	
Steinzeug-Keramo N.V. Paalsteenstraat 36 B-3500 Hasselt Belgium Telephone: +32 11 265 279  13  108	
EN 295-1:2013  Vitrified clay pipe DN250 – 2,5 – FN60 – C  Buried drain and sewer systems for the conveyance of wastewater	
<b>Essential characteristics</b>	<b>Performance</b>
<b>Reaction to fire</b>	Class A1
<b>Crushing strength (<math>F_N</math>)</b>	60 kN/m
<b>Dimensional tolerances, concerning:</b>	
Internal diameter	Within tolerance
Length	Within tolerance
Squareness of ends	Within tolerance
Straightness	Within tolerance
Continuity of invert	Within tolerance
Joint inter-changeability	System C
<b>Tightness (gas and liquid) and Permeability as:</b>	
Watertightness	Tight
Airtightness	Tight
<b>Watertightness of joint assemblies, as:</b>	
Angular deflection	Tight
Shear resistance	Tight
<b>Durability of crushing strength, against:</b>	
Chemical resistance	$\leq 0,15\%$ loss of mass
Resistance against high pressure water jetting <ul style="list-style-type: none"> <li>Moving nozzle</li> <li>Stationary nozzle</li> </ul>	12 MPa 28 MPa
Water absorption	< 6% of mass
<b>Durability of watertightness, against:</b>	
Chemical and physical resistance to effluent	Tight
Thermal cycling stability	Tight
Long term thermal stability	Tight



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Paalsteenstraat 36  
B-3500 Hasselt Belgium  
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13

108

EN 295-1:2013

Vitrified clay connector GA DN250 – 0,6 – FN60 – C  
Vitrified clay connector GZ DN250 – 0,6 – FN60 – C

Buried drain and sewer systems for the conveyance of wastewater

Essential characteristics	Performance
Reaction to fire	Class A1
Crushing strength ( $F_N$ )	60 kN/m
<b>Dimensional tolerances, concerning:</b>	
Internal diameter	Within tolerance
Length	Within tolerance
Squareness of ends	Within tolerance
Continuity of invert	Within tolerance
Joint inter-changeability	System C
<b>Tightness (gas and liquid) and Permeability as:</b>	
Watertightness	Tight
Airtightness	Tight
<b>Watertightness of joint assemblies, as:</b>	
Angular deflection	Tight
Shear resistance	Tight
<b>Durability of crushing strength, against:</b>	
Chemical resistance	$\leq 0,15\%$ loss of mass
Resistance against high pressure water jetting <ul style="list-style-type: none"> <li>Moving nozzle</li> <li>Stationary nozzle</li> </ul>	12 MPa 28 MPa
Water absorption	< 6% of mass
<b>Durability of watertightness, against:</b>	
Chemical and physical resistance to effluent	Tight
Thermal cycling stability	Tight
Long term thermal stability	Tight



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13

108

EN 295-1:2013

Vitrified clay bend DN250 – FN60 – C – 15°  
Vitrified clay bend DN250 – FN60 – C – 30°  
Vitrified clay bend DN250 – FN60 – C – 45°  
Vitrified clay bend DN250 – FN60 – C – 90°

Buried drain and sewer systems for the conveyance of wastewater

Essential characteristics	Performance
Reaction to fire	Class A1
<b>Dimensional tolerances, concerning:</b>	
Internal diameter	Within tolerance
Angle of curvature and radius	Within tolerance
Continuity of invert	Within tolerance
Joint inter-changeability	System C
<b>Tightness (gas and liquid) and Permeability as:</b>	
Watertightness	Tight
Airtightness	Tight
<b>Watertightness of joint assemblies, tested as joint assembly of pipes</b>	
Angular deflection	Tight
Shear resistance	Tight
<b>Durability of watertightness, against:</b>	
Chemical and physical resistance to effluent	Tight
Thermal cycling stability	Tight
Long term thermal stability	Tight



