THE WATER QUALITY CENTRE | (Materials Testing)

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NON-METALLIC MATERIALS FOR USE WITH DRINKING WATER

TEST REPORT

Product : Maxseal Super
Report Reference : M 103361/A

Drizoro SA
C/Primavera 50-52
28850 Torrejon de Ardoz
Madrid
SPAIN

Report Date : 15th December 2004

UKAS TESTING
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1.1 SITE APPLIED PRODUCTS.

Typical uses of the product	e.g used as a waterproof coating for exterior and walls.
Method of test sample preparation	After mixing with water MAXSEAL SUPER was brush applied to fully cured and preconditioned cement blocks in two coats, and cured for a total of 28 days.
Mix ratio (mass : mass)	25kg : 7 litres (maxseal super : water)
Number of coats used	Two
Cure conditions	Coat One = 24 hours at 23±2°C Coat Two = 27 days at 23±2°C (NB. in the final 3 weeks of curing, the samples were cured in water for 3 x 24 hr periods per week)
Location of sample preparation	Spencer House Laboratory
Total curing (time and temperature)	28 days at 23±2°C

Preconditioning of Sample : the samples were preconditioned in water (Aggressivity Index >12.0) for 2 days until the pH fell below 9.0 on two consecutive days.
Preconditioning Profile (days) : pH 8.3, 8.3

2. LEACHATE PREPARATION.

Leachate preparation was carried out at an extraction temperature of 23±°C in accordance with BS 6920-1:2000 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. 1st and 7th extract leachates from the sample of this material were analysed using the methods described on the following results page for THM's.

Helen Bala
Materials Testing Manager

TESTING OF NON-METALLIC MATERIALS FOR USE WITH DRINKING WATER.

1. TEST SAMPLES.

General composition of product	**Cement Based Waterproof Coating**
Trade name/designation	**Maxseal Super**
Material manufacturer	Drizoro SA
Date of manufacture/production	27-02-04
Production batch numbers	058-4-01
Samples prepared by	WQC staff
Submitting organisation	Drizoro SA
Date of receipt of test samples	5th March 2004
Method of packaging	Product Container
Condition on receipt	Satisfactory
Laboratory storage before test	Ambient temperature (21±4)°C

Description	test article	Coated Cement Block
Appearance of article	colour	Coating = White
	surface finish	Textured
	opacity	Opaque
Surface area of one article (mm^2)		≈15000
Number of articles to give a surface area of 15000mm^2		1
Calibration mark of the test vessel/container in litres		1
Extraction temperature used		(23±2)°C

3. TEST RESULTS.

DETERMINATION OF TRIHALOMETHANES

Date test started : 26.10.04

The following results were obtained on the leachates prepared by following the BS6920-1:2000 extraction procedure.

Determinand	Results (µg/L - 1st Extract		Results (µg/L) - 7th Extract	
	Sample	Reagent blank	Sample	Reagent blank
Benzene	<0.1	<0.1	<0.1	<0.1
Bromodichloromethane	<0.4	0.4	0.6	0.7
Bromoform	<0.5	<0.5	<0.5	<0.5
Carbon Tetrachloride	<0.2	<0.2	<0.2	<0.2
Chloroform	0.5	0.6	0.6	5.7
Dibromochloromethane	0.4	0.4	0.4	0.4
Dichloroethane (1 2)	<0.1	<0.1	<0.1	<0.1
THM Total	0.9	1.4	1.6	6.8
Tetra & Trichloroethane Total	0.0	0.0	0.0	0.0
Tetrachloroethene	<0.2	<0.2	<0.2	<0.2
Trichloroethane (1 1 1)	<0.2	<0.2	<0.2	<0.2
Trichloroethene	<0.2	<0.2	<0.2	<0.2

Analytical method.
Trihalomethanes in water samples are analysed using static headspace and measured by gas chromatography - mass spectrometry.

A known volume of sample, in a headspace vial, is spiked with an internal standard solution. Sodium Chloride is added, the vial sealed, and placed in a Hewlet Packard 7694 headspace auto sampler. The vial is thermostatically heated, agitated and allowed to equilibrate. It is then pressurised with gas, a volume of headspace gas is sampled and injected into a gas chromatograph, fitted with a mass spectrometer. [method code LP/R/496].

NOTE - This technique is in continuous use for analysis of drinking water samples and is validated to the requirements of "A Manual on Analytical Quality Control for the Water Industry" (NS 30) and the requirements laid down by the Drinking Water Inspectorate. This technique has a comprehensive AQC protocol including control solutions with each batch of samples for analysis - full details available upon request. **These methods are included in our scope of UKAS (BS EN ISO 17025) accreditation.**