



Concrete Blocks to: CE Mark I.S. EN 771-3:2011+A1:2015  
(Specification for masonry units - Part 3: Aggregate concrete masonry units).

## Declaration of Performance

### 20N/mm<sup>2</sup> Concrete Block (Category I)

#### *Product Type and identification:*

Name	Identification
20N 100mm Solid Block	S/440x100x215

**Intended Use:** Walls, columns, and partitions.

**Manufacturer:** Hanlon Concrete Products Ltd. Lowtown, Roberstown, Naas, Co Kildare.

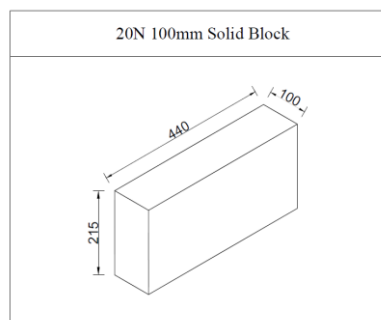
**System of AVCP:** System 2+

**Harmonized Standard:** I.S. EN 771-3:2011+A1:2015.

**Declared Performance:** The declared essential characteristics and performance of each product is as follows:

**Table 1 – Dimensions:**

Name	Dimensions (length x width x height) (mm)
20N 100mm Solid Block	440x100x215

**Normal configuration:**

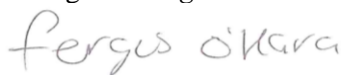
**Table 2 – Essential Characteristics and Performance:**

Essential Characteristics		Performance
Dimensions:	Dimensions (length x width x height)	Refer to <b>Table 1 – Dimensions</b> and <b>Normal configuration</b> figures.
Dimensional tolerances:	Category	D1
Configuration:	Shape & Features	NPD
Compressive strength:	Mean Compressive Strength	20N/mm <sup>2</sup>
	Direction of Load	Perpendicular to bed face
	Unit Category	Category I
Bond strength:	Shear Bond Strength	0.15N/mm <sup>2</sup> (tabulated value)
	Flexural Bond Strength	NPD
Flatness:		NPD
Plane parallelism of bed faces:		NPD
Dimensional stability (shrinkage):		<0.6mm/m
Reaction to fire:		Euroclass A1
Water absorption:		<20 g/(m <sup>2</sup> .s <sup>0.5</sup> )  - 20N units: Not to be left unrendered in Exposed conditions. - All strengths: not to be used as a DPM. - Refer to Freeze-Thaw clause below.
Water vapour permeability:		5/15μ (tabulated value)
Direct airborne sound insulation:	Net density:	>1900 kg/m <sup>3</sup>
	Gross density:	>1900 kg/m <sup>3</sup> - Solid
	Configuration	As above
Thermal conductivity (w/mK) (λ10, dry):		0.90 - 1.30 (Solid)
Durability against freeze-thaw:		NPD
Dangerous substances:		NPD

Note: Information on dangerous substances will only be given when and where required in the appropriate form.

Signed: *Fergus O'Hara*.