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13


108


EN 295-1:2013


Vitrified clay junction DN250150 – FN60 – C/F – 45°  
Vitrified clay junction DN250150 – FN60 – C/F – 90°  
Vitrified clay junction DN250200 – FN60 – C/F – 45°  
Vitrified clay junction DN250200 – FN60 – C/F – 90°  
Vitrified clay junction DN250200 – FN60 – C/C – 45°  
Vitrified clay junction DN250200 – FN60 – C/C – 90°  
Vitrified clay junction DN250250 – FN60 – C/C – 45°  
Vitrified clay junction DN250250 – FN60 – C/C – 90°

Buried drain and sewer systems for the conveyance of wastewater

Essential characteristics	Performance
Reaction to fire	Class A1
<b>Dimensional tolerances, concerning:</b>	
Internal diameter	Within tolerance
Squareness of ends	Within tolerance
Branch angle	Within tolerance
Continuity of invert	Within tolerance
Joint inter-changeability	System C
<b>Tightness (gas and liquid) and Permeability as:</b>	
Watertightness	Tight
Airtightness	Tight
<b>Watertightness of joint assemblies, tested as joint assembly of pipes</b>	
Angular deflection	Tight
Shear resistance	Tight
<b>Durability of watertightness, against:</b>	
Chemical and physical resistance to effluent	Tight
Thermal cycling stability	Tight
Long term thermal stability	Tight

	
Steinzeug-Keramo N.V. Paalsteenstraat 36 B-3500 Hasselt Belgium Telephone: +32 11 265 279  13  108	
EN 295-1:2013  Vitrified clay repair junction DN250150 – FN60 – C/F – 45° Vitrified clay repair junction DN250150 – FN60 – C/F – 90°  Buried drain and sewer systems for the conveyance of wastewater	
<b>Essential characteristics</b>	<b>Performance</b>
<b>Reaction to fire</b>	Class A1
<b>Dimensional tolerances, concerning:</b>	
Internal diameter	Within tolerance
Squareness of ends	Within tolerance
Branch angle	Within tolerance
Continuity of invert	Within tolerance
Joint inter-changeability	System C
<b>Tightness (gas and liquid) and Permeability as:</b>	
Watertightness	Tight
Airtightness	Tight
<b>Watertightness of joint assemblies, tested as joint system of flexible couplings</b>	
Angular deflection	Tight
Shear resistance	Tight
<b>Durability of watertightness, against:</b>	
Chemical and physical resistance to effluent	Tight
Thermal cycling stability	Tight
Long term thermal stability	Tight

	
Steinzeug-Keramo N.V. Paalsteenstraat 36 B-3500 Hasselt Belgium Telephone: +32 11 265 279  13  108	
EN 295-4:2013  Vitrified clay connector GE DN250 – FN60 – C  Buried drain and sewer systems for the conveyance of wastewater	
<b>Essential characteristics</b>	<b>Performance</b>
<b>Reaction to fire</b>	Class A1
<b>Dimensional tolerances, concerning:</b>	
Internal diameter	Within tolerance
Squareness of ends	Within tolerance
Continuity of invert	Within tolerance
Joint inter-changeability	System C
<b>Tightness (gas and liquid) and Permeability as:</b>	
Watertightness	Tight
Airtightness	Tight
<b>Watertightness of joint assemblies, tested as joint assembly of pipes</b>	
Angular deflection	Tight
Shear resistance	Tight
<b>Durability of watertightness, against:</b>	
Chemical and physical resistance to effluent	Tight
Thermal cycling stability	Tight
Long term thermal stability	Tight

	
Steinzeug-Keramo N.V. Paalsteenstraat 36 B-3500 Hasselt Belgium Telephone: +32 11 265 279  13  108	
EN 295-4:2013  Vitrified clay stopper DN250 – FN60 – C  Buried drain and sewer systems for the conveyance of wastewater	
<b>Essential characteristics</b>	<b>Performance</b>
<b>Reaction to fire</b>	Class A1
<b>Dimensional tolerances, concerning:</b>	
Joint inter-changeability	System C
<b>Tightness (gas and liquid) and Permeability as:</b>	
Watertightness	Tight
Airtightness	Tight
<b>Watertightness of joint assemblies, tested as joint assembly of pipes</b>	
Angular deflection	Tight
Shear resistance	Tight
<b>Durability of watertightness, against:</b>	
Chemical and physical resistance to effluent	Tight
Thermal cycling stability	Tight
Long term thermal stability	Tight

<b>Declaration of Performance 108</b>	
1. Unique identification	Vitrified clay pipe system DN250 – FN60 – C
2. Type	Vitrified clay pipe DN250 – 2,5 – FN60 – C Vitrified clay connector GA DN250 – 0,6 – FN60 – C Vitrified clay connector GZ DN250 – 0,6 – FN60 – C Vitrified clay bend DN250 – FN60 – C – 15° Vitrified clay bend DN250 – FN60 – C – 30° Vitrified clay bend DN250 – FN60 – C – 45° Vitrified clay bend DN250 – FN60 – C – 90° Vitrified clay junction DN250150 – FN60 – C/F – 45° Vitrified clay junction DN250150 – FN60 – C/F – 90° Vitrified clay junction DN250200 – FN60 – C/F – 45° Vitrified clay junction DN250200 – FN60 – C/F – 90° Vitrified clay junction DN250200 – FN60 – C/C – 45° Vitrified clay junction DN250200 – FN60 – C/C – 90° Vitrified clay junction DN250250 – FN60 – C/C – 45° Vitrified clay junction DN250250 – FN60 – C/C – 90° Vitrified clay repair junction DN250150 – FN60 – C/F – 45° Vitrified clay repair junction DN250150 – FN60 – C/F – 90° Vitrified clay connector GE DN250 – FN60 – C Vitrified clay stopper DN250 – FN60 – C
3. Intended use	Buried drain and sewer systems for the conveyance of wastewater
4. Name and contact address of the manufacturer	Steinzeug-Keramo N.V. Paalsteenstraat 36 B-3500 Hasselt Belgium Telephone: +32 11 265 279
5. Name and contact address of the authorised representative	N.A.
6. System of assessment and verification of the construction product	System 4
7. Declaration of performance concerning a construction product covered by a harmonised standard	Yes
8. European Technical Assessment issued	N.A.



9. Declared performance:			
Essential characteristics	Performance	Harmonised technical specification	
Reaction to fire	Class A1	EN295-1:2013 EN295-4:2013	
Crushing strength (F <sub>N</sub> ) <sup>a)</sup>	60 kN/m		
Dimensional tolerances, concerning:			
Internal diameter <sup>e)</sup>	Within tolerance		
Length <sup>a)</sup>	Within tolerance		
Squareness of ends <sup>d)</sup>	Within tolerance		
Straightness <sup>b)</sup>	Within tolerance		
Angle of curvature and radius <sup>c)</sup>	Within tolerance		
Branch angle <sup>d)</sup>	Within tolerance		
Continuity of invert <sup>e)</sup>	Within tolerance		
Joint inter-changeability	System C		
Tightness (gas and liquid) and Permeability as:			
Watertightness	Tight		
Airtightness	Tight		
Watertightness of joint assemblies, as:			
Angular deflection	Tight		
Shear resistance	Tight		
Durability of crushing strength, against:			
Chemical resistance	≤ 0,15% loss of mass		
Resistance against high pressure water jetting <ul style="list-style-type: none"><li>Moving nozzle</li><li>Stationary nozzle</li></ul>	12 MPa 28 MPa		
Water absorption	< 6% of mass		
Durability of watertightness, against:			
Chemical and physical resistance to effluent	Tight		
Thermal cycling stability	Tight		
Long term thermal stability	Tight		
The performance of the product identified in points 1 and 2 is in conformity with the declared performance in point 9. This declaration of performance is issued under the sole responsibility of the manufacturer identified in point 4.			
a) Only for pipes and connectors GA/GZ			
b) Only for pipes			
c) Only for bends			
d) Only for junctions & repair junctions			
e) For pipes, bends, junctions, repair junctions & connectors			
f) For pipes, junctions, repair junctions & connectors			

Signed for and on behalf of the manufacturer:

Name and function: Mr. R. van Veldhoven, Quality Director

Place and date: Frechen, 2 July 2013

Signature:

