

BS6920 Test Report



REPORT NO. MA7615/X

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Section 3

Tamkeen Modern Pipe Dark Grey

Suspension Polyvinyl Chloride PVC-67S

CLIENT:		Tamkeen Modern Pipes Company Industrial Area 2 P.O. Box 15442 Jeddah 21543 Kingdom of Saudi Arabia
CLIENT'S REFERENCE:		L. Sathisha Mane
PHOENIX NUMBER:		UK760-0031370
DATE		14 April 2022 Re-issued with amendments 25 April 2022 Re-issued with further amendments 23 May 2022 Re-issued with further amendments 26 May 2022
WRITTEN BY:		REVIEWED BY:
 MATTHEW BRIDGE ANALYST		 HANNAH TODD LABORATORY SUPERVISOR

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0102

**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
WRAS TESTS OF EFFECT ON WATER QUALITY (BS 6920: 2014)
HIGH TEMPERATURE TESTS (BS6920: PART 3: 2014)**

INFORMATION AND GUIDANCE NOTE

WATER REGULATIONS APPROVAL SCHEME

The Scheme wishes to draw to the attention of product manufacturers and users that reports issued by accredited test laboratories do not of themselves constitute approval by the Scheme or the test laboratory. Only a letter from the Scheme, citing a Directory Reference Number, can be regarded as indicating approval.

1. SAMPLES FOR TESTING	
General composition of product	UPVC
Trade name and reference of material	Suspension Polyvinyl Chloride PVC-67S
Material manufacturer	Saudi Basic Industries Corporation (SABIC), Kingdom of Saudi Arabia
Submitting organisation	Tamkeen Modern Pipes Company, Kingdom of Saudi Arabia
Component name/ref	Tamkeen Modern Pipe Dark Grey
Component manufacturer	Tamkeen Modern Pipes Company, Kingdom of Saudi Arabia
Batch number of product	information not provided
Date of manufacture of product	14 December 2021
Method of manufacture of sample	extrusion
Sampling procedure	information not provided
Description of sample	dark grey opaque smooth shiny pipe
Surface area of test piece	15052mm ²
Number of articles constituting a test piece	1
Dimensions of test piece:	ext./int. diameter/length: 24.98mm/20.56mm/103.00mm
Calibration mark of test containers	1 litre
Date of application	14 December 2021
Date of receipt of test samples	22 December 2021
Condition of samples on receipt	satisfactory
Method of packaging	plastic
Conditions of storage of the samples between receipt and testing	as instructed in BS6920-2.1: 2014: clause 5.2
Proposed use of the product	water supply, waste drainage, ventilation, irrigation, sewage network, electrical housing, telecom, construction industries

2. THE EXTRACTION OF METALS

Extraction temperature – 60°C

Date test commenced – 11 January 2022

Number of extracts – 7

All analyses carried out on triplicate samples of the product as specified below

Aluminium, Antimony, Arsenic, Boron, Cadmium, Chromium, Iron, Lead, Manganese, Mercury, Nickel, Selenium:
Inductively coupled plasma – mass spectrometry (ICP-MS)

Extract 1

Metal	Expression of the results	Max. admissible concentration	Reporting Limit	Concentration Final Extract			Reagent Blank
				I	II	III	
Aluminium	Al µg/L	200	20.0	< 20.0	< 20.0	< 20.0	< 20.0
Antimony	Sb µg/L	5	0.5	< 0.5	< 0.5	< 0.5	< 0.5
Arsenic	As µg/L	10	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Boron	B µg/L	1000	100.0	< 100.0	< 100.0	<100.0	<100.0
Cadmium	Cd µg/L	5	0.5	< 0.5	< 0.5	< 0.5	< 0.5
Chromium	Cr µg/L	50	5.0	< 5.0	< 5.0	< 5.0	< 5.0
Iron	Fe µg/L	200	20.0	< 20.0	< 20.0	< 20.0	< 20.0
Lead	Pb µg/L	10	1.0	2.60	1.95	1.83	< 1.0
Manganese	Mn µg/L	50	5.0	< 5.0	< 5.0	< 5.0	< 5.0
Mercury	Hg µg/L	1	0.1	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	Ni µg/L	20	2.0	< 2.0	< 2.0	< 2.0	< 2.0
Selenium	Se µg/L	10	1.0	< 1.0	< 1.0	< 1.0	< 1.0

Extract 7

Metal	Expression of the results	Max. admissible concentration	Reporting Limit	Concentration Final Extract			Reagent Blank
				I	II	III	
Lead	Pb µg/L	10	1.0	< 1.0	< 1.0	< 1.0	< 1.0

Comment - thus the samples of this product have been found to comply with the requirements of BS 6920: Part 1: clause 8 when extracted at 60°C

CONCLUSION

The samples of the products referred to in this report have been tested in accordance with the methods specified in BS 6920: Part 2: 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: Methods of test" (including High Temperature Tests in accordance with BS 6920: Part 3: 2014) and the requirements of the Water Regulations Approval Scheme 'WRAS Material Approval Guidance, Version 2.2 issued 28 April 2021'.

This product has satisfied the criteria set out in BS 6920: Part 1: 2014 "Specification" and thus complies with the requirements of the Water Regulations Approval Scheme Tests of Effect on Water Quality (BS 6920: 2014): Extraction of Metals (Triplicate testing) / High Temperature Tests (60°C).

NO OTHER TESTS WERE UNDERTAKEN ON THIS PRODUCT

N.B The results specified in this report relate only to the sample of the product submitted for testing. Any changes in the nature or source of ingredients and the process of manufacture or application could affect the suitability of the product for use in contact with potable water.

Materials and products intended for use by a public water supply company in the preparation or conveyance of water may need to satisfy more comprehensive toxicological requirements as set specified by the Drinking Water Inspectorate. These additional requirements are necessary to ensure legal compliance with Regulation 31 of Water Supply (Water Quality) Regulations 2000.

NOTE FOR WRAS

BS6920-2.6 carried out in triplicate after a previous test failure according to BS6920-1, Clause 8. Previous testing on this product covered by our test report ref MA7264/O Section 3 dated 16 August 2021.

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