HBCDD)**

Test Method : With reference to IEC 62321:2008, analysis was performed by GC-MS.

Test Item(s)	Unit	MDL	001
Hexabromocyclododecane (HBCDD)	mg/kg	10	ND

**Perfluorooctanoic acid (PFOA) & Perfluorooctane sulfonates (PFOS)**

Test Method : With reference to CEN/TS15968:2010, analysis was performed by LC-MS or LC-MS/MS.

Test Item(s)	CAS NO.	Unit	MDL	001
Perfluorooctanoic acid (PFOA)	335-67-1	mg/kg	0.01	ND
Perfluorooctane Sulfonates (PFOS)^	-	mg/kg	0.01	ND

Test Item(s)	CAS NO.	Unit	MDL	003
Perfluorooctanoic acid (PFOA)	335-67-1	mg/kg	0.01	ND
Perfluorooctane Sulfonates (PFOS)^	-	mg/kg	0.01	ND

Notes :

^ PFOS refer to Perfluorooctanesulfonic acid and its derivatives including Perfluorooctanesulfonic acid, Perfluorooctane sulfonamide, N-Methylperfluorooctane sulfonamide, N-Ethylperfluorooctane sulfonamide, N-Methylperfluorooctane sulfonamidoethanol and N-Ethylperfluorooctane sulfonamidoethanol.



**Phthalate**

Test Method : With reference to EN14372: 2004. Analysis was performed by GC-MS.

<u>Test Item(s)</u>	<u>CAS NO.</u>	<u>Unit</u>	<u>MDL</u>	<u>001</u>
Dibutyl Phthalate (DBP)	84-74-2	%(w/w)	0.003	ND
Benzylbutyl Phthalate (BBP)	85-68-7	%(w/w)	0.003	ND
Bis(2-ethylhexyl) Phthalate (DEHP)	117-81-7	%(w/w)	0.003	ND
Diisononyl Phthalate (DINP)	28553-12-0 / 68515-48-0	%(w/w)	0.010	ND
Di-n-octyl Phthalate (DNOP)	117-84-0	%(w/w)	0.003	ND
Diisodecyl Phthalate (DIDP)	26761-40-0 / 68515-49-1	%(w/w)	0.010	ND
Dimethyl Phthalate (DMP)	131-11-3	%(w/w)	0.003	ND
Diethyl Phthalate (DEP)	84-66-2	%(w/w)	0.003	ND
Diisobutyl Phthalate (DIBP)	84-69-5	%(w/w)	0.003	ND
Dinonyl Phthalate (DNP)	84-76-4	%(w/w)	0.003	ND
Diisooctyl Phthalate (DIOP)	27554-26-3	%(w/w)	0.010	ND
Dipropyl Phthalate (DPrP)	131-16-8	%(w/w)	0.003	ND
Dicyclohexyl Phthalate (DCHP)	84-61-7	%(w/w)	0.003	ND
Dipentyl Phthalates (DPENP/DnPP)	131-18-0	%(w/w)	0.003	ND
Dibenzyl Phthalate (DBzP)	523-31-9	%(w/w)	0.003	ND
Diphenyl Phthalate (DPhP)	84-62-8	%(w/w)	0.003	ND
Di-n-hexyl Phthalate (DnHP)	84-75-3	%(w/w)	0.003	ND

**Notes :**

(1) DBP, BBP, DEHP, DIBP Reference information: Entry 51 of Regulation (EU) No2018/2005 amending Annex XVII of REACH Regulation (EC) No 1907/2006:

i) Shall not be used as substances or in mixtures, individually or in any combination of DBP, BBP, DEHP & DIBP, in concentrations equal to or greater than 0.1 % by weight of the plasticised material, in toys and childcare articles.

ii) Shall not be placed on the market in toys or childcare articles, individually or in any combination of DBP, BBP, DEHP, in concentrations equal to or greater than 0.1 % by weight of the plasticised material. In addition, DIBP shall not be placed on the market after 7 July 2020 in toys or childcare articles, individually or in any combination of DBP, BBP, DEHP & DIBP, in concentrations equal to or greater than 0.1 % by weight of the plasticised material.

iii) shall not be placed on the market after 7 July 2020 in articles, individually or in any combination of DBP, BBP, DEHP & DIBP, in concentrations equal to or greater than 0.1 % by weight of the plasticised material in the articles.

