



Title: (Detail of the Item or System)	StormPRO SN8 Slotted Pipe	TA Level.:	Preliminary <input type="checkbox"/>
			Provisional <input type="checkbox"/>
			Full <input checked="" type="checkbox"/>
		TA No.:	VLP344
Supplier:	Vinidex Pty Ltd	Date:	31/05/2023
Suppliers Address:	Level 4, 26 College St Darlinghurst, NSW 2010	Supplier Phone:	131169
		Supplier Email:	ipaterson@vinidex.com.au
Manufacturer:	.	Model No.:	29501, 29502, 29503, 29504, 29505, 29506, 29507, 29508

(Use in conjunction with NIPR-1310-Type Approval – V/Line Asset Management).

1 Executive Summary

1.1 Background

The StormPro slotted pipe has been proposed as an alternative water infiltration pipe and subsurface drainage system.

1.2 Precedents

Historically V/Line has utilised the legacy Type Approved MegaFlo drainage system (Geofabrics Australia) for water infiltration and subsurface drainage.

The StormPro slotted pipe was approved by the local metropolitan railway operator Metro Trains Melbourne (MTM) recently (September 2022) with the condition of: “unless the pipe is wrapped in geotextile, the granular filter material shall contain maximum 0-5% passing a 9.50mm sieve, and 0-3% passing a 4.75mm sieve”.

Standardsmark Licence from SAI Global was granted to Vinidex Pty Ltd certifying that the Polypropylene pipes (Corrugated Type B- ID series) and fittings are manufactured to AS/NZS 5065:2005, although this standard does not cover pipe perforations. StormPRO has been tested to and meet or exceed the relevant US AASHTO Standards for corrugated polypropylene pipe.

1.3 Benefits to V/Line

The product provides an alternative to non-recycled plastics for stormwater infiltration and subsurface drainage by utilising plastic waste material recycled into pipes. The use for recycled Polypropylene is in line with V/Line’s obligations to Victoria’s recycled first policy.

1.4 Supporting Documentation

The following supporting documentation has been considered in the review of this application and electronic copies are stored on the V/Line intranet version of the Type Approval register.

- Structural Design of StormPRO Applications
- Standardsmark Compliance Licence by SAI Global
- Quality Accreditation for compliance to ISO 9001:2015
- Conformance Certificate to AS/NZS 5065:2005 (R2017) and ISO 9001:2015
- Full Type Approval Certificate (#TA00847) by Metro Trains Melbourne (MTM)
- AASHTO Testing reports
- StormPRO Technical Datasheets
- StormPRO comparison datasheets with Steel Reinforced Concrete Pipes
- StormPRO Product Catalogues and Installation Guides
- StormPRO Slotted Pipe flyer
- StormPRO and StormFLO Presentation July 2022



2 Full Item Description

StormPRO SN8 Slotted Pipes are supplied in nominal 6-meter lengths with diameters as tabulated below.

Vinindex Code	Nominal Size (mm)	Effective Length (m)	Description
29501	225	5.99	225 StormPRO2 SN8 PP SLOT 5.99m
29502	300	5.94	300 StormPRO2 SN8 PP SLOT 5.94m
29503	375	5.93	375 StormPRO2 SN8 PP SLOT 5.93m
29504	450	5.95	450 StormPRO2 SN8 PP SLOT 5.95m
29505	525	5.89	525 StormPRO2 SN8 PP SLOT 5.89m
29506	600	5.85	600 StormPRO2 SN8 PP SLOT 5.85m
29507	750	5.92	750 StormPRO2 SN8 PP SLOT 5.92m
29508	900	5.91	900 StormPRO2 SN8 PP SLOT 5.91m

Further details are provided by StormPRO Slotted Pipes in the referenced supporting documents.

3 Scope of this Approval

This approval covers the use of StormPRO Slotted pipes, compliant with the terms and conditions of the Regional Infrastructure Lease and requirements of the V/Line Safety Management System for operation on the V/Line network in accordance with the scope and application set of in this certificate.

4 Qualifications and Conditions

This full Type Approval is granted on conditions of:

1. Use as subsurface water infiltration and collection pipes.
2. The pipes must not be used under locations that are subject to dynamic railway or roadway surcharge loads. For avoidance of doubt, the pipes may be used:
 - a. In respect of railway lines
 - i. At any depth provided that no part of the pipe is closer than 2.6 m horizontally from the centerline of the closest railway line.
 - ii. At any location closer to 2.6 m from the track centerline provided that no part of the pipe lays within a loading zone defined by the ratio of 1H:2V (H=Horizontal, V=Vertical) extending from the bottom of the adjacent track sleeper.
 - b. In respect of roadways, including access roads and car parks:
 - i. At any depth provided that no part of the pipe is closer than 1.4 m horizontally from the road pavement.
 - ii. At any location closer than 1.4 m from the road pavement provided that no part of the pipe lays within a loading zone defined by the ratio of 1H:1.5V (H=Horizontal, V=Vertical) extending downwards from the edge of the pavement.
3. The pipes must not be used under surcharge loading from buildings, structures or facilities unless a comprehensive review or design ascertains the suitability for such use in accordance with the requirements of V/Line procedure NIPR-2695 "Design management".
4. The pipes must not be used in locations or with liquids subject to temperatures greater than 80°C.
5. The pipes must not be used in conditions where there is a risk of exposure to chemical oxidants (including in aqueous solution) or hydrocarbons.
6. Where the pipes are proposed for use with effluent or there is a potential for chemicals to be present in diluted (aqueous) form, the exposure to chemicals and the impact of the chemicals to the design life of the pipes must be assessed, and the use of the pipe approved by the V/line Chief Engineer.



Type Approval Certificate

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7. Adherence to StormPRO pipes prescribed installation methodology described in the StormPRO Pipes supporting documents (refer to Section 1.4 of the Type Approval Certificate), with emphasis on:
 - a. Compaction
 - b. Backfill, and
 - c. Haunch support
8. The StormPRO Pipes are to be installed, commissioned, and used in order of precedence, in accordance with the V/Line Safety Management System (Including Standards, procedures, and guidelines), followed thereafter by the designer’s and manufacturer’s documentation
9. Locations where StormPRO Pipes are utilized shall be assessed for future potential for railway, roadway or facilities expansion and the resulting impacts associated with compliance with conditions 2 and 3 above.
10. StormPRO slotted pipes shall be used as water infiltration pipes only between catch pits and may not be used as carrier pipes to transport water from catch pits to discharge locations.
11. The pipes must be wrapped in a Type Approved geotextile when used in applications where it is not installed within a surrounding bed of free draining coarse aggregate. The free draining coarse aggregate shall have less than 5% of its product passing a 9.5 mm sieve.
12. This approval is for the pipes only. Special fittings and fixtures associated with the StormPRO system are not included in this Type Approval.

5 Certification

5.1 Authorization

Recommended			
Type Approval Facilitator	Deepti Wagle (Print Name)	(Signature)	(Date)
Endorsed			
Systems and Safe Working Manager	(Print Name)	(Signature)	(Date)
Relevant Discipline Engineer Manager	(Print Name)	(Signature)	(Date)
Chief Engineer	(Print Name)	(Signature)	(Date)
Approved			
Executive Director NDAM	(Print Name)	(Signature)	(Date)

5.2 Applicant’s Acknowledgement

(Applicant is to sign and return to the designated V/Line Type Approval Facilitator).

Applicant’s Agent or Representative	(Print Name)	(Signature)	(Date)
	(Print Position Title)		
	(Print Business Name)		