



ORIGINAL

SUBJECT Microbiological & 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 Guangdong Fortress Chemical Co.Ltd.

CLIENT ADDRESS No.45, Jinzhou Road, Xinhui Development Zone, Jiangmen, Guangdong

TEST PERIOD 19-Oct-2017~16-Mar-2018

TEST REQUEST Please refer to the next page

CONCLUSION

1. The results of Odour & Flavour test show that the sample **complies with the** requirement of BS 6920-2000+A1:2014 Part 2, Section 2.2: Odour and Flavour of water.
2. The results of Appearance of water test show that the sample **complies with the** requirement of BS 6920-2000+A1:2014 Part 2, Section 2.3: Appearance of water.
3. The results of Growth of Aquatic Microorganisms test show that the sample **complies with the** requirement of BS 6920-2000+A1:2014 Part 2, Section 2.4: Growth of Aquatic Microorganisms.
4. The results of Extraction of Substances that may be of concern to public health test show that the sample **complies with the** requirement of BS 6920-2000+A1:2014 Part 2, Section 2.5: Extraction of Substances that may be of concern to public health (Cytotoxicity Test).
5. The results of Extractable metals test show that the sample **complies with the** requirement of BS 6920-2000+A1:2014 Part 2, Section 2.6: The extraction of metals.

Prepared By


(Cynthia Cao)
Report Drafter

Authorized By



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. (5)The test result can be used by client for quality control.

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RECEIPT DATE / TEST DATE

19-Oct-2017/ 19-Oct-2017

THE FOLLOWING SAMPLE(S) WAS/WERE SUBMITTED

BY/ ON BEHALF OF THE CLIENTS AS

Sample Name: MPHT-AFC Paint
Sample Specification: AFC Pro
Batch No./Date: 2017-9-20
Manufacturer: Guangdong Fortress Chemical Co.Ltd.

SAMPLE NO.	DESCRIPTION	PHOTOGRAPH
721635366	White solid	

TEST REQUEST

- British Standard 6920:2000+A1:2014 "Suitability of non-metallic products for use in contact with water intended for human consumption with regard to their effect on the quality of the water" – Part 2: Method of test
 - Section 2.2: Odour and Flavour of water
 - Section 2.3: Appearance of water
 - Section 2.4: Growth of aquatic microorganisms test
 - Section 2.5: The extraction of substances that may be of concern to public health(Cytotoxicity Test)
 - Section 2.6: The extraction of metals
- British Standard BS EN 15768:2015 "Influence of materials on water intended for human consumption – GC-MS identification of water leachable organic substances"

TEST METHOD(S)

- The tests were based on the procedures and methods in British Standard 6920:2000+A1:2014 "Suitability of non-metallic products for use in contact with water intended for human consumption with regard to their effect on the quality of the water".
 - Part 2: Methods of test;
 - Section 2.2: Odour and Flavour of water;
 - Section 2.3: Appearance of water;
 - Section 2.4: Growth of aquatic microorganism test;
 - Section 2.5: The extraction of substances that may be of concern to public health (Cytotoxicity Test);
 - Section 2.6: The extraction of metals;
- In accordance with British Standard BS EN 15768:2015 "Influence of materials on water intended for human consumption – GC-MS identification of water leachable organic substances"



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TEST RESULT(S)

1. Odour and Flavour of Water

- Surface area of sample: 2.6dm²
- Extraction temperature: 23°C
- Volume of test water: 1500ml

Test Items	Test Method	Test Result	
		Chlorinated test water	Chlorine-free test water
Odour	BS6920- 2.2.1:2000+A3:2014	N	Plastics

Test Items	Test Method	Test Result			
		Chlorinated test water		Chlorine-free test water	
		1 st dilution	2 nd dilution	1 st dilution	2 nd dilution
Flavour	BS6920- 2.2.1:2000+A3:2014	N	N	N	N

Note: 1. N denotes No Odour/Flavour could be detected for the extract by 3 test panelists

2. Appearance of Water

- Surface area of sample: 2.6dm²
- Extraction temperature: 23°C
- Volume of test water: 1500ml

Test items	Test method	Test Result			Limit
		Sample	Blank	Difference	
Colour(mg/L Pt)	BS 6920- 2.3:2000+A2:2014	<5	<5	<5	<5
Turbidity(FNU)	BS 6920- 2.3:2000+A2:2014	<0.5	<0.5	<0.5	<0.5

Note: 1. Difference= Sample Value – Blank Value
2. The sample is regarded as PASS when the color difference is less than 5 standard units [mg/L Pt] and the turbidity difference is less than 0.5 FNU.

3. Growth of Aquatic Microorganisms Test

- Surface area of sample: 2.7dm²
- Extraction temperature: 30°C
- Volume of test water: 1500ml

Test item	Test method	Test result [mg/L]	Limit [mg/L]
MDOD (Mean Dissolved Oxygen Difference)	BS 6920- 2.4:2000+A1:2014	0.24	2.4

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4. The Extraction of Substances that may be of concern to public health

- Surface area of sample: 2.6dm²
- Extraction temperature: 23°C
- Volume of test water: 1500 ml

Result of Blank	Result of Sample
The test reagent blank exhibited confluent growth of cells.	Exhibited confluent growth of cells, thus indicating a non-cytotoxic response.

Note: The extracts from the sample and the blank were used to prepare culture media for use with the monkey kidney cell line (Vero ATCC CCL81).

5. The Extraction of Metals

- Surface area of sample: 2.6dm²
- Extraction temperature: 23°C
- Volume of test water: 1500ml
- Extraction duration: 24hours

Test items	Results [ug/L]	MDL [ug/L]	MAC [ug/L]
Al	< 20	20	200
Sb	< 0.5	0.5	5
As	< 1.0	1.0	10
B	< 100	100	1000
Cd	< 0.5	0.5	5
Cr	< 5.0	5.0	50
Fe	< 20	20	200
Pb	< 1.0	1.0	10
Mn	< 5.0	5.0	50
Hg	< 0.1	0.1	1
Ni	< 2.0	2.0	20
Se	< 1.0	1.0	10

Note: 1. MAC denotes Maximum allowable concentrations
 2. MDL denotes Method Detection Limit





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6. Method for The GCMS Identification of Water Leachable Organic Substances

- Surface area of sample: 5.2dm²
- Volume of test water: 1000ml
- Extraction procedure: Annex A – procedure for preparing test leachates

Test Items	Results [ug/L]	MDL [ug/L]
Leachable organic substances with chlorined water (1st)	2993	1
Leachable organic substances with chlorined water (2rd)	1184	1
Leachable organic substances with chlorined water (3rd)	1151	1
Leachable organic substances without chlorinde water (1st)	2012	1
Leachable organic substances without chlorined water (2rd)	578	1
Leachable organic substances without chlorined water (3rd)	536	1

Note: 1. MDL denotes Method Detection Limit

-END OF THE TEST REPORT-

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