



Kitemark[®] Licence

No. KM 20173

The licence is granted to:

**Naylor Drainage Limited
Clough Green
Cawthorne
Barnsley
S75 4AD
United Kingdom**

In respect of:

BS EN 295

Vitrified clay pipes & fittings & pipe joints for drains and sewers

This issues the right and licence to use the Kitemark in accordance with the Kitemark Licence Conditions of Contract governing the use of the Kitemark, as may be updated from time to time by The British Standards Institution, and as approved by the Registrar under the Trade Marks Act 1994 (the "Conditions"). All defined terms in this Licence shall have the same meaning as in the Conditions.

The use of the Kitemark is authorized in respect of the Product(s) detailed on this Licence provided at or from the above address.

For and on behalf of BSI:

Gary Fenton, Global Assurance Director

First Issued: 20/03/1992

Latest Issue: 17/02/2012



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**BS EN 295 –
Vitrified clay pipes and fittings and joints for drains and sewers.**

General:

Pipes and fittings detailed in this schedule may be supplied with or without sockets. Pipe diameters are described by nominal bore (DN) size and crushing strengths (FN) and include lengths up to and including 2.0 metres.

Part 1 - Requirements for Vitrified Clay Pipes and Fittings.

A – PIPES

1. Spigot Controlled Jointing System G known as: Denseal Plus

Nominal Size (DN)	Crushing Strength (FN) kN/m
200	40
225	54
250	60
300	72
375	48
400	64
450	72
500	80
600	96
700	96

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A – PIPES (Continued)

2. Spigot Controlled Jointing System G known as: Densleeve

Nominal Size (DN)	Crushing Strength (FN) kN/m
100	34
150	34
150	40
200	56
225	45
250	70
300	72

3. Spigot Controlled Jointing System known as: System 2000

Nominal Size (DN)	Crushing Strength (FN) kN/m
DN 600 only	72

4. Spigot Controlled Jointing System known as: Revit

Nominal Size (DN)	Crushing Strength (FN) kN/m
225	54
250	60
300	72
375	48
400	64
450	72
500	80
600	96

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B – FITTINGS (All System G)

Pipeline connections of all sizes up to and including DN 500

Fittings Group	Nominal Length	Angle of Curvature of Branch Angle (Degrees)
Taper and Splay Pipes	Up to and Including 1.0m	---
Access and Inspection Pipes and Chambers, Channels and Taper Channels	Up to and Including 2.0m	---
Bends*, Taper and Rest	---	11¼, 15, 22½*, 30, 45*, 60, 75 & 90*
Channel Bends, Access and Inspection Bends	---	10, 11¼, 15, 22½, 30, 45, 50, 60, 70, 90, 115, 140 & 165
Saddles and Oblique Saddles	---	45 & 90
Junctions*	Up to and Including 2.0m	30, 45*, 60 & 90*
Channel Junctions and Access Junctions	Up to and Including 2.0m	30, 45, 60 & 90
Taper Channel Bends	---	11¼, 15, 22½, 30, 45, 60 & 90
Trapped Gullies, Low Back Traps, Syphons and Interceptors	---	
Trapless Gullies, Hoppers and Raising Pieces	---	
Saddle Fitting Joint	DN 150	

* Bends and junctions of these angles will normally be supplied unperforated for use with perforated pipelines (Denline – BS EN 295:Pt.5). They may be perforated if specifically requested.

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C - FLEXIBLE MECHANICAL JOINTS

When used in conjunction with the pipes and fittings covered by this Licence, the following joints comply with BS EN 295:

Trade Name of Joint/Fitting	Jointing System	Nominal Bore	Relevant Part of BS EN 295
Denseal Plus	System G	DN 375 - DN 700	Pt. 1
Densleeve	System G	DN 100 - DN 300	Pt. 1
System 2000	System 2000	DN 600	Pt. 1
Band-Seal ¹	Band-Seal	DN 100 - DN 1000	Pt. 4
Denlok®	Denlok®	DN 150 - DN 700	Pts. 1 & 7

Part5 - Perforated Vitrifed Clay Pipes and Fittings² - Denline Range

Nominal Size (DN)	Crushing Strength kN/m	Perforation Area Type
75	20, 22 & 28	A
100	20, 22 & 28	A
125	20, 22 & 28	A
150	20, 22 & 28	A
200	24	A
225	28	A
250	30	A
300	36	A
375	38	A
400	38	A
450	43	A
500	48	A

¹ This range includes adaptor couplings; Type 1; 2A & B; bushes.

² Fittings as per Section B on Page 4



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Part 7 - Vitrified clay pipes and joints for pipe jacking – *Denlok[®]* Range.

Nominal Size (DN)	Minimum Crushing Strength(kN/m) Clause 4.8.1	Design Jacking Load (kN) Clause 4.8.4
150	64	365
150	64	400
200	80	700
225	54	715
225	81	715
250	100	1630
300	120	1875
350	70	2429
400	160	3150
450	144	3250
500	120	3400
525	126	3560
600	120	4520
700	96	5000

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