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检测  
TESTING  
CNAS L2774

## Test Report

No. TSNEC2303264403

Date: 01 Dec 2023

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Client Name : TIANJIN LAIRD LTD

Client Address : C3&C4 BUILDING, HONGTAI INDUSTRY PARK, NO.87 TAI FENG ROAD, TEDA, TIANJIN, CHINA

Sample Name : THERMAL CONDUCTIVE ELASTOMERIC GAP FILLER

Model No. : Tflex CR350S B

Main Substance : Silicone polymer and fillers

The above sample(s) and information were provided by the client.

SGS Job No. : TJP23-002863 - TJ

Date of Sample Received : 27 Nov 2023

Testing Period : 27 Nov 2023 - 01 Dec 2023

Test Requested : Selected test(s) as requested by the client.

Test Method(s) : Please refer to next page(s).

Test Result(s) : Please refer to next page(s).

### Result Summary :

Test Requested	Conclusion
EU RoHS Directive (EU) 2015/863 amending Annex II to Directive 2011/65/EU- Lead, Mercury, Cadmium, Hexavalent chromium, Polybrominated biphenyls (PBBs), Polybrominated diphenyl ethers (PBDEs), Bis(2-ethylhexyl) phthalate (DEHP), Butyl benzyl phthalate (BBP), Dibutyl phthalate (DBP) and Diisobutyl phthalate (DIBP)	PASS
Halogen	See Results
Sulfur	See Results
Hexabromocyclododecane (HBCDD/HBCD)	See Results
Phthalates	See Results



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Signed for and on behalf of  
SGS-CSTC Standards Technical Services (Tianjin) Co., Ltd.

*Patrick Kou*

Patrick Kou  
Approved Signatory

scan to see the report



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Test Result(s) :

Test Part Description :

Specimen No.	SGS Sample ID	Description
SN1	TSN23-032644.002	white paste

Remarks :

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

**EU RoHS Directive (EU) 2015/863 amending Annex II to Directive 2011/65/EU- Lead, Mercury, Cadmium, Hexavalent chromium, Polybrominated biphenyls (PBBs), Polybrominated diphenyl ethers (PBDEs), Bis(2-ethylhexyl) phthalate (DEHP), Butyl benzyl phthalate (BBP), Dibutyl phthalate (DBP) and Diisobutyl phthalate (DIBP)**

Test Method : With reference to IEC 62321-5:2013, IEC 62321-4:2013+AMD1:2017, IEC 62321-7-2:2017, IEC 62321-6:2015 and IEC 62321-8:2017, analyzed by ICP-OES, UV-Vis and GC-MS.

Test Item(s)	Limit	Unit	MDL	002
Cadmium (Cd)	100	mg/kg	2	ND
Lead (Pb)	1000	mg/kg	2	ND
Mercury (Hg)	1000	mg/kg	2	ND
Hexavalent Chromium (Cr(VI))	1000	mg/kg	8	ND
Sum of PBBs	1000	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	1000	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



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<u>Test Item(s)</u>	<u>Limit</u>	<u>Unit</u>	<u>MDL</u>	<u>002</u>
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
Dibutyl phthalate (DBP)	1000	mg/kg	50	ND
Butyl benzyl phthalate (BBP)	1000	mg/kg	50	ND
Bis (2-ethylhexyl) phthalate (DEHP)	1000	mg/kg	50	ND
Diisobutyl Phthalates (DIBP)	1000	mg/kg	50	ND

### Notes :

- (1) The maximum permissible limit is quoted from RoHS Directive (EU) 2015/863.
- (2) IEC 62321 series is equivalent to EN 62321 series.
- (3) 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.

### Halogen

Test Method : With reference to EN 14582: 2016, analysis was performed by Ion Chromatograph (IC).