Date: 15<sup>th</sup> September 2022





**Hanlon Concrete Products Ltd.**  
**Lowtown, Robertstown, Naas, Co Kildare**

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**1029-CPR-GB19/964093**

**I.S. EN 771-3:2011+A1:2015**  
 (Specification for masonry units - Part 3: Aggregate concrete masonry units).

**20N/mm<sup>2</sup> Concrete Block (Category I)**

**Intended Use:** Walls, columns, and partitions.

Characteristic	Declared Performance	Technical Specification
Dimensions:	Refer to <i>Table 1 – Dimensions and Normal configuration</i> figures.	-
Dimensional tolerances:	Category D1	<ul style="list-style-type: none"> <li>• I.S. EN 772-16</li> <li>• S.R. 325:2013+A2:2018, Annex C.3</li> </ul>
Configuration:	NPD	<ul style="list-style-type: none"> <li>• I.S. EN 1996-1-1 + NA</li> <li>• S.R. 325:2013+A2:2018, Annex C.5</li> </ul>
Compressive Strength (mean):	20N/mm <sup>2</sup> (perpendicular to bed face) (Category I)	<ul style="list-style-type: none"> <li>• I.S. EN 772-1</li> <li>• S.R. 325:2013+A2:2018, Annex C.4 and C.5</li> <li>• Building Regulation - Part A (Structure): NDP</li> </ul>
Shear bond strength:	0.15N/mm <sup>2</sup>	<ul style="list-style-type: none"> <li>• I.S. EN 998-2 (Tabulated)</li> </ul>
Flexural bond strength:	NPD	<ul style="list-style-type: none"> <li>• I.S. EN 998-2</li> </ul>
Flatness:	NPD	<ul style="list-style-type: none"> <li>• I.S. EN 772-20</li> </ul>
Plane parallelism of bed faces:	NPD	<ul style="list-style-type: none"> <li>• I.S. EN 772-20</li> </ul>
Dimensional stability (moisture movement / shrinkage):	<0.6mm/m	<ul style="list-style-type: none"> <li>• I.S. EN 772-14</li> <li>• S.R. 325:2013+A2:2018, Annex C.6</li> <li>• S.R. 325:2013+A2:2018, Clause 5.4.3.4 (Movement joints requirements or as specified by engineer)</li> <li>• Table NA.6 from NA:2010+A1:2014 (to I.S. EN 1996-1-1:2005+A1:2012): NDP</li> </ul>
Reaction to fire:	Euroclass A1	<ul style="list-style-type: none"> <li>• Based on Commission Decision 200/605 EC amending 96/603 EC</li> <li>• I.S. EN 1996-1-2 National Annex, Table NA 3.1/3.2/ 3.3 (fire ratings, walls constructed with Euroclass A1 units)</li> <li>• Building Regulations Part B, Fire Safety</li> </ul>
Water absorption:	<20 g/(m <sup>2</sup> .s <sup>0.5</sup> )  - 20N units: Not to be left unrendered in exposed conditions. - All strengths: not to be used as a DPM. - Refer to Freeze-Thaw clause below.	<ul style="list-style-type: none"> <li>• I.S. EN 772 – 11</li> <li>• Refer to Freeze-Thaw clause below.</li> </ul>
Water Vapour diffusion coefficient:	5/15μ	<ul style="list-style-type: none"> <li>• I.S. EN 1745 Annex A (Tabulated)</li> </ul>
Direct airborne sound insulation:	NPD	-
Net density:	>1900 kg/m <sup>3</sup>	<ul style="list-style-type: none"> <li>• I.S. EN 772-13</li> </ul>
Gross density:	>1900 kg/m <sup>3</sup> - Solid >1150 kg/m <sup>3</sup> - Cavity	<ul style="list-style-type: none"> <li>• I.S. EN 772-13</li> <li>• Building Regulation - Part E (Sound): NDP</li> </ul>
Thermal Conductivity:	0.90 - 1.30 W/mK (λ10, dry) (Solid)	I.S. EN 1745 Annex A (Tabulated)
Durability against <u>Freeze-Thaw</u> :	<p>Masonry Conditions/Situations in Table 14 (Durability of masonry in finished construction) of S.R. 325:2013+A2:2018 and used in accordance with Irish Building Regulations (including Technical Guidance Documents C &amp; D), Eurocodes, I.S. EN 13914 - 1 &amp; 2: 2016 and S.R. 325:2013+A2:2018.</p> <p><b>Masonry Conditions/Situations A1 and A2 (Work below or near external ground level) and D (Rendered external walls (other than chimneys, cappings, copings, parapets, sills)) – Classes MX2.1/2.2/3.1:</b>            Category 1, Group 1:</p>	<ul style="list-style-type: none"> <li>• Irish Building Regulations (including Technical Guidance Documents C &amp; D).</li> <li>• Eurocodes.</li> <li>• I.S. EN 1996-1-1:2005 (Eurocode 6: Design of masonry structures. General rules for reinforced and unreinforced masonry structures (+A1:2012) (including Irish National Annex +A1:2014)).</li> <li>• I.S. EN 1996-2:2006 (Eurocode 6: Design of masonry structures. Design considerations, selection of materials and execution of masonry (includes Irish National Annex - NA:2010)).</li> <li>• S.R. 325:2013+A2:2018 (including Clause 5.5 (exclusion of moisture), Clause 5.6 (durability) &amp; Table 14).</li> <li>• I.S. EN 13914 - 1 &amp; 2: 2016.</li> </ul>