Please refer to Regulation (EU) No 2018/2005 to get more detail information.



(2) DINP, DNOP, DIDP Reference information: Entry 52 of Regulation (EC) No 552/2009 amending Annex XVII of REACH Regulation (EC) No 1907/2006 (previously restricted under Directive 2005/84/EC).

i) Shall not be used as substances or in mixtures, in concentrations greater than 0.1 % by weight of the plasticised material, in toys and childcare articles which can be placed in the mouth by children.

ii) Such toys and childcare articles containing these phthalates in a concentration greater than 0.1 % by weight of the plasticised material shall not be placed on the market.

Please refer to Regulation (EC) No 552/2009 to get more detail information.

**Polycyclic Aromatic Hydrocarbons (PAHs)**

Test Method : With reference to AfPS GS 2019:01 PAK, analysis was performed by GC-MS.

Test Item(s)	CAS NO.	Unit	MDL	001
Naphthalene(NAP)	91-20-3	mg/kg	0.1	ND
Phenanthrene(PHE)	85-01-8	mg/kg	0.1	ND
Anthracene(ANT)	120-12-7	mg/kg	0.1	ND
Fluoranthene(FLT)	206-44-0	mg/kg	0.1	ND
Pyrene(PYR)	129-00-0	mg/kg	0.1	ND
Benzo(a)anthracene(BaA)	56-55-3	mg/kg	0.1	ND
Chrysene(CHR)	218-01-9	mg/kg	0.1	ND
Benzo(b)fluoranthene(BbF)	205-99-2	mg/kg	0.1	ND
Benzo(j)fluoranthene(BjF)	205-82-3	mg/kg	0.1	ND
Benzo(k)fluoranthene(BkF)	207-08-9	mg/kg	0.1	ND
Benzo(a)pyrene(BaP)	50-32-8	mg/kg	0.1	ND
Benzo(e)pyrene(BeP)	192-97-2	mg/kg	0.1	ND
Indeno(1,2,3-c,d)pyrene(IPY)	193-39-5	mg/kg	0.1	ND
Dibenzo(a,h)anthracene(DBA)	53-70-3	mg/kg	0.1	ND
Benzo(g,h,i)perylene(BPE)	191-24-2	mg/kg	0.1	ND
Sum of 4 PAHs (Phenanthrene, Pyrene, Anthracene, Fluoranthene)	-	mg/kg	-	ND
Sum of 15 PAHs	-	mg/kg	-	ND



AfPS (German commission for Product Safety) : GS PAHs requirements

Parameter	Category 1	Category 2		Category 3	
	Materials, that are destined in mouth closed or material in toys according to Directive 2009/48 EC or materials in articles for use by children up to 3 years with longer term according to skin contact (longer than 30s) at intended use	Materials not covered in category 1, with foreseeable contact to skin longer than 30 seconds (long-term skin contact) or repeated short term skin contact at intended or foreseeable use	Used by Children (<14 years)	Other Consumer Products	Used by Children (<14 years)
Benzo(a)pyrene (BaP) Benzo(e)pyrene (BeP) Benzo(a)anthracene (BaA) Benzo(b)fluoranthene (BbF) Benzo(j)fluoranthene (BjF) Benzo(k)fluoranthene (BkF) Chrysene (CHR) Dibenzo(a,h)anthracene (DBA) Benzo(g,h,i)perylene (BPE) Indeno(1,2,3-c,d)pyrene (IPY)	< 0.2 mg/kg (each)	< 0.2 mg/kg (each)	< 0.5 mg/kg (each)	< 0.5 mg/kg (each)	< 1 mg/kg (each)
Phenanthrene (PHE) Pyrene (PYR) Anthracene (ANT) Fluoranthene (FLT)	< 1 mg/kg (Sum)	< 5 mg/kg (Sum)	< 10 mg/kg (Sum)	< 20 mg/kg (Sum)	< 50 mg/kg (Sum)
Naphthalene (NAP)	< 1 mg/kg	< 2 mg/kg		< 10 mg/kg	
Sum of 15 PAHs	<1 mg/kg	< 5 mg/kg	< 10 mg/kg	< 20 mg/kg	< 50 mg/kg

Remark:

The German committee on Product Safety (AfPS) published a new PAHs document (AfPS GS 2019:01 PAK) on May 15, 2019, which will be binding for the issue of GS mark certificate from 1 July 2020. The previously valid document (AfPS GS 2014:01 PAK) can be used during the transitional period to determine the procedure for existing certificates and new certificates; also, there are exceptions.

Remark 1: Results shown 002 are of the total weight of mixed samples.

Remark 2: The sample(s) was/were 002 analyzed on behalf of the applicant as mixing sample in one testing. The above result(s) was/were only given as the informality value and only for reference.



REMARK:

PHINO RoHS Product As Follow:

Item	Type				
Plastic	Jacket Plastic	Insulation Plastic	Plug Plastic	Strain Relief	Tie Plastic
VDE Cable	H03VVH2-F 2C/3C	H06VVH2-F 2C/3C	H03VVH-F 2C/3C	H06VVH-F 2C/3C	H07VVH-F 2C/3C
SAI Cable	GTSA-2F 2C	LTSA-2F 2C	GTSA-2 2C	GTSA-3 3C	LTSA-3 3C
CCC Cable	RVV 300/500V	RVV 300/500V			
UL Cable	SPT-1,2,3	NISPT-1,2	SVT	SJT	SJTW
	SJTO	1007	1015	1185	1633
	2055	2057	2060	2051	2218
	2272	2273	2313	2359	2405
	2447	2450	2458	2554	2571
PSE Cable	VFF	HVFF	VCTF	VCTFK	HVCTF
	HHVCTF	HHVCTFK	VCT	HVCT	
Other	DC CORD	WIRE HARNESS			
Plug	PHP-201(A/B/C)	PHP-202(R1/R2/R3/R5)	PHP-203(A/R)	PHP-204	PHP-205(E)
	PHP-206(S/W)	PHP-207(G)	PHP-208	PHP-209(P/N)	PHP-211(W)
	PHP-212	PHP-214	PHP-215	PHP-216	PHP-217
	PHP-218	PHP-219	PHP-220(R)	PHP-221	PHP-222
	PHP-223	PHP-224	PHP-225	PHP-226	PHP-227(R)
	PHP-228	PHP-230	PHP-231	PHP-233	PHP-234
	PHP-236	PHP-237	PHP-242	PHP-301(A/B/C/G)	PHP-301(R1/R2/R3/R4/R4)
	PHP-302(R6/R6/R7)	PHP-304(R/R1/R/RB/RC/RD)	PHP-305	PHP-306(B)	PHP-307
	PHP-308	PHP-309	PHP-310(R/L)	PHP-311	PHP-312
	PHP-313	PHP-314	PHP-316	PHP-317	PHP-318(A)
	PHP-320	PHP-321	PHP-322	PHP-323	PHP-324
	PHP-325	PHP-326	PHP-328	PHP-329	PHP-330
	PHP-331(R)	PHP-332(A)	PHP-333	PHP-335(R)	PHP-336
	PHP-338	PHP-339	PHP-341(R1/R2)	PHP-342(R/R1/R2/R5)	PHP-343
	PHP-348	PHP-349	PHP-350	PHP-351	PHP-352
	PHP-353	PHP-359	PHP-350	PHP-351	PHP-352
	PHP-353				

Socket	PHS-204(R)	PHS-205(A/D/V)	PHS-206	PHS-207	PHS-209
	PHS-210	PHS-211	PHS-213	PHS-214	PHS-215
	PHS-216	PHS-217(RL)	PHS-218	PHS-219(R/V)	PHS-220
	PHS-222	PHS-235	PHS-236	PHS-301(A/RL/RR)	PHS-302
	PHS-303	PHS-304	PHS-305(RL/RR)	PHS-306	PHS-307
	PHS-308	PHS-313	PHS-314(W)	PHS-316(A)	PHS-320
	PHS-321	PHS-401	PHS-402	PHS-403	PHS-405
	PHS-407	PHS-601	PHS-802		
SR	ALL Strain Relief				
Other type	PWS-2202/3202/3203/3301/3401/3402/3408/3411/3412/3501/3503/3504/3507/3501/4404/4501				
	PWS-4401/4002/4403/4009/4011/4012/4013				



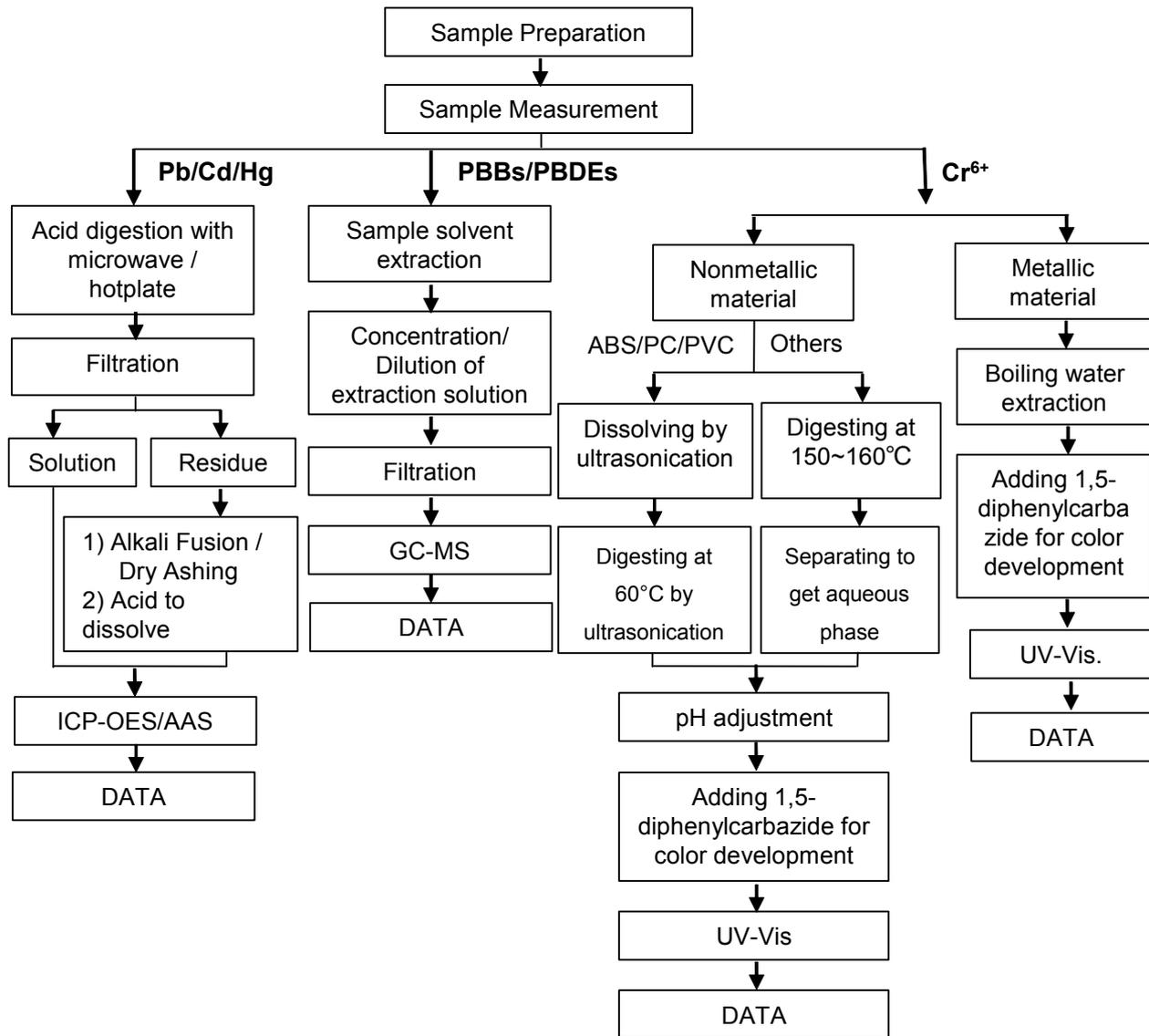
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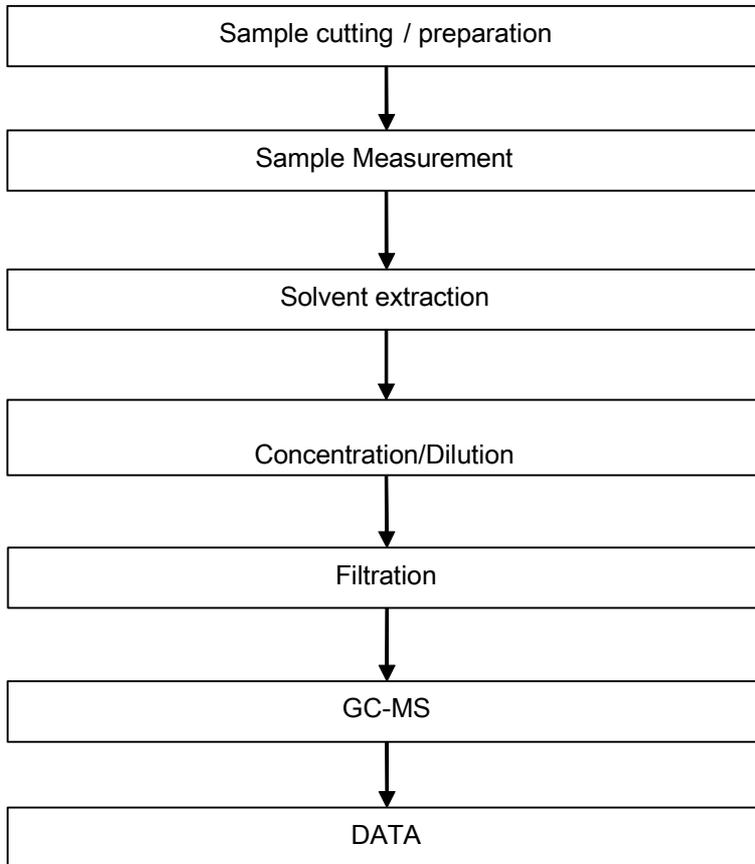
**Pb/Cd/Hg/Cr<sup>6+</sup>/PBBs/PBDEs Testing Flow Chart**

1) These samples were dissolved totally by pre-conditioning method according to below flow chart. (Cr<sup>6+</sup> and PBBs/PBDEs test method excluded).



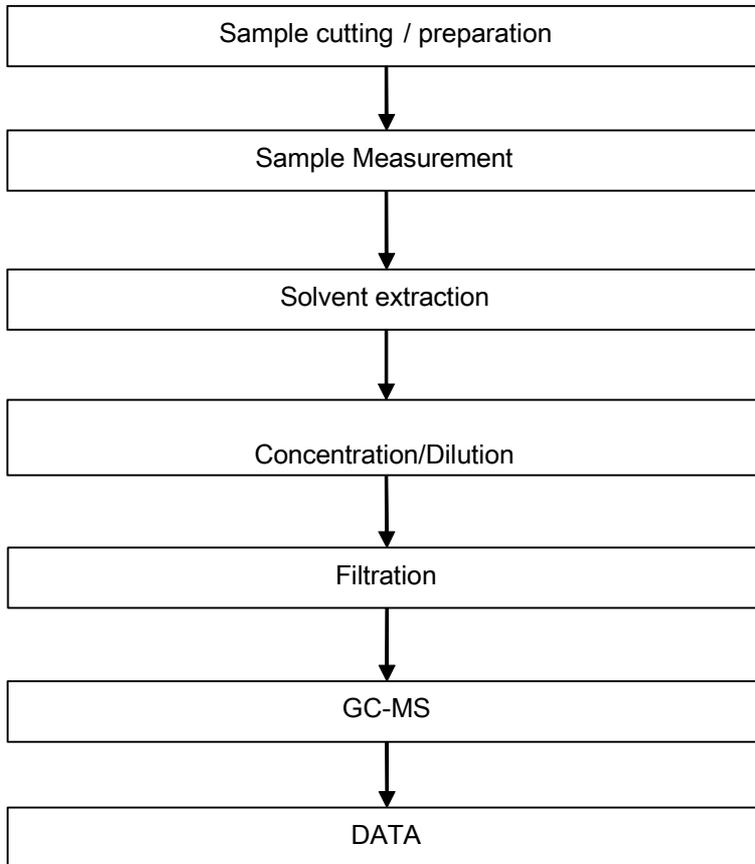
### ATTACHMENTS

#### Phthalates Testing Flow Chart



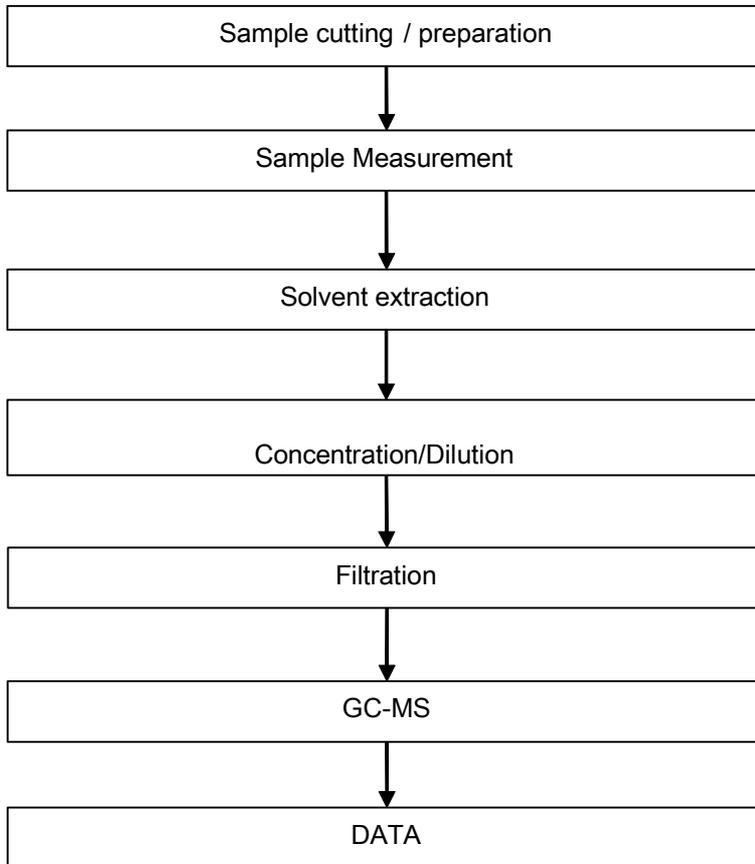
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**HBCDD Testing Flow Chart**



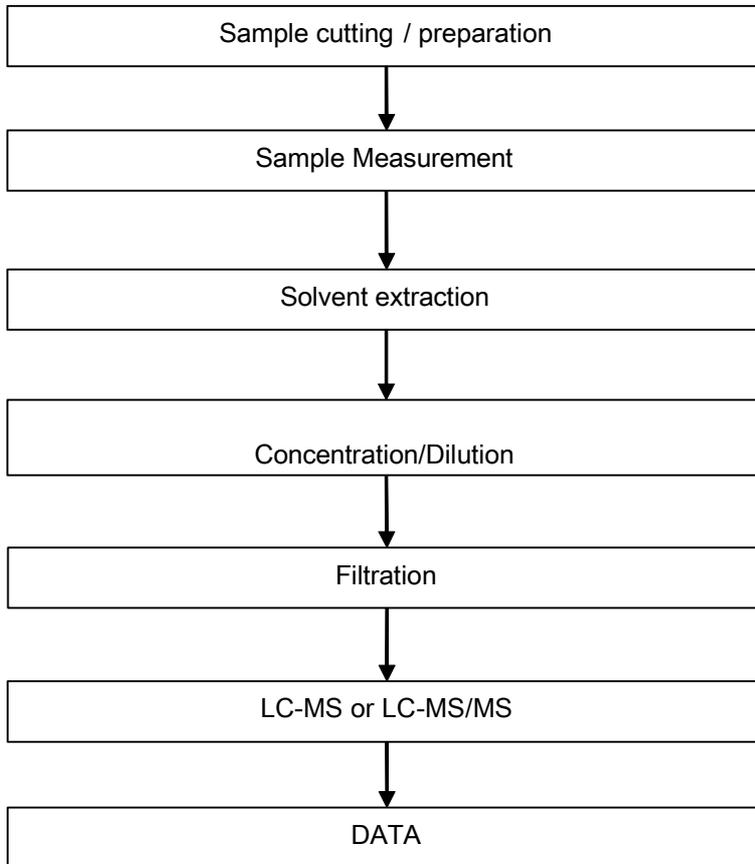
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**PAHs Testing Flow Chart**



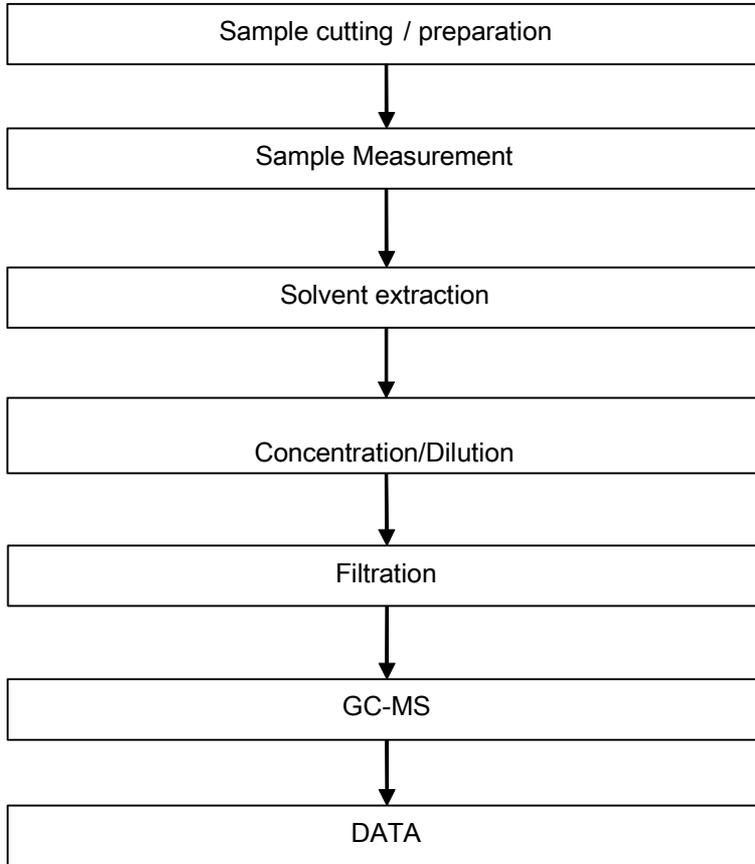
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**PFOA / PFOS Testing Flow Chart**



**ATTACHMENTS**

**Dimethyl Fumarate Testing Flow Chart**



Sample photo:



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