



CLOUD NATURAL

NATURAL INDIAN SANDSTONE - PAVING SLABS & COBBLES

Technical Data Sheet · External Use · BS EN 1341 (Paving) & BS EN 1342 (Setts) Compliant

1. PRODUCT IDENTIFICATION

Commercial Name	Kandla Grey Indian Sandstone
Also Known As	Cloud Grey Sandstone, Bhilwara Grey Sandstone, Silver Sand Sandstone, Kandhla Grey
Material Type	Natural Sandstone (Sedimentary Rock - Silica / Quartz-cemented, with calcite binder)
Stone Family	Sandstone - fine-grained, low-porosity arenaceous rock; among the least porous of the Indian sandstones
Country of Origin	India - Rajasthan region (Kota, Bundi, Bhilwara districts)
Product Category	Natural Stone Paving Slabs (flags) and Natural Stone Setts / Cobbles
Paving Standard	BS EN 1341:2001 - Slabs of natural stone for external paving
Setts Standard	BS EN 1342:2001 - Setts of natural stone for external paving
CE / UKCA Marking	CE Marked & UKCA Marked - Declaration of Performance (DoP) available
Accreditation	UKAS-accredited third-party testing; ETI Base Code / TruStone ethically sourced

2. COLOUR & AESTHETIC DESCRIPTION

Primary Colours	Silver grey, dove grey, cool mid-grey base
Secondary Tones	Blue-grey undertones; occasional warmer beige or buff patches in some batches
Colour Character	Cool, calm and consistent palette; one of the most uniform Indian sandstones - suits contemporary and heritage schemes alike
Brachot Classification	Not formally classified under the Brachot European reference scheme
Wet Appearance	Colours deepen to charcoal and slate-grey; blue undertones become more pronounced
Dry Appearance	Pale, cool silvery-grey; light and airy in bright sunlight
Colour Variation	Low to moderate - one of the most visually consistent Indian sandstones; always view a full board before ordering
Design Compatibility	Pairs well with render, glass, steel, timber and grey/anthracite features; excellent for contemporary minimalist, coastal and Cotswold-contrast schemes

Iron Markings	Occasional iron oxidation marks possible on new installation; weather off naturally. Low porosity limits staining generally.
Fossil Inclusions	Occasional fossil imprints and mineral inclusions - natural characteristics, not defects

3A. AVAILABLE SIZES - PAVING SLABS (FLAGS)

Size (L x W)	Thickness (calibrated)	Tolerance	Coverage per slab	Wt. approx. (kg/m ²)
900 x 600 mm	18 mm or 22 mm	+/-2-5 mm	0.54 m ²	~48 (22mm)
600 x 600 mm	18 mm or 22 mm	+/-2-5 mm	0.36 m ²	~48 (22mm)
600 x 290 mm	18 mm or 22 mm	+/-2-5 mm	0.174 m ²	~48 (22mm)
290 x 290 mm	18 mm or 22 mm	+/-2-5 mm	0.084 m ²	~48 (22mm)
Mixed Patio Pack	18-25 mm	+/-2-5 mm	~17-22 m ² per pack	~48-52
Step treads	30-50 mm	+/-5 mm	Per linear metre	~135 kg/lm
Bespoke / custom	25-100 mm	+/-5 mm	On request	Varies

NOTE: Coverage based on 10 mm joint. Calibrated = machine cut to consistent thickness (typically 22mm or 25mm for UK supply); tolerance +/-2-5 mm.

3B. AVAILABLE SIZES - SETTS & COBBLES

Size (L x W)	Thickness	Coverage approx.	Setts / m ²	Pack size
140 x 140 mm	20 mm	~0.02 m ²	~47	Crate / tonne (European square format)
140 x 200 mm	30-50 mm	~0.028 m ²	~33	Crate / tonne
140 x 140 mm	30-70 mm	~0.02 m ²	~47	Crate / tonne
100 x 100 mm	30-50 mm	~0.01 m ²	~80	~1,000 per crate
200 x 100 mm	50-70 mm	~0.02 m ²	~43	Tonne / loose (driveway grade)

Coverage per tonne (setts): approximately 8-10 m². 140x140 mm European platine format also available with flat top surface. Dimensional tolerance +/-5 mm plan; +/-5-10 mm thickness.

4. SURFACE FINISHES & EDGE TREATMENTS

Riven (Natural Cleft)	Standard finish; natural split along bedding planes. Textured, cool-toned surface; strong slip resistance in wet and dry conditions.
Tumbled / Antique	Machine tumbled for rounded arrises and softened edges; weathered heritage appearance.
Sawn & Honed (Smooth)	Machine sawn and honed to a smooth, near-uniform silver-grey surface; clean contemporary look. Natural level of slip resistance, though riven grips better in high-risk wet areas.
Sandblasted	Open textured surface; good anti-slip properties; enhances the cool grey tones.
Brushed / Leathered	Wire-brushed or leathered surface; slightly aged feel; retains some texture; suited to poolside and terrace use.

Edge Treatments	Hand-cut/fettled (standard, traditional), sawn (clean, contemporary), tumbled (rounded, heritage), bullnosed/rebated (steps, coping, pool edging).
Sett & Cobble Finishes	Riven top with hand-cut sides (standard); Platine flat-top (comfort underfoot); fully tumbled cobbles (antique feel).

5. PHYSICAL & MECHANICAL PROPERTIES (TEST DATA)

Property	Test Standard	Declared Value	Unit
Apparent Density	EN 1936:1999	~2,650 - 2,750	kg/m3
Apparent Porosity	EN 1936:1999	0.45	%
Water Absorption (by weight)	EN 13755:2001	0.80	% wt.
Water Absorption (by capillary)	EN 1925:1999	0.23	%
Compressive Strength	EN 1926:1999	~37 (380.3 kg/cm2)	MPa
Flexural Strength (Dry)	EN 12372:2006	23.7	MPa
Flexural Strength after 12 freeze-thaw cycles	EN 12372:2006	22.7	MPa
Flexural Strength after 48 freeze-thaw cycles	EN 12372:2006	21.0	MPa
Slip Resistance SRV Dry	EN 14231:2004	70	SRV
Slip Resistance SRV Wet	EN 14231:2004	68	SRV
Wear / Abrasion Resistance (Bohme, average)	EN 14157:2004	5.8	mm
Wear / Abrasion Resistance (Bohme, individual)	EN 14157:2004	5.6	mm
Frost Resistance	EN 12371:2010	Pass - >=48 cycles	-
Breaking Load (setts)	IS 13630	6.0 x 10^3	N
Thermal Expansion Coefficient	EN 14581:2004	8 - 12	x10^-6/C
Modulus of Elasticity	-	8 - 22	GPa
Service Life (expected)	-	50+ years	years

6. STANDARDS & REGULATORY COMPLIANCE

Paving Slabs	BS EN 1341:2001 - Slabs of natural stone for external paving
Setts	BS EN 1342:2001 - Setts of natural stone for external paving
Kerbs	BS EN 1343:2001 - Kerbs of natural stone for external paving
CE / UKCA Marking	Required under UK Construction Products Regulations; all compliant products carry CE/UKCA mark and Declaration of Performance
UKAS Accreditation	Testing conducted at UKAS-accredited laboratories for UK market compliance
Slip Resistance	EN 14231:2004 (Pendulum Test Value / SRV)

Wear Resistance	EN 14157:2004 (Bohme disc abrasion test)
Frost Resistance	EN 12371:2010 - no cracking, spalling or delamination after minimum 48 freeze-thaw cycles
Ethical Sourcing	ETI (Ethical Trading Initiative) Base Code. TruStone initiative compliance available from some European importers.
Aggregate Standard	EN 933-1 - Tests for geometrical properties of aggregates (sieve analysis)

7. RECOMMENDED APPLICATIONS

Domestic Patios & Terraces	Primary UK application; cool grey tones suit both contemporary and traditional homes
Garden Pathways	Highly popular for path layouts; smaller single sizes or mixed packs provide flexible cutting options
Driveways	25-50 mm thick slabs for vehicular areas; low porosity aids resistance to oil/tyre staining
Steps & Treads	Bullnosed, sawn or riven treads; 50 mm+ recommended
Pool Surrounds & Wet Zones	Riven finish preferred for maximum grip; sawn/honed acceptable away from immediate poolside
Wall Cladding	Sawn or riven Kandla Grey used for wall faces, feature walls, and property facades
Commercial Pedestrian	Widely specified for pedestrian zones and public realm; consult engineer for load class and sub-base specification
Public Realm / Civic Spaces	Flat-top platines (European format) allow cobble aesthetics in pedestrian-priority areas
Pool Edging & Steps	Setts used as pool coping and step risers

8. INSTALLATION GUIDANCE

Sub-Base - Pedestrian patios & paths	Min. 100 mm compacted MOT Type 1 hardcore + 25-50 mm sharp sand blinding layer
Sub-Base - Driveways (domestic)	Min. 150 mm compacted MOT Type 1 + full mortar bed; haunching for setts; edge restraints essential
Bedding - Paving Slabs	Full-bed mortar (semi-dry 5:1 sand:cement) or proprietary flexible adhesive; NO spot bedding - causes slab cracking
Bedding - Setts & Cobbles	25-40 mm compacted semi-dry mortar bed; wet haunching mortar on all edges for driveways
Jointing - Paving Slabs (riven)	10 mm joints; resin jointing compound or brushed kiln-dried sand for domestic use
Jointing - Paving Slabs (sawn/honed)	3-5 mm tight joints possible with sawn edges; use colour-matched flexible pointing mortar
Jointing - Setts	6-12 mm joints; 10 mm recommended for natural size variation tolerance
Colour Blending	Open and blend from multiple crates/packs during laying to balance the light-to-mid grey tonal range
Cutting	Diamond blade wet saw or angle grinder + diamond disc; wet cutting essential - reduces silica dust exposure

Pre-soaking	Dampen slab backs before laying, particularly for sawn/honed finish, to aid mortar bond
Over-ordering	Minimum 10-15% extra; natural stone variation means some pieces will be rejected for visual reasons
Curing	48 hours minimum before light foot traffic; 7+ days before vehicles
Frost precaution	Do not lay below 3C or when frost forecast within 24 hours

9. SEALING, CLEANING & AFTERCARE

Sealing - Priority	Recommended but less critical than for lighter/beige stones - Kandla Grey's low porosity (0.45%) already limits visible staining. Sealing sawn/honed finishes is advisable, as sawing opens surface pores more than splitting.
Sealer Type	Penetrating silane/siloxane impregnator; colour-enhancing sealers deepen the grey/blue tones; natural finish also available
Application Timing	Pre-seal bare stone before grouting (protects against grout haze); final seal 4-6 weeks post-installation when mortar salts have cleared and stone is dry
Reapplication	Typically every 3-5 years; re-seal when water no longer beads
Routine cleaning	Brush debris; rinse with clean water; pH-neutral stone cleaner
Stain removal	Dedicated stone degreaser for oil/grease; biological cleaner for algae/moss
Grout haze	Remove with proprietary grout haze remover within 24-48 hours; do not use acid-based products
Pressure washing	Max. 1,500 psi; diagonal angle to surface; avoid concentrated streams on joints; re-check jointing after
Avoid	Bleach, hydrochloric acid, salt de-icers, iron-based fertilisers, steam cleaners
Rust / iron marks	Treat promptly with dedicated iron stain remover product; easier to remove when fresh

10. PACKAGING, SUPPLY & ORDERING

Pack Types - Paving	Mixed-size patio packs (17-22 m2); single-size packs; project/contractor packs; full or half pallets
Pack Types - Setts	Full wooden crates (~1,000 units 100x100 mm; ~500 units 200x100 mm; Platine crates by piece count); tonne bags
Packing	ISPM-15 fumigated wooden crates or pallets; plastic wrapped; wooden spacers between layers
Paving pallet weight	Approx. 800-1,100 kg per full pallet (thickness and pack size dependent)
Sett crate weight	Approx. 800-1,000 kg per full wooden crate
Coverage per tonne (setts)	Approximately 8-10 m2; dependent on size and thickness
Unit of sale	Per m2, per unit, per tonne, or per pack - confirm with supplier
MOQ	Typically 1 m2 to full pallet; varies by supplier
Lead time	UK stock: typically 2-5 working days; direct import from India: 6-10 weeks

Delivery	Kerbside delivery via 18T flatbed with tail-lift; hard road required; vehicle access essential
Over-order buffer	Order minimum 10-15% extra

11. HEALTH, SAFETY & ENVIRONMENTAL INFORMATION

Silica Dust (RCS)	Contains crystalline silica (quartz). All cutting, drilling and grinding generates Respirable Crystalline Silica (RCS) dust - a known cause of silicosis. COSHH risk assessment mandatory on site. Use wet cutting, LEV, or minimum RPE FFP3.
Manual Handling	Individual slabs/setts can be heavy. Two-person lift technique; mechanical handling preferred. PPE: steel-capped footwear, gloves, back support brace.
Slipping Hazard	Kandla Grey offers good slip resistance in both wet and dry conditions (riven finish). Sawn/honed surfaces have a naturally lower, though still acceptable, slip resistance; riven is recommended for pool surrounds and slopes.
COSHH Compliance	COSHH assessment required before any cutting, grinding, or abrading operations on site
Ethical Sourcing	Sourced under ETI Base Code; supplier documentation available. TruStone-certified supply chains available for European-sourced product.
Environmental Benefits	Natural, 100% geological resource. 50+ year design life; fully reusable/recyclable at end of life. Low porosity supports long-term durability.
REACH Compliance	Natural stone article; not subject to REACH substance notification requirements