DRIFT SUMMER SHADOWS
## CONTENTS

### INTRO COLLECTION RANGES:

<table>
<thead>
<tr>
<th>Page</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>04.</td>
<td>ASHLAR</td>
</tr>
<tr>
<td>06.</td>
<td>BEVEL BRICK</td>
</tr>
<tr>
<td>08.</td>
<td>CITY TOUCHSTONE</td>
</tr>
<tr>
<td>10.</td>
<td>CLASSICS</td>
</tr>
<tr>
<td>12.</td>
<td>COUNTRY STONES</td>
</tr>
<tr>
<td>14.</td>
<td>COUNTY</td>
</tr>
<tr>
<td>16.</td>
<td>CRISTAL</td>
</tr>
<tr>
<td>18.</td>
<td>DRIFT</td>
</tr>
<tr>
<td>20.</td>
<td>ECHO</td>
</tr>
<tr>
<td>22.</td>
<td>GRAIN</td>
</tr>
<tr>
<td>24.</td>
<td>GRASMERE</td>
</tr>
<tr>
<td>26.</td>
<td>KERASTAR</td>
</tr>
<tr>
<td>28.</td>
<td>LAGOS</td>
</tr>
<tr>
<td>30.</td>
<td>MELFORD MARBLE</td>
</tr>
<tr>
<td>32.</td>
<td>MICROS</td>
</tr>
<tr>
<td>34.</td>
<td>POLAR</td>
</tr>
<tr>
<td>36.</td>
<td>SANCTUARY</td>
</tr>
<tr>
<td>38.</td>
<td>SHIMMER</td>
</tr>
<tr>
<td>40.</td>
<td>STUDIO</td>
</tr>
<tr>
<td>42.</td>
<td>THREADS</td>
</tr>
<tr>
<td>44.</td>
<td>TUNDRA</td>
</tr>
<tr>
<td>46.</td>
<td>URBANIQUE</td>
</tr>
</tbody>
</table>

### 48. TECHNICAL INFORMATION

SPECIFICATION, FLOOR VALUES, COLOUR NOTATIONS, PHYSICAL PROPERTIES, INSTALLATION ADVICE, CLEANING AND MAINTENANCE, ETC...
ASHLAR
GLAZED CERAMIC | WALL TILES

One Size Format
Available Size:

300x200mm
8mm thick

One Finish
Available Finish:

Textured Finish

N.B. For full details on specification and suitability please see page 48. For advice on technical issues please contact our technical helpline.

Three Colour Options
Available Colours:

◆ Warm Taupe
◆ Weathered White
◆ Crafted Grey
Ashlar Warm Taupe

Availability

300x200x8mm
- ALR01A Warm Taupe Textured Finish
- ALR02A Weathered White Textured Finish
- ