



TEST REPORT 2322475-OYC

Date 16 JUN 2023

Singapore Test Lab Pte Ltd, 10B Enterprise Road, Singapore 629828, Tel: +65 6353 6393, Fax: +65 6353 6395

SUBJECT:

Testing of uPVC pipe

TESTED FOR:

Snow Pte Ltd
15A Tuas Ave 18, #03-01,
Singapore 638905

Attn: Mr Steven Eu

SAMPLE RECEIVED DATE:

14 Apr 2023 (Size 50mm & 100mm pipe)
19 May 2023 (40mm & 150mm pipe)
09 Jun 2023 (80mm pipe)

TEST DATE:

14 Apr 2023
19 May 2023
09 Jun 2023

METHOD OF TEST:

SS 141: 2013 - Specification for unplasticised PVC pipe for cold water services and industrial uses

TEST CONDECTED:

1. Measurement of dimensional
2. Softening point
3. Heat reversion
4. Hydrostatic pressure
5. Impact strength
6. Opacity



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SAMPLE DESCRIPTION:

One lot of uPVC pipe was received. The descriptions are as follow:

Size	Markings
40mm Ø	SNOW 40MM UPVC PIPE SS141 BS 3505 AS 1477 CL D PPD4058 2 LEAD FREE
50mm Ø	SNOW 50MM UPVC PIPE SS141 BS 3505 AS 1477 CL D PPD5058 2 LEAD FREE
80mm Ø	SNOW 80MM UPVC PIPE SS141 BS 3505 AS 1477 CL D PPD8058 2 LEAD FREE
100mm Ø	SNOW 100MM UPVC PIPE SS141 BS 3505 AS 1477 CL D PPD10058 1 LEAD FREE
150mm Ø	SNOW 150MM UPVC PIPE SS141 BS 3505 AS 1477 CL D PPD15058 (5.8M) 1 LEAD FREE

TEST RESULTS:

Table 1a - Dimensional measurements

Sample Reference & Sizes	Results		SS 141: 2013 Requirements PN 12 (Class D)	
	40mm Ø	50mm Ø	50mm Ø	50mm Ø
Mean outside diameter (mm)	48.3	60.5	48.1 min. 48.4 max.	60.2 min. 60.5 max.
Thickness individual value (mm) Min.	2.8	3.1	2.5	3.1
Thickness individual value (mm) Max.	3.0	3.5	3.0	3.7
Thickness average value (mm) Max	2.9	3.4	3.0	3.7

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TEST RESULTS (CONT'D):

Table 1b - Dimensional measurements

Sample Reference & Sizes	Results		SS 141: 2013 Requirements PN 12 (Class D)	
	80mm Ø	100mm Ø	80mm Ø	100mm Ø
Mean outside diameter (mm)	88.9	114.3	88.7 min. 89.1 max.	114.1 min. 114.5 max.
Thickness individual value (mm) Min.	4.9	6.4	4.6	6.0
Thickness individual value (mm) Max.	5.0	6.8	5.3	6.8
Thickness average value (mm) Max	4.9	6.6	5.3	6.8

Table 1c - Dimensional measurements

Sample Reference & Sizes	Results	SS 141: 2013 Requirements PN 12 (Class D)
	150mm Ø	155mm Ø
Mean outside diameter (mm)	168.4	168.0 min. 168.5 max.
Thickness individual value (mm) Min.	9.2	8.8
Thickness individual value (mm) Max.	9.7	9.9
Thickness average value (mm) Max	10.2	10.2

Table 2a - Softening point test

Sample Reference & Sizes	Results			SS 141: 2013 Requirements
	50mm Ø	50mm Ø	80mm Ø	
Softening temperature °C	82.0	81.5	81.8	≥ 80

Table 2b - Softening point test

Sample Reference & Sizes	Results		SS 141: 2013 Requirements
	100mm Ø	150mm Ø	
Softening temperature °C	81.5	82.2	≥ 80

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TEST RESULTS (CONT'D):

Table 3a – Heat reversion test

Sample Reference & Sizes	Results			SS 141: 2013 Requirements PN 12 (Class D)
	40mm Ø	50mm Ø	80mm Ø	
Heat reversion, (%) (Hot air oven)	2.1	2.7	1.9	5 max.

Table 3b- Heat reversion test

Sample Reference & Sizes	Results		SS 141: 2013 Requirements PN 12 (Class D)
	100mm Ø	155mm Ø	
Heat reversion, (%) (Hot air oven)	1.8	1.8	5 max.

Table 4a – Hydrostatic pressure test

Sample Reference & Sizes	Results			SS 141: 2013 Requirements PN 12 (Class D)
	40mm Ø	50mm Ø	80mm Ø	
Hydrostatic short term strength test	Passed			No failure during the test.

Table 4b – Hydrostatic pressure test

Sample Reference & Sizes	Results		SS 141: 2013 Requirements PN 12 (Class D)
	100mm Ø	155mm Ø	
Hydrostatic short term strength test	Passed		No failure during the test.

Table 5a – Impact test

Sample Reference & Sizes	Results			SS 141: 2013 Requirements PN 12 (Class D)
	40mm Ø	50mm Ø	80mm Ø	
Impact test	Passed			Clause D.5

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TEST RESULTS (CONT'D):

Table 5b – Impact test

Sample Reference & Sizes	Results		SS 141: 2013 Requirements PN 12 (Class D)
	100mm Ø	155mm Ø	
Impact test	Passed		Clause D.5

Table 6a – Opacity Test

Sample Reference & Sizes	Result			SS 141: 2013 Requirements PN 12 (Class D)
	40mm Ø	50mm Ø	80mm Ø	
Opacity, (%)	0			Shall not transmit more than 0.2% of visible light falling on it

Table 6b – Opacity Test

Sample Reference & Sizes	Result		SS 141: 2013 Requirements PN 12 (Class D)
	100mm Ø	155mm Ø	
Opacity, (%)	0		Shall not transmit more than 0.2% of visible light falling on it


 Ong Yeo Chuan
 Testing Officer


 Chua Peck Cheong
 Senior Manager

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