



Pre-mixed Concrete & Quarry Products Catalogue

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DOCUMENT CONTROL INFORMATION

DOCUMENT DETAILS

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DOCUMENT HISTORY

Issue	Revision	Date Approved	Change	Reasons for change	Comments
A	01	10 May 2007			
A	02	20 May 2008	Formatting changes only		
A	03	20 September 2010	In page 8 & 9 - Excluding scoria as embedment material for water reticulation works in WSA PS 361.	Scoria has been disapproved as embedment material for water reticulation works effective from 1 st November 2010.	Following publication of Technical Note TN 10-2 dated 20 Sept 2010
A	03	20 September 2010	In page 11 - Excluding scoria as trench fill material for water reticulation works in WSA PS 363.	Scoria has been disapproved as trench fill material for water reticulation works effective from 1 st November 2010.	
A	04	30 November 2010	In page 6 - Instructions for downloading WSAA Product Specifications	WSAA has changed its Products Specification website	
B	01	15 March 2011	No change to the previous issue		TN 11-01 dated 24 March 2011 was published
B	02	30 June 2011	No change to the previous issue		
B	03	30 December 2011	No change to the previous issue		

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ABOUT THIS CATALOGUE

The Water Services Association of Australia (WSAA) has prepared product specifications to facilitate procurement of pre-mixed concrete and quarried products for use in constructing water and sewer infrastructure.

In some cases WSAA has prepared more than one product specification for pre-mixed concrete and quarried products to accommodate different Water Agency requirements, locally available rock types quarried and processes used to produce these materials. This catalogue lists City West Water approved product specifications for the supply and delivery of embedment and trench fill material, including pre-mixed concrete used in City West Water asset creation contracts or land development agreement projects.

Since 1994, City West Water has required all concrete and quarry product suppliers to be ISO 9001 accredited. The current Codes and WSAA Product Specifications reinforce this requirement.

To help the industry identify accredited suppliers, City West Water maintains a list of accredited suppliers of Premixed Concrete and Quarry products on our website <http://www.citywestwater.com.au>.

City West Water does not give preference to any particular supplier and will consider new suppliers' requests for inclusion on our list of Accredited Suppliers - Premixed Concrete and Quarried Products provided they comply with the relevant standards or specifications.

Changes may be made periodically to the information in this catalogue and the list of accredited suppliers for pre-mixed concrete and quarry products. Product specifications, suppliers and installation drawings may be withdrawn or added to the catalogue and list of accredited suppliers from time to time. For current information, users should refer to the latest versions located on the CWW website.

Purchasers of products should obtain a declaration from the supplier that products purchased do in fact conform in every aspect to the product listed in this catalogue. In the event that a product is not available for a specific purpose or use from this catalogue, the Manager, Standards and Design shall obtain direction from CWW's Asset Management Committee regarding alternatives.

CWW will assume no responsibility for any errors that may appear in this catalogue or any damages arising out of the use or inability to use this document.

Other products not listed in this catalogue may be used in specific projects with the approval of City West Water.

INTENDED AUDIENCE

This catalogue is intended for City West Water personnel, consultant engineers and contractors engaged in the design, construction and maintenance of CWW's pressure pipeline systems for drinking and non-drinking water supply and sewer networks.

RELATED REFERENCE MATERIAL

- ◆ Melbourne Retail Water Agencies (MRWA) Editions of the Water Services Association of Australia (WSSA) Water Supply Code of Australia WSA – 03 2002. Version 2.3.
- ◆ MRWA Editions of the Water Services Association of Australia (WSAA) Sewerage Code of Australia WSA – 02 2002. Version 2.3.
- ◆ WSAA Polyethylene Pipeline Code of Australia WSA – 01 2004 Version 3.1.
- ◆ WSAA Vacuum Sewerage Code of Australia WSA – 06 2004 Version 1.1.
- ◆ WSAA Sewage Pumping Station Code of Australia WSA 04-2005 Version 2.1.
- ◆ CWW Supplement to the WSAA Sewerage Pump Station Code of Australia WSA 04-2005.
- ◆ WSAA Pressure Sewerage Code of Australia WSA 07-2007 Version 1.1.
- ◆ MRWA Dual Water Supply Code Supplement to the MRWA Edition of the Water Supply Code of Australia WSA – 03 2002.
- ◆ The Water Services Association of Australia (WSAA) Purchase Specifications (refer <http://www.wsaa.asn.au/> National Codes / Purchase Specifications).
- ◆ The Water Services Association of Australia (WSAA) Product and Material Information Guidance Notes (refer <http://www.wsaa.asn.au/> National Codes / Purchase Specifications).
- ◆ City West Water list of Accredited Suppliers – Of Pre-mixed Concrete and Quarry Products. <http://www.citywestwater.com.au>.
- ◆ MRWA Backfill Specification No. 04-03.1
- ◆ Vic Roads Standard Specifications, 812, 815, 818, 820, 821; (801 related)
- ◆ AS 1379 Specification and Supply on concrete
- ◆ WSA – 114 Industry Standard for Concrete – Special Class
- ◆ Any other CWW Supplements

INSTRUCTIONS FOR DOWNLOADING WSAA PRODUCT SPECIFICATIONS

Click [here](#) to download or view a full set of Product Specifications. The file will open at the contents page of the Product Specifications. If you press the F5 key you can now navigate around the document using the bookmarks.

