

### **INDEPENDENT SLATE SUPPLIES** *Where quality comes naturally*

# ZAMORA

Origin: Spain Colours: Blue/Grey Quality: Prime

## **Natural Roofing Slate**



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## INDEPENDENT SLATE SUPPLIES

Independent Slate Supplies (ISS) have been established for over 35 years and are specialists in the import and distribution of high quality, competitively priced roofing and flooring products and their associated accessories.

Whether you are a roofing contractor, a developer, a homeowner, a general builder, an architect or a merchant, please do not hesitate to contact us so we can discuss your requirements. We can assist you in selecting the most appropriate product for your planned development, which can be supplied via our network of merchants and stockists throughout the UK.



### Natural Roofing Slate: ZAMORA

Origin: Zamora is a Spanish slate from the Galicia region.

#### Colour: Blue/Grey

Texture and Appearance: A light textured surface with traditional dressed edges, the Zamora contains some small inert inclusions, which gives a unique character to this quality slate.

Quality: ISS provide the Zamora slate in a prime quality having been through the most stringent selection process, whilst also being tested to the current British and European requirements.

Slates Thickness: In addition to the popular 4-7mm thickness, the Zamora is produced in a heavy grade (7-9mm), which is suitable for the northern England and Scottish markets.

Sizes Available: 600x300 500x300 500x250 400x250 400x200 350x200

A medium dark slate from the Zamora region of Galicia, which is located to the south east of the main producing areas. The Zamora is an easy slate to work with and is particularly suited for complicated roof areas, which require significant amounts of cutting and detailing.

#### **Testing Results and Design Considerations:**

requirements. There are many testing procedures performed on each slate to determine it's quality and life expectancy.

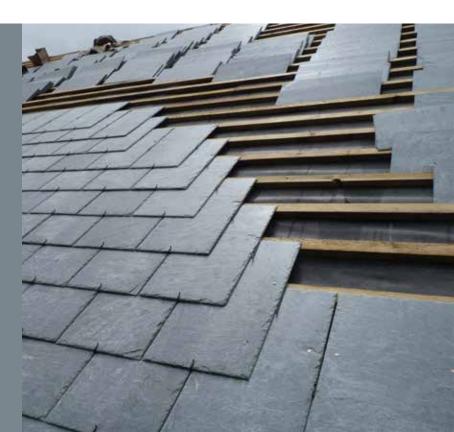
This particular slate is regularly tested to the following national standard:

British and European Harmonised Standard BS EN 12326-1 2014 • Exhibited the top Class A1/W1 for water absorption • Exhibited the top Class T1 for thermal cycle resistance • Exhibited the top Class S1 for sulphur dioxide exposure resistance

- Good flexural strength both transversely and longitudinally • Acceptable non-carbonate content
- Normal texture using the classifications detailed in BS EN 12326

A Declaration of Performance (DOP) and full testing results can be provided upon request.

Practice for Slating and Tiling and BS8000-6:2013 Code of Practice for Workmanship on Building Sites - Slating and Tiling, this slate meets the strength requirements for the imposed and uniformly distributed wind and snow loads etc. The site exposure rating and the pitch of roof rafters will determine the size, pattern, lap and fixings for the slates and the following map and associated tables set out site exposure ratings and associated fixing guidelines for the UK and Northern Ireland.



Categories of Exposure to Driving Rain

- Cream areas depict driving rain exposures of less than 56 l/m<sup>2</sup> per spell (moderate)
- Green areas depict driving rain exposures of more than 56 l/m<sup>2</sup> per spell (severe)

Pitch Degree

85°

Slate Size mmxmm

500 x 250

450 x 220

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Severe Exposure - more than or equal to 56.51/m<sup>2</sup> per