<u>Test Item(s)</u>	<u>Unit</u>	<u>MDL</u>	<u>002</u>
Fluorine (F)	mg/kg	20	ND
Chlorine (Cl)	mg/kg	50	ND
Bromine (Br)	mg/kg	50	ND
Iodine (I)	mg/kg	50	ND

### Sulfur

Test Method : With reference to EN 14582: 2016, analysis was performed by Ion Chromatograph (IC).

<u>Test Item(s)</u>	<u>Unit</u>	<u>MDL</u>	<u>002</u>
Sulfur (S)	mg/kg	30	ND

### Hexabromocyclododecane (HBCDD/HBCD)



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Test Method : With reference to IEC 62321-9:2021, analysis was performed by GC-MS.

Test Item(s)	Unit	MDL	002
Hexabromocyclododecane (HBCDD/HBCD)	mg/kg	20	ND

Phthalates

Test Method : With reference to IEC 62321-8:2017, determination of phthalates by GC-MS.

Test Item(s)	CAS NO.	Unit	MDL	002
Diisononyl Phthalate (DINP)	28553-12-0/ 68515-48-0	% (w/w)	0.005	ND
Di-n-octyl Phthalate (DNOP)	117-84-0	% (w/w)	0.005	ND
Diisodecyl Phthalate (DIDP)	26761-40-0/ 68515-49-1	% (w/w)	0.005	ND
Dimethyl Phthalate (DMP)	131-11-3	% (w/w)	0.005	ND
Diethyl Phthalate (DEP)	84-66-2	% (w/w)	0.005	ND
Diisooctyl Phthalate (DIOP)	27554-26-3	% (w/w)	0.005	ND
Bis(2-methoxyethyl) Phthalate (DMEP)	117-82-8	% (w/w)	0.005	ND
Diisopentyl Phthalate (DIPP)	605-50-5	% (w/w)	0.005	ND
n-pentyl Isopentyl phthalate (nPIPP)	776297-69-9	% (w/w)	0.005	ND
Di-n-hexyl Phthalate (DnHP)	84-75-3	% (w/w)	0.005	ND
1,2-Benzenedicarboxylic acid, di-C7-11-branched and linear alkyl esters (DHNUP)	68515-42-4	% (w/w)	0.005	ND
1,2-Benzenedicarboxylic acid, di-C6-8-branched alkyl esters, C7-rich (DIHP)	71888-89-6	% (w/w)	0.005	ND
1,2-Benzenedicarboxylic acid, dipentylester, branched and linear (DPP)	84777-06-0	% (w/w)	0.005	ND
Di-n-pentyl Phthalate (DnPP)	131-18-0	% (w/w)	0.005	ND
1,2-Benzenedicarboxylic acid, dihexyl ester, branched and linear (DHP)	68515-50-4	% (w/w)	0.005	ND
Dicyclohexyl Phthalate (DCHP)	84-61-7	% (w/w)	0.005	ND
Diisohexyl phthalate (DIHP)	71850-09-4	% (w/w)	0.005	ND

The report is the English version of another report (Report No.TSNEC2303264404) , if any discrepancy between Chinese version and English version , the Chinese version shall prevail.

Unless otherwise stated, the decision rule for conformity reporting is based on Binary Statement for Simple Acceptance Rule (  $w=0$  ) stated in ILAC-G8:09/2019.

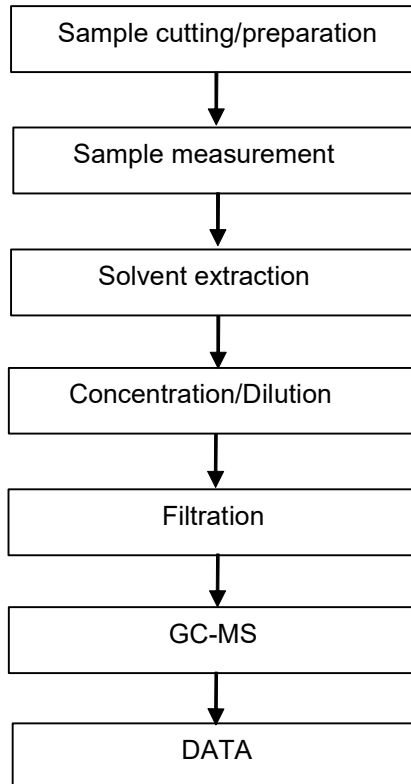


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## HBCDD/HBCD Testing Flow Chart