	<ul style="list-style-type: none"> <li>• net density <math>\geq 1,500 \text{ kg/m}^3</math>.</li> <li>• declared mean compressive strength <math>\geq 7.5 \text{ N/mm}^2</math> or a declared normalised compressive strength of <math>\geq 10.5 \text{ N/mm}^2</math>.</li> <li>• mortar strength class: M4 (A1 / MX2.1/2.2/3.1), M6 (A2 / MX2.2).</li> </ul> <p><b>Masonry Conditions/Situations A3 (Work below or near external ground level) and C1 and C2 (Unrendered external walls (other than chimneys, cappings, copings, parapets, sills)) – Class MX3.2:</b></p> <p>Category 1, Group 1:</p> <ul style="list-style-type: none"> <li>• net density <math>\geq 1,500 \text{ kg/m}^3</math>.</li> <li>• declared mean compressive strength <math>\geq 13 \text{ N/mm}^2</math> and a declared normalised compressive strength of <math>\geq 18 \text{ N/mm}^2</math>.</li> <li>• mortar strength class: M12.</li> </ul> <p>All masonry units produced with aggregate in accordance with I.S. EN 12620 (Aggregates for concrete) and S.R. 16:2016 (Guidance on the use of I.S. EN 12620, Aggregates for concrete).</p>	<p><b>Table 14 of S.R. 325:2013+A2:2018:</b></p> <p>Masonry Conditions/Situations:</p> <ul style="list-style-type: none"> <li>• A1 - Low Risk of Saturation (1) Without Freezing (MX2.1, MX2.2) (2) With Freezing (MX3.1)</li> <li>• A2 - High Risk of Saturation Without Freezing (MX2.2)</li> <li>• A3 - High Risk of Saturation with Freezing (MX3.2)</li> <li>• C1 - Low Risk of Saturation (MX3.1)</li> <li>• C2 - High Risk of Saturation (MX3.2)</li> </ul> <p>See masonry mortar strength classes in Table NA.3 of National Annex in I.S. EN 1996-1-1:2005.</p> <p><b>Table A.1 (Classification of micro conditions of exposure of completed masonry) of I.S. EN 1996-2:2006:</b></p> <ul style="list-style-type: none"> <li>• MX2.1 - Exposed to moisture but not exposed to freeze/thaw cycling or external sources of significant levels of sulfates or aggressive chemicals.</li> <li>• MX2.2 - Exposed to severe wetting but not exposed to freeze/thaw cycling or external sources of significant levels of sulfates or aggressive chemicals.</li> <li>• MX3.1 - Exposed to moisture or wetting and freeze/thaw cycling but not exposed to external sources of significant levels of sulfates or aggressive chemicals.</li> <li>• MX3.2 - Exposed to severe wetting and freeze/thaw cycling but not exposed to external sources of significant levels of sulfates or aggressive chemicals.</li> </ul> <p>For <b>Render</b> (including mix, thickness, and number of coats), see S.R. 325:2013+A2:2018 (including Clause 5.5.3.2.1 (Applied external surface finishes), Annex E (Specification for mortar for masonry - I.S. EN 998-1 and 2) and Annex F (National guidance to I.S. EN 13914-1:2016)) and I.S. EN 13914-1:2016 (including Clauses 5 (Materials), 6 (Design considerations) and 7 (Work on site, preparation and application of renderings)). <b>Note:</b> Rendering is affected by the combined action of freeze thaw cycles, wind, sun and rain, and their effects will depend upon the degree of exposure. Durability of render will depend on the correct choice of mix, thickness and number of coats and correct detailing.</p>
Dangerous Substances:	NPD	Cement, Aggregate, Water, Admixture, Pigment comply with relevant/applicable E.N. Standards, I.S. Standards and Irish S.R. Standards which prohibit the usage of dangerous substances.

## Certificate of Conformity of the Factory Production Control 1029 – CPR – GB19/964093

In compliance with **Regulation 305/2011/EU** of the European Parliament and of the Council of 9 March 2011 (the Construction Products Regulation or CPR), this certificate applies to the construction product

### Aggregate Concrete Masonry Units (Dense and Lightweight Aggregates).

placed on the market under the name or trade mark of

**Hanlon Concrete Products Ltd**

Lowtown, Robertstown, Naas, Co. Kildare, IRELAND

and produced in the manufacturing plant

**Hanlon Concrete Products Ltd**

Lowtown, Robertstown, Naas, Co. Kildare, IRELAND

This certificate attests that all provisions concerning the assessment and verification of constancy of performance described in Annex ZA of the standard(s)

### EN 771-3:2011+A1:2015

under system 2+ are applied and that

**the factory production control is assessed to be in conformity with the applicable requirements**

This certificate is valid from 24 August 2022 until 23 August 2025, and will remain valid as long as neither the harmonised standard, the construction product, the AVCP methods nor the manufacturing conditions in the plant are modified significantly, unless suspended or withdrawn by the notified factory production control certification body

Issue 3. Certified with SGS since 23 August 2013.

Authorised by



Luis Neves  
Certification Management



Luis Santos  
Certification Management

SGS ICS – Serviços Internacionais de Certificação, Lda Notified Body 1029

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