



SUBJECT Chemical Test

TEST LOCATION TÜV SÜD China

TÜV SÜD Products Testing (Shanghai) Co., Ltd.
B-3/4, No.1999 Du Hui Road, Minhang District
Shanghai 201108, P.R. China

CLIENT NAME Dongguan Diercon Technology Co., Ltd.

CLIENT ADDRESS Room 303, No. 12, An'li Road, Changan Town, Dongguan City, Guangdong Province, China.

TEST PERIOD 11-Dec-2023~16-Jan-2024

- RESULT SUMMARY**
- The tested items **complied with** Order of 25 November 1992 relating to materials and articles made of silicone elastomers placed or intended to be brought into contact with foodstuffs, products and food beverages.
 - Overall migration test **PASS**
 - Peroxide value **PASS**
 - Volatile Organic Matters **PASS**
 - Specific migration of Organotin **PASS**
 - Sensory test **PASS**
 - The tested items **complied with** France Law No. 2012-1442 of 24 December 2012 for the suspension of the manufacture, import, export and marketing of all-purpose food packaging containing bisphenol A
 - Bisphenol A content **PASS**
 - The tested items **complied with** European Resolution Res AP (2004) 4 on rubber products intended to come into contact with foodstuffs.
 - Specific Migration of Total Primary Aromatic Amine **PASS**
 - As per client's request
 - Phthalates Content **PASS**
 - Bisphenol S content **See details enclosed**
 - Bisphenol F content **See details enclosed**
 - Bisphenol AF content **See details enclosed**

Prepared By

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(Wei Jun)
Report Drafter

Authorized By

[Signature]
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Authorized Signatory



Note: (1) General Terms & Conditions as mentioned overleaf. (2) The results relate only to the items tested. (3) The test report shall not be reproduced except in full without the written approval of the laboratory. (4) Without the agreement of the laboratory, the client is not authorized to use the test results for unapproved propaganda.

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SAMPLE SOURCE/ RECEIPT DATE / TEST DATE

Logistics Express/ 11-Dec-2023/ 11-Dec-2023

**THE FOLLOWING SAMPLE(S) WAS/WERE SUBMITTED
BY/ ON BEHALF OF THE CLIENTS AS**

Sample Name: Gasket of silicone sport bottle
Sample Specification: TA0301018500
Batch No./Date: 20231206
Manufacturer: /

SAMPLE NO.	DESCRIPTION	PHOTOGRAPH
721686473	Black sample	

TEST RESULT(S)

Note: The migration results in this report were tested and expressed based on repeated use articles.

1. Overall Migration Test

- Test method: With reference to EN 1186-3:2022
- Migration ratio(S/V): 6dm² /L

Simulant (s) Used	Test Condition	Result (s) [mg/dm ²]	Maximum Permissible Limit [mg/dm ²]
3% Acetic acid	40°C for 10 days	<3.0	10
50% Ethanol	40°C for 10 days	<3.0	10

2. Specific migration of Total Primary Aromatic Amine

- Test method: With reference to EN13130-1:2004, followed by Kunststoffe im Lebensmittelverkehr, Book 2, Teil B II,XXI
- Test condition: 3% Acetic acid, 40°C for 24 hours
- Migration ratio(S/V): 6dm²/L

Test Item(s)	Result(s) [mg/kg]	Maximum Permissible Limit [mg/kg]
Total Primary Aromatic Amine	<0.01	0.01

3. Peroxide Value

- Test method: With reference to European Pharmacopoeia

Test Item(s)	Result(s)	Maximum Permissible Limit
Peroxide Value	Absent	Absent

4. Volatile Organic Matter

- Test method: With reference to Order of 25 November 1992 Annex III

- Test condition: 200°C for 4 hours

Test Item(s)	Result(s) [%]	Maximum Permissible Limit [%]
Volatile Organic Matter	0.36	0.5

5. Specific migration of Organotin

- Test method: With reference to in house method

- Test condition: 3% Acetic acid, 40°C for 24 hours

- Migration ratio(S/V): 6dm² /L

Test Item(s)	Result(s) [mg/kg]	Maximum Permissible Limit [mg/kg]
Specific migration of Organotin	<0.1	0.1

6. Bisphenol A content

- Test method: With reference to in house method, analysed by HPLC/MS/MS

Test item(s)	Result(s) [mg/kg]	Maximum Permissible Limit [mg/kg]
Bisphenol A content	ND	Not Detected (DL:0.1)

7. Sensory test

- Test method: With reference to DIN 10955:2023-02.

- Test condition: Distilled water, 40°C for 24 hours

- Migration ratio(S/V): 1dm²/50mL

Sample(s)	Testing Parameter	Intensity result(s)	Description of the difference (from Intensity ≥ 2)	Recommended level
721686473	Transfer of look	0	NA	<3
	Transfer of taste	0	NA	<3
	Transfer of smell	0	NA	<3

Note:

1. NA denotes Not Applicable

2. Available Intensity scale are listed as follow:

Intensity scale: 0: No perceptible look/taste/smell deviation

1: Just perceptible look/taste/smell deviation

2: Weak look/taste/smell deviation

3: Clear look/taste/smell deviation

4: Strong look/taste/smell deviation

8. Bisphenol S, Bisphenol F, Bisphenol AF content
- Test method: With reference to in house method

Test item(s)	CAS No.	Result(s) [mg/kg]	Method Detection Limit [mg/kg]
Bisphenol S	80-09-1	ND	0.1
Bisphenol F	620-92-8	ND	1
Bisphenol AF	1478-61-1	ND	1

Note: 1. ND denotes Not Detected and less than Method Detection Limit.

9. Phthalates Content

- Test method: In house method, solvent extraction and determination by GC/MS

Test Item(s)	CAS No.	Result(s) [%]	Detection Limit [%]	Limit # [%]
dibutyl phthalate(DBP)	84-74-2	ND	0.005	0.05
butyl benzyl phthalate(BBP)	85-68-7	ND	0.005	0.05
bis-(2-ethylhexyl) phthalate(DEHP)	117-81-7	ND	0.005	0.05
di-n-octylphthalate(DNOP)	117-84-0	ND	0.005	0.05
di-iso-nonylphthalate(DINP)	28553-12-0	ND	0.005	0.05
di-iso-decylphthalate(DIDP)	26761-40-0	ND	0.005	0.05
Di-ethyl phthalate(DEP)	84-66-2	ND	0.005	0.05
Di-propyl phthalate(DPrP)	131-16-8	ND	0.005	0.05
Diisopentyl phthalate(DiPP)	605-50-5	ND	0.005	0.05
1,2-Benzenedicarboxylic acid, dipentyl ester, branched and linear(PiPP)	84777-06-0	ND	0.005	0.05
n-pentyl-isopentyl phthalate(nPiPP)	776297-69-9	ND	0.005	0.05
Di-n-pentyl phthalate(DnPP)	131-18-0	ND	0.005	0.05
Dihexyl phthalate(DHP)	84-75-3	ND	0.005	0.05
Dicyclohexyl phthalate(DCHP)	84-61-7	ND	0.005	0.05
Dibenzyl phthalate(DBzP)	523-31-9	ND	0.005	0.05
Diisooctyl phthalate(DiOP)	27554-26-3	ND	0.005	0.05
Diphenyl phthalate(DPhP)	84-62-8	ND	0.005	0.05
Diisobutylphthalate(DiBP)	84-69-5	ND	0.005	0.05
Di(2-methoxyethyl) phthalate(DMEP)	117-82-8	ND	0.005	0.05
bis(2-n-butoxyethyl)phthalate(DBEP)	117-83-9	ND	0.005	0.05
bis(4-methyl-2-phentyl) phthalate(DMPP)	146-50-9	ND	0.005	0.05

Test Item(s)	CAS No.	Result(s) [%]	Detection Limit [%]	Limit # [%]
Bis(2-ethoxyethyl) phthalate(DEEP)	605-54-9	ND	0.005	0.05
Dimethyl phthalate(DMP)	131-11-3	ND	0.005	0.05
Dinonyl phthalate(DNP)	84-76-4	ND	0.005	0.05
1,2-Benzenedicarboxylic acid, di-C6-C8 branched alkyl ester, C7-rich(DIHP)	71888-89-6	ND	0.005	0.05
1,2-Benzenedicarboxylic acid, di-C7-C11 branched and linear alkyl ester, C7-rich(DHNUP)	68515-42-4	ND	0.005	0.05
Di-n-Heptylphthalate(DHeP)	3648-21-3	ND	0.005	0.05
Di-n-Decylphthalate(DnDP)	84-77-5	ND	0.005	0.05
Di-iso-undecylphthalate(DiUP)	96507-86-7	ND	0.005	0.05
Di-n-undecylphthalate(DnUP)	3648-20-2	ND	0.005	0.05
Di-2-propylheptylphthalate(DPHP)	53306-54-0	ND	0.005	0.05
Phthalic acid,bis-allyl ester(DAP)	131-17-9	ND	0.005	0.05
n-Octyl n-decyl phthalate(NODP)	119-07-3	ND	0.005	0.05
1,2-Benzenedicarboxylic acid, dihexyl ester, branched and linear	68515-50-4	ND	0.005	0.05
1,2-benzenedicarboxylic acid, mixed decyl and hexyl and octyl diesters with \geq 0.3% of dihexyl phthalate	68648-93-1	ND	0.005	0.05
1,2-benzenedicarboxylic acid, di-C6-10-alkyl esters with \geq 0.3% of dihexyl phthalate	68515-51-5	ND	0.005	0.05
bis(2-ethylhexyl) tetrabromophthalate	26040-51-7	ND	0.005	0.05
Diisohexyl phthalate(DHP)	71850-09-4	ND	0.005	0.05
Butyl octyl phthalate(BOP)	84-78-6	ND	0.005	0.05
Hexyl 2-ethylhexyl phthalate(HEHP)	75673-16-4	ND	0.005	0.05
Diisopropyl phthalate(DIPRP)	605-45-8	ND	0.005	0.05
Butyl cyclohexyl phthalate(BCP)	84-64-0	ND	0.005	0.05
Ditridecyl phthalate(DTDP)	119-06-2	ND	0.005	0.05
The sum of the above phthalates content	--	ND	--	0.1

- Note:
1. ND denotes Not Detected and less than Detection Limit
 2. # denotes Limit was provided by client
 3. This report is for internal use only such as internal scientific research, education, quality control, product R&D.

-END OF THE TEST REPORT-