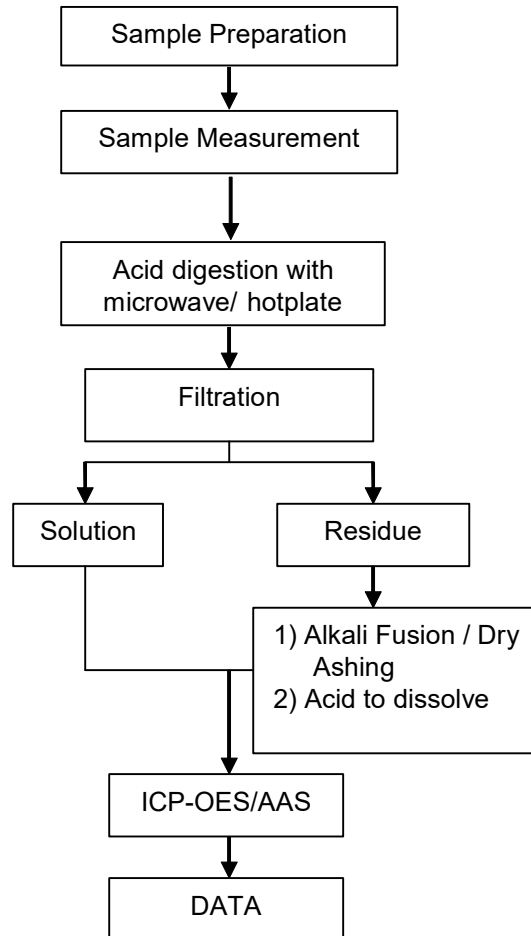
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## Elements (IEC62321) Testing Flow Chart

1) These samples were dissolved totally by pre-conditioning method according to below flow chart.

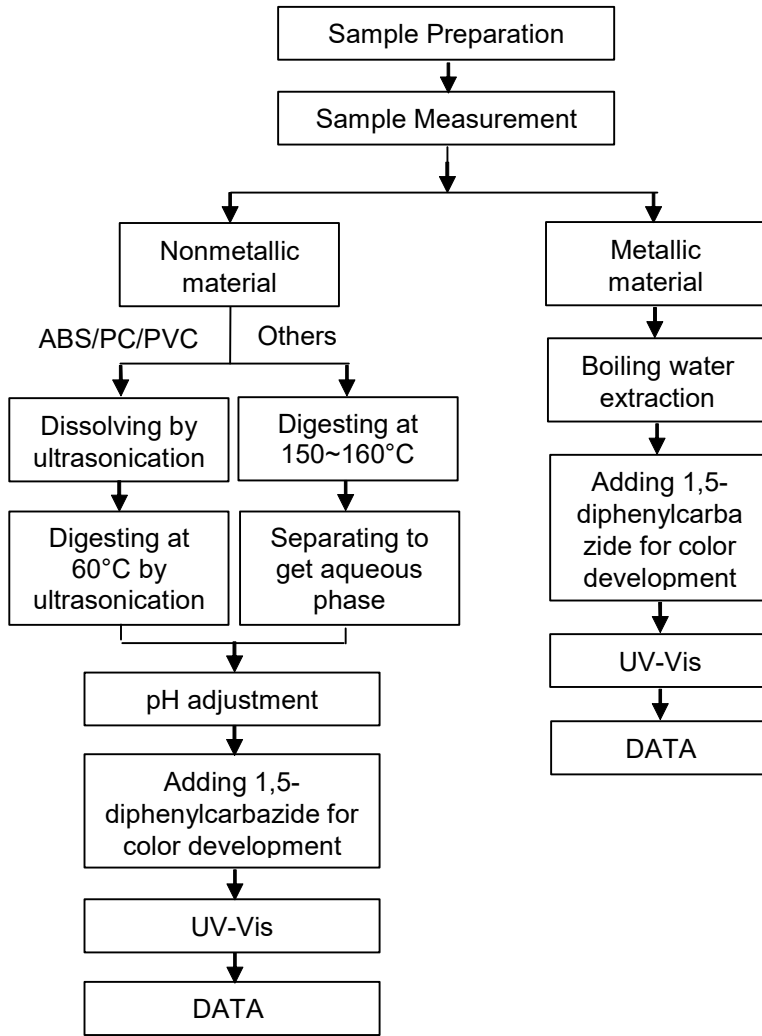


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Hexavalent Chromium (Cr(VI)) Testing Flow Chart

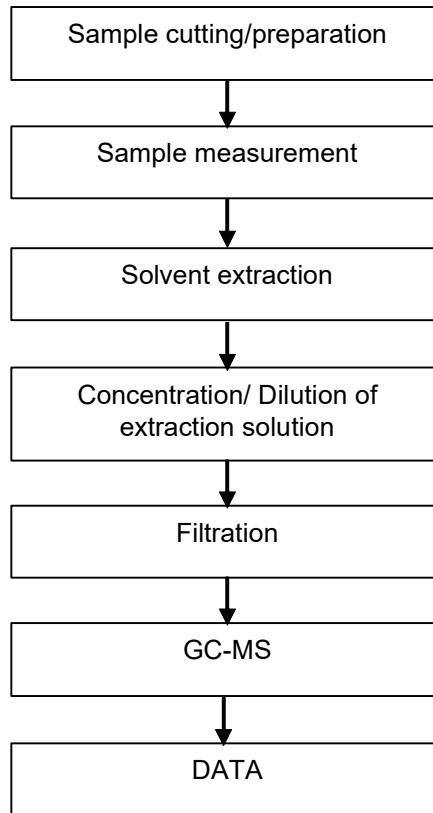


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## PBBs/PBDEs Testing Flow Chart

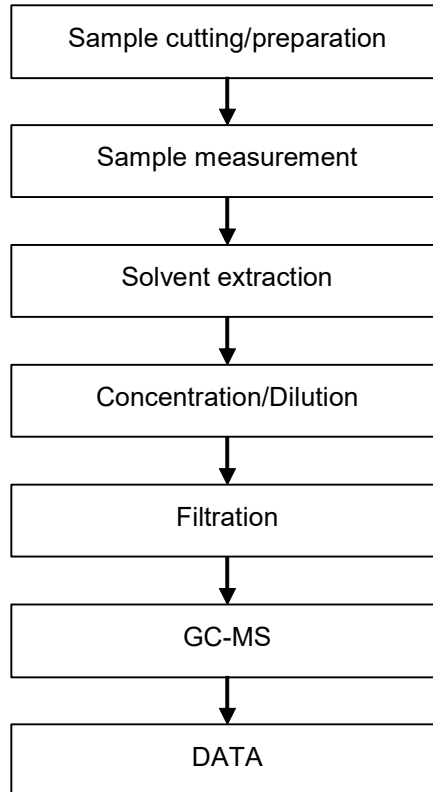


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## Phthalates Testing Flow Chart