Alternatively you can access the WSAA Website <https://www.wsaa.asn.au> and download or view a full set of Product Specifications:

The screenshot shows the WSAA website interface. The header includes the WSAA logo and the tagline 'The peak industry association for urban water utilities'. The navigation menu includes 'Home', 'About WSAA', 'Media Centre', 'Publications', 'National Codes', 'Product Appraisals', and 'Links'. The 'Product Appraisals' section is active, showing a breadcrumb trail: 'Home > Product Appraisals > Water Supply & Sewerage'. The main content area is titled 'Water Supply & Sewerage' and describes the appraisal process in three steps. A table at the bottom lists 'Product Specifications' with columns for Title, Publication Number, and Published Date. The table shows one entry: 'Product Specifications' with a publication number and a date of 5/15/2008, with a 'free download' link.

Title	Publication Number	Published Date	
Product Specifications		5/15/2008	free download

Product Specifications will continue to be developed as more Industry Standards and Australian Standards are published.

It is a Designer's responsibility to nominate specification most appropriate to project-specific circumstances and to complete the "Options to be specified" table and nominate the "Agency approved options" for each product. For further information refer to the content in this Product Catalogue or the relevant WSAA Codes and/or MRWA Supplement.

ORGANISATION OF THIS CATALOGUE

The information for each product in this catalogue is formatted as shown below.

Heading	Description
Material	This lists the materials used in the manufacture of the product.
WSAA Product Specification	Lists the product specifications for products and materials referenced in the WSAA Codes and Supplements
Special Conditions	Special conditions imposed by CWW on the use of the listed product.

Product Specifications, Australian Standards and International Standards relevant to products listed are shown at the beginning of each product category.

INFORMATION

For information and advice and to advise of possible errors, omissions and changes required for future revisions, please fill out a [Document Improvement Request Form](#) and submit to Mr Robert Jagger, Manager Standards by email at standards@citywestwater.com.au

QUARRIED PRODUCTS – PIPE EMBEDMENT MATERIALS

SPECIFICATIONS	WSA PS – 351 Processed Aggregates for Pipe Embedment
	WSA PS – 352 Controlled Low Strength Pipe Embedment Materials
	WSA PS – 360 Embedment Sand
	WSA PS – 361 Embedment / 5 mm Minus (excluding scoria as an embedment material for water reticulation works)
	WSA PS – 362 Well Graded Crushed Rock for Pipe Embedment

PROCESSED SINGLE-SIZE COARSE AGGREGATES FOR PIPE EMBEDMENT

20 mm Single-Size Coarse Aggregate

Material	20 mm Single Size Coarse Aggregate
WSAA Product Specification	WSA PS – 351
Special Conditions	

10 mm Single-Size Coarse Aggregate

Material	10 mm Single Size Coarse Aggregate
WSAA Product Specification	WSA PS – 351
Special Conditions	

SANDS FOR PIPE EMBEDMENT

Material	Embedment Sand
WSAA Product Specification	WSA PS– 360
Special Conditions	

FINE CRUSHED ROCK FOR PIPE EMBEDMENT

Embedment / 5 mm minus

Material	5 mm minus
WSAA Product Specification	WSA PS – 361
Special Conditions	Excluding scoria as an embedment material for water reticulation works effective from 1 Nov 2010.

WELL GRADED CRUSHED ROCK FOR PIPE EMBEDMENT

20 mm Well Graded Crushed Rock

Material	20 mm Well Graded Crushed Rock
WSAA Product Specification	WSA PS – 362
Special Conditions	

10 mm Well Graded Crushed Rock

Material	10 mm Well Graded Crushed Rock
WSAA Product Specification	WSA PS – 362
Special Conditions	

CONTROLLED LOW STRENGTH MATERIAL PRODUCTS (CLSM) – PIPE EMBEDMENT MATERIALS

20 mm Class 3 Plant Mixed Wet Mix Crushed Rock (Complying with Vic Roads Standard Specification 815)

Material	20 mm Class 3 Cement Treated Crushed Rock
WSAA Product Specification	WSA PS – 352.2 (a) Controlled Low Strength Pipe Embedment Materials
Special Conditions	Target cement content shall be specified in the project specifications or on the project drawings Ground granulated blast furnace slag shall not be used as a cementitious binder.

10 mm Plant Mixed Wet Mix Crushed Rock

Material	10 mm Cement Treated Crushed Rock
WSAA Product Specification	WSA PS – 352.2 (a) Controlled Low Strength Pipe Embedment Materials
Special Conditions	Target cement content shall be specified in the project specifications or on the project drawings
	Ground granulated blast furnace slag shall not be used as a cementitious binder.

Flowable Controlled Low Strength Pipe Embedment Materials (Liquidfill® OR Similar Product)

Material	Sand / Crushed Rock
WSAA Purchase Specification	WSA PS 352.2 (b) Controlled Low Strength Pipe Embedment Materials
Special Conditions	The target strength shall be specified in the project specifications or on the project drawings.
	Flowable CLSM shall comply with mix proportions in Table 352.2 and the grading limits in Table 352.3
	Ground granulated blast furnace slag shall not be used as a cementitious binder.

**TABLE 352.3
GRADING LIMITS FOR GRANULAR MATERIAL**

Sieve Size	Mass of sample passing
mm	%
19	100
0.075	0-20

Table 352.3 is taken from Table K2 of AS/NZS 2566.2:2002.

The gradings specified in WSA PS 360 and WSA PS361 conform to Table K2 of AS/NZS 2566.2:2002 and when blended with the CLSM mix proportions in Table 352.2 and water form a flowable cement stabilised embedment material.

QUARRY PRODUCTS – TRENCH BACKFILL MATERIALS UNDER PAVED SURFACES

SPECIFICATIONS	WSA PS – 363 Trenchfill Materials (excluding scoria as trench fill material for water reticulation works)
Material	Includes <ul style="list-style-type: none"> ▪ 20 mm nominal size Class 4 Crushed Rock ▪ 20 mm nominal size Class 4 Crushed Scoria (excluding scoria as trench fill material for water reticulation works) ▪ 20 mm nominal size Class 4 Crushed Concrete

WELL GRADED CRUSHED ROCK FOR TRENCH BACKFILL MATERIAL

20 mm Class 4 Crushed Rock (Complying with Vic Roads Standard Specification 812)

Material	20 mm nominal size Class 4 Crushed Rock
WSAA Purchase Specification	WSA PS – 363 Trenchfill Materials
Special Conditions	Excluding scoria as trench fill material for water reticulation works effective from 1 Nov 2010 onwards

20 mm Class 4 Crushed Scoria (Complying with Vic Roads Standard Specification 818)

Material	20 mm nominal size Class 4 Crushed Scoria
WSAA Purchase Specification	WSA PS – 363 Trenchfill Materials
Special Conditions	Excluding scoria as trench fill material for water reticulation works effective from 1 Nov 2010 onwards

20 mm Class 4 Crushed Concrete (Complying with Vic Roads Standard Specification 820)

Material	20 mm nominal size Class 4 Crushed Concrete
WSAA Purchase Specification	WSA PS – 363 Trenchfill Materials
Special Conditions	Excluding scoria as trench fill material for water reticulation works effective from 1 Nov 2010 onwards

20 mm Class 2 Plant Mixed Wet Mix Crushed Rock (Complying with Vic Roads Standard Specification 812)

Material	Class 2 Wet Mixed Crushed Rock
WSAA Purchase Specification	WSA PS – 363 Trenchfill Materials
Special Conditions	Excluding scoria as trench fill material for water reticulation works effective from 1 Nov 2010 onwards

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CONCRETE PRE-MIXED PRODUCTS

SPECIFICATIONS	WSA PS – 357 Concrete Pre-mix Normal Class
	WSA PS – 358 Concrete Pre-mix Special Class
	AS 1379 Specification and Supply on Concrete
	WSA – 114 Industry Standard for Concrete – Special Class

CONCRETE PRE-MIXED

Normal Class

Material	Concrete Pre-mix Normal Class
WSAA Purchase Specification	WSA PS – 357
Special Conditions	The strength class of the concrete ordered shall be specified in the project specifications or on the project drawings

Special Class

Material	Concrete Pre-mix Special Class
WSAA Purchase Specification	WSA PS – 358
Special Conditions	The strength class of the concrete ordered shall be specified in the project specifications or on the project drawings.

CONCRETE PRE-MIX BAGGED CONCRETE

Material	Concrete Mix
WSAA Purchase Specification	None
Special Conditions	<p>Premixed bagged concrete is NOT to be used for the construction of concrete structures which require structural strength or where concrete strength of 25 MPa or greater at 28 days is specified.</p> <p>Premixed bagged products are to be used for :</p> <p>Applications of non-structural repairs and alterations to access chambers including :</p> <p>Retrofit of new connections.</p> <p>General repairs.</p> <p>Embedment of pipes</p> <p>Embedment of VC pipe junctions</p> <p>Embedment of stack surrounds</p> <p>Anchor blocks</p>

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PREMIXED CONCRETE AND QUARRY PRODUCT SUPPLIERS

A list of accredited suppliers of cement, concrete & quarry products can be downloaded from City West Water website. <http://www.citywestwater.com.au>

The firms on this list have ISO9001 accreditation and supply premixed concrete and/or quarry products to the nominated Water Agency purchase specification(s).

City West Water makes no other guarantees or warranties as to the commercial practices or viability of these firms. You are advised to make your own inquiries and obtain a number of quotes to increase confidence in the supplier of your choice.

For details and information regarding this listing please contact the Manager, Standards at City West Water via email standards@citywestwater.com.au.

DOCUMENT IMPROVEMENT REQUEST

Pre-Mixed Concrete and Quarry Products Catalogue

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