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	112/2		430 x 220	30	22.20	200	200
			400 x 250	50	22.40	175	235
			400 x 200	50	27.90	175	235
			350 x 200	50	32.50	150	210
			300 x 200	50	39.00	125	185
		45° - 75°	600 x 300	55	12.00	273	338
	1.12		500 x 300	55	14.70	223	288
			500 x 250	55	17.60	223	288
spell	1		450 x 220	55	22.45	198	263
oling iuge mm			400 x 250	55	22.70	173	238
3	Y		400 x 200	55	28.30	173	238
8	-10		350 x 200	55	33.10	148	213
3			300 x 200	55	39.80	123	188
3		40°	600 x 300	60	12.14	270	340
8	R		500 x 300	60	14.90	220	290
3			500 x 250	60	17.83	220	290
5	ALE		450 x 220	60	23.31	195	265
5	1 states		400 x 250	60	23.07	170	240
5	1 78		400 x 200	60	29.69	170	240
0	-		350 x 200	60	33.64	145	215
5			300 x 200	60	40.65	120	190
5		35°	600 x 300	70	12.40	265	345
0			500 x 300	70	15.20	215	295
5			500 x 250	70	18.20	215	295
0	71		450 x 220	70	23.39	190	270
0	1		400 x 250	70	23.80	165	245
0	1		400 x 200	70	29.60	165	245
5	11.00		350 x 200	70	34.80	140	220
0			300 x 200	70	42.40	115	195
0	C D	30°	600 x 300	80	12.60	260	350
5			500 x 300	80	15.60	210	300
0			500 x 250	80	18.70	210	300
5			450 x 220	80	24.02	185	275
5			400 x 250	80	24.50	160	250
5			400 x 200	80	30.50	160	250
0	1.10		350 x 200	80	36.10	135	225
5			300 x 200	80	44.30	110	200
5		27.5°	600 x 300	85	12.70	258	353
0	1000		500 x 300	85	15.80	208	303
5			500 x 250	85	18.90	208	303
0		25°	600 x 300	95	13.00	253	358
0	1100		500 x 300	95	16.20	203	308
0			500 x 250	95	19.40	203	308
5		22.5°	500 x 300	105	16.60	198	313
0	1		500 x 250	130	17.70	185	325
0	1100	20°	500 x 300	115	17.00	193	318
5	1.12	All headlap	s have been	rounded up	to the ne	arest 5mm ir	ncrem
0	-	general, the	e above reco	mmendations osures of less	apply to r	after lengths	of no
	and the second se		ing rain exp	osales of less	than 501/1		TOTE L

Moderate Exposure – less than 56.5 l/m<sup>2</sup> per spell

Slates no/m<sup>2</sup>

17.40

22.20

Batten Gauge mm

225

200

Holing Gauge mm

285

260

Minimum Headlap mm

50

50

All headlaps have been rounded up to the nearest 5mm increment and in general, the above recommendations apply to rafter lengths of no more than 9m in driving rain exposures of less than 56l/m<sup>2</sup> and no more than 6m in driving rain exposures greater than 56l/m<sup>2</sup>. Specifiers should take account of any abnormal conditions that might apply and may need to specify greater values than the recommended minimums. If it is necessary to use pitches lower than the lowest recommended minimums, special precautions should be taken. Slate weights can be provided upon request.

	Pitch Degree	Slate Size mmxmm	Minimum Headlap mm	Slates no/m <sup>2</sup>	Batten Gauge mm	Holing Gauge mm	
	85°	500 x 250	65	18.00	218	293	
		450 x 220	65	23.03	193	268	-
		400 x 250	65	23.40	168	243	
		400 x 200	65	29.10	168	243	100
		350 x 200	65	34.20	143	218	
		300 x 200	65	41.50	118	193	
	45° - 75°	600 x 300	70	12.40	265	345	117
1		500 x 300	70	15.20	215	295	
1.		500 x 250	70	18.20	215	295	
-		450 x 220	70	23.90	190	270	
		400 x 250	70	23.80	165	245	2
		400 x 200	70	29.60	165	245	
		350 x 200	70	34.80	140	220	
		300 x 200	70	42.40	115	195	
	40°	600 x 300	80	12.60	260	350	7
		500 x 300	80	15.60	210	300	1.11
-		500 x 250	80	18.70	210	300	- ANN
		450 x 220	80	24.02	185	275	11.8
-		400 x 250	80	24.50	160	250	
-		400 x 200	80	30.50	160	250	C.p.
1		350 x 200	80	36.10	135	225	
		300 x 200	80	44.30	110	200	
	35°	600 x 300	90	12.90	255	355	1.83
5		500 x 300	90	16.00	205	305	1415
		500 x 250	90	19.10	205	305	411
		450 x 220	90	24.69	180	280	1.12
-		400 x 250	90	25.30	155	255	
-		400 x 200	90	31.50	155	255	<b>R</b>
		350 x 200	90	37.50	130	230	1000
		300 x 200	90	46.50	105	205	-
	30°	600 x 300	100	13.10	250	360	
		500 x 300	100	16.40	200	310	11 11
-		500 x 250	100	19.60	200	310	
1		450 x 220	100	25.40	175	285	
		400 x 250	100	26.10	150	260	100
-		400 x 200	100	32.50	150	260	111/200
		350 x 200	100	39.00	125	235	1.13
		300 x 200	100	48.80	100	210	
	27.5°	500 x 300	110	16.80	195	315	1.4
		500 x 250	110	20.10	195	315	1000
	25°	500 x 300	120	17.30	190	320	
	22.5°	500 x 300	130	17.70	185	325	

#### Roof Design:

- It should be noted that the minimum batten size for rafter spacing up to 600mm for use with natural slates is 50 x 25mm as per BS5534. The ends of any batten should be fully supported and the length of any batten should be no less than 1.2m.
- Traditional Scottish roofing practice consists of covering the roof using square edge sarking boards (in place of battens), covered with an underlay or membrane (as per the architects specification) prior to installing the slates. Buildings have their own unique and individual roof design comprising different elevations and angles to complement the building's architecture. In the interests of aesthetics and to maintain the bond, at all verges, abutments, hips and valleys, alternative slate courses must start with a half width slate or a slate and a half width. Slate and a half widths must be used if the half slate is less than 150mm wide.
- In respect of roof ventilation, the roof space and/or batten cavity must be ventilated in accordance with the latest edition of BS 5250: 2002. ISS can supply in-line ventilation systems to suit most applications including mechanical extraction. Full technical information and support can be provided upon request.

#### **Estimating:**

As a natural product, each individual slate may vary slightly in respect of colour and size. As such, it is necessary to add a cutting and wastage allowance in estimating the total number of slates required. For guidance on wastage allowances please contact us.

#### **Preparation:**

As with all natural slates, it is necessary to sort and grade the slates into a minimum of three groups of similar thicknesses prior to fixing. The thickest groups should be used nearest to the eaves, progressing to the thinnest selection nearing the ridge. This will ensure the slates are laid as flat as possible on the roof slope to avoid unsightly gaps or 'kicking' and any associated problems that may occur.

#### Fixing:

ISS advocate that slates are fixed using either copper nails or via stainless steel slate hooks.

- Copper nails: slates should generally be twice centrenailed to horizontal battens, except in Scotland, where smaller heavier slates can sometimes be singled nailed (provided every third course is twice nailed). The minimum nail head diameter is 10mm (which means a shank diameter of between 3mm – 3.35mm). The nails should penetrate into the batten by a minimum of 15mm after considering the thickness of two slates (being careful not to penetrate the underlay or membrane). Individual slates should be holed so that the thickest end of the slate is at the tail. Slates should be holed from the underside, which creates a countersink to accept the nail head.
- Hook fixing: one stainless steel spike hook to suit common laps should be used per slate. The minimum recommended pitch for hook fixing is 25°. Below 30°, crimped hooks should be used.
- Slates should be vertically aligned and should allow for a small 'perp' gap between slates of approximately 2mm-5mm in accordance with BS 5534.

#### Supply:

ISS products can be supplied direct to site via our network of merchant stockists throughout the UK. Please contact us with any enquiries you may have.



## INDEPENDENT SLATE SUPPLIES

INDEPENDENT SLATE SUPPLIES Head Office 6 Gilston Road . Saltash . Cornwall . UK PL12 6TW

Tel: 01752 848080 Fax: 01752 848084

EMAIL: info@independentslatesupplies.com

INDEPENDENT SLATE SUPPLIES Scottish Depot 1A Liggat Skye Place . East Mains Ind Est . Broxburn West Lothian . Scotland . EH52 5NA

Tel: 01506 852 862 Fax: 01752 848084

EMAIL: info@independentslatesupplies.com

### www.independentslatesupplies.com

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