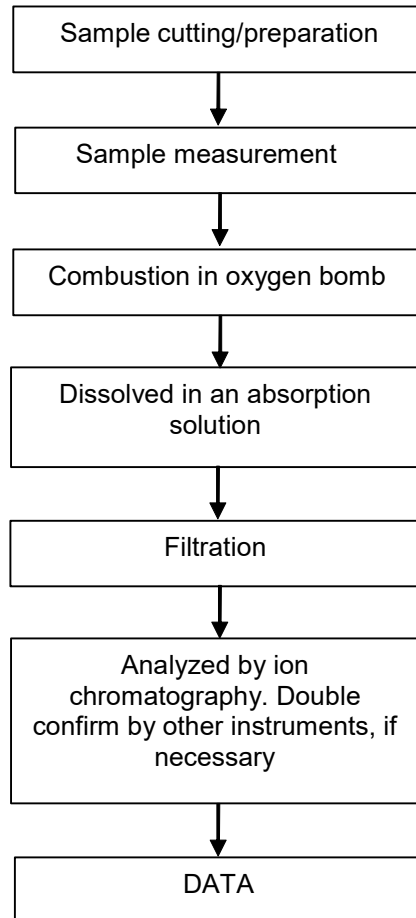


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Halogen Testing Flow Chart

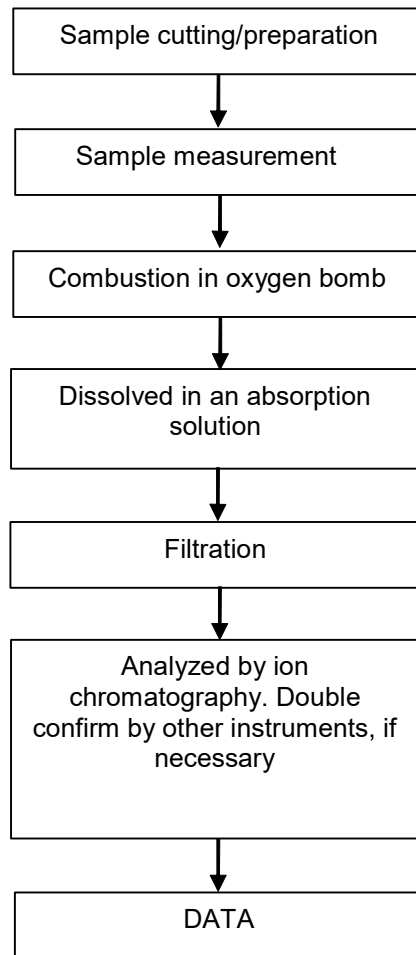


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## Sulfur Testing Flow Chart



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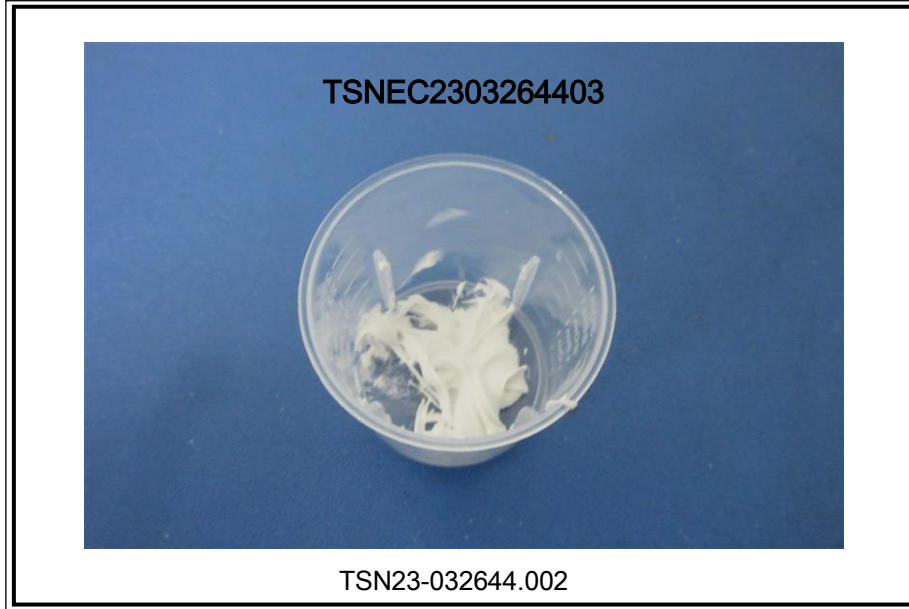
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