

VS EL-9000 L

## REPORT ON PERFORMANCE TESTS OF uPVC FITTING

Client : East Wind Products Limited

Project : Test of uPVC Fitting

Client Ref. : --

Report No. : 180719ST180207(2)B



Date : 30 November 2021

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## **CONTENTS**

- 1.0 Introduction
- 2.0 Sample Description
- 3.0 Summary of Test Results
- 4.0 Individual Results
- 5.0 Record Photographs

Client Ref. : --

Page 1 of 6

Report No. : 180719ST180207(2)B

## 1.0 Introduction

Fugro Technical Services Limited, FTS was commissioned by the client, East Wind Products Limited address: 10A Fraser Road, Tuen Mun, N.T., Hong Kong to conduct a series of tests on uPVC Fitting briefly in accordance with: BS 4514 : 2001.

The test samples given a code number ST180207 were received by FTS on 14 March 2018, 15 May 2018 and 08 September 2021.

## 2.0 Sample Description

Sample Description : Fittings

Model : EL-9000L

Brand : POSEIDON

Body Markings : POSE DON

Nominal Size : DN100

## 3.0 Summary of Test Results

Test Sample	Test Item	Test Method	Test Results	Remark
Fittings / EL-9000L	Dimensions	BS 4514 : 2001, Clause 5	Thickness : 4.03 mm (min.)	Pass
	Proof Pressure of Pipework Assemblies	BS 4514 : 2001, Clause 6.5	No visible leakage	Pass
	Vicat Softening Temperature	BS 4514 : 2001, Clause 6.1	Average 85°C	Pass
	Stress Relief Behaviour of Mould Fittings	BS 4514 : 2001, Clause 6.4	No crack	Pass
	Elevated Temperature Cycling Test	BS 4514 : 2001, Clause 6.6	No leakage	Pass

Remarks : 1.) The test results relate only to the samples tested.  
2.) The results apply to the sample as received.  
3.) This report is to supersede our previous test report no. 180719ST180207(2).

Checked by

Chan Chun Wai Ivan  
Manager (Product Testing Laboratory)

30 NOV 2021

30 NOV 2021

Date

Date

Client Ref. : --  
Report No. : 180719ST180207(2)B

Page 2 of 6

#### 4.0 Individual Results

##### 4.1 Dimensions

(BS 4514 : 2001, Clause 5)

Lab Sample I.D. : ST180207/3  
Sample Received Date : 14 March 2018  
Date Tested : 08 May 2018

Dimension Item	Test Results (mm)	BS Requirement (mm)
Thickness	4.03 mm	min. 3.0

Remark : The test results **comply** with the requirement of BS 4514 : 2001, Clause 5 for wall thickness

##### 4.2 Proof Pressure of Pipework Assemblies

(BS 4514 : 2001, Clause 6.5)

Lab Sample I.D. : ST180207/12  
Sample Received Date : 14 March 2018  
Date Tested : 09 May 2018

Lab. Sample I.D.	Applied Hydraulic Pressure (bar)	Duration (sec)	Observation	BS Requirement
ST180207/12	0.5	15	No leakage	No leakage

Remark : The test results **comply** with the requirement of BS 4514 : 2001, Clause 6.5



Client Ref. : --

Report No. : 180719ST180207(2)B

Page 3 of 6

### 4.3 Vicat Softening Temperature

(BS 4514 : 2001, Clause 6.1)

Lab Sample I.D. : ST180207/6a-6b

Sample Received Date : 14 March 2018

Date Tested : 07 May 2018

Lab. Sample I.D.	Vicat Softening Temperature (°C)	BS Requirement (°C)
ST180207/6a	85.0	≥79°C
ST180207/6b	85.0	
Average	85.0	

Remark : The test results **comply** with the requirement of BS 4514 : 2001, Clause 6.1.

### 4.4 Stress Relief Behaviour of Mould Fittings

(BS 4514 : 2001, Clause 6.4)

Lab Sample I.D. : ST180207/3

Sample Received Date : 15 May 2018

Date Tested : 16 May 2018

Lab. Sample I.D.	Observation	BS Requirement
ST180207/3	No weld line splitting and no crack	<ul style="list-style-type: none"> <li>i. Within a radius of 15 times the wall thickness around the injection point, the depth of cracks, delamination or blisters shall not exceed 50% of the wall thickness at that point.</li> <li>ii. Within a distance of 10 times the wall thickness from the diaphragm zone, the depth of cracks, delamination or blisters shall not exceed 50% of the wall thickness at that point.</li> <li>iii. Within a distance of 10 times the wall thickness from the ring gate, the length of cracks shall not exceed 50% of the wall thickness at that point.</li> <li>iv. The weld line shall not have opened more than 50% of the wall thickness at the line.</li> <li>v. In all other parts of the surface the depth of cracks and delaminations shall not exceed 30% of the wall thickness at that point. Blisters shall not exceed a length 10 times of the wall thickness.</li> <li>vi. After cutting through the fitting, the cut surfaces shall show no foreign particles, when viewed without magnification.</li> </ul>

Remark : The test results **comply** with the requirement of BS 4514 : 2001, Clause 6.4

Client Ref. : --

Report No. : 180719ST180207(2)B

Page 4 of 6

#### 4.5 Elevated Temperature Cycling Test

(BS 4514 : 2001, Clause 6.6)

Lab Sample I.D. : ST210562/9  
 Date Received : 08 September 2021  
 Date Test Started : 04 October 2021  
 Date Test Completed : 13 October 2021

Lab. Sample I.D.	Observation After Test	Requirement of BS 4514 : 2001, Clause 6.6
ST210562/9	No leakage and no sagging	i) No leakage  ii) Sagging : $\leq 3 \text{ mm}$ ( $\text{DN} \leq 50$ ) / $0.05 \text{ dn mm}$ ( $\text{DN} > 50$ )

Note: dn - Nominal outside diameter

Remark : The test results **comply** with the requirement of BS 4514 : 2001, Clause 6.6

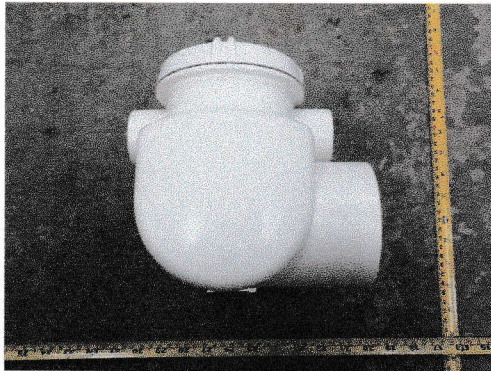


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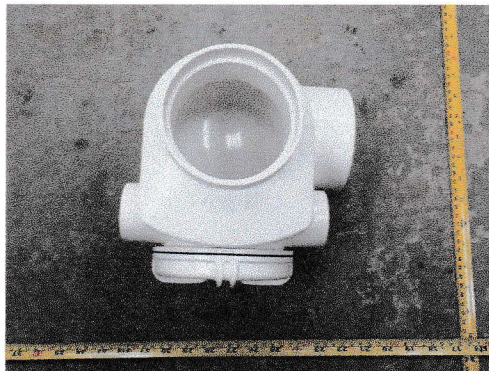
Report No. : 180719ST180207(2)B

Page 5 of 6

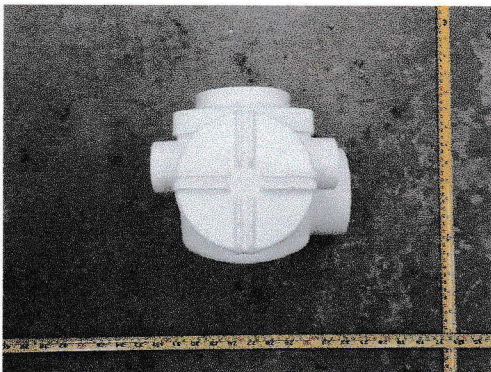
## 5.0 Record Photographs



Test Sample  
Sample I.D.: ST180207/3



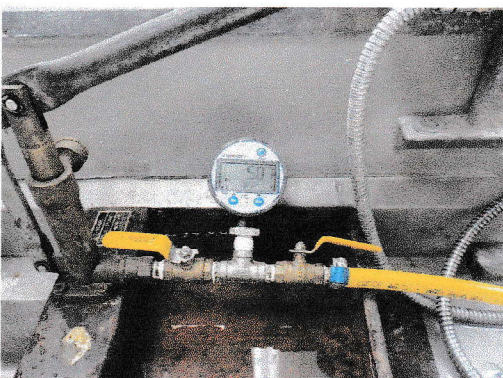
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Sample I.D.: ST180207/3



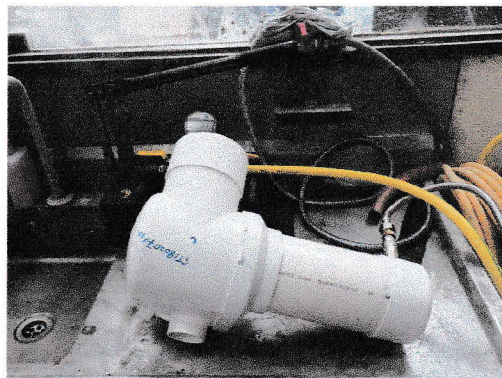
Test Sample  
Sample I.D.: ST180207/3



Body Marking  
Sample I.D.: ST180207/3



Test Configuration  
Sample I.D.: ST180207/12



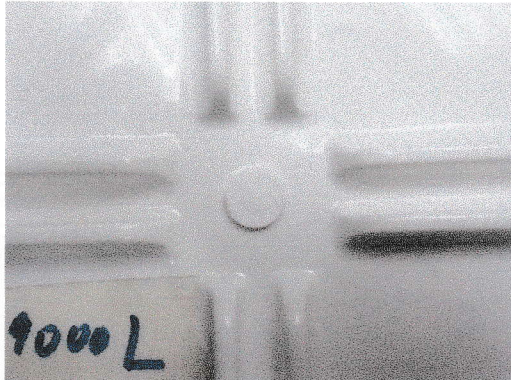
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Sample I.D.: ST180207/12



Client Ref. : --

Report No. : 180719ST180207(2)B

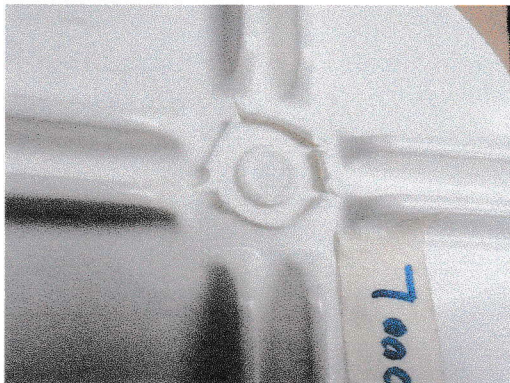
Page 6 of 6



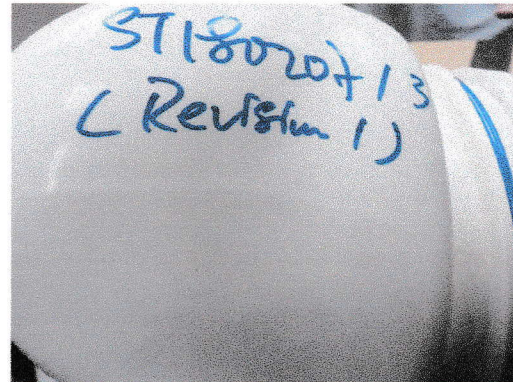
Sample Before Test  
Sample I.D.: ST180207/3



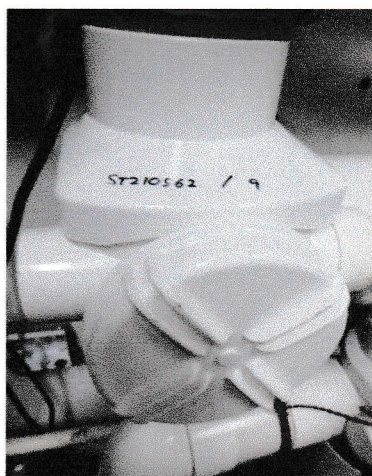
Sample Before Test  
Sample I.D.: ST180207/3



Sample After Test  
Sample I.D.: ST180207/3



Sample After Test  
Sample I.D.: ST180207/3



Sample After Test (Model: EL-9000L)  
Sample I.D.: ST210562/9

**\*\* End of Report \*\***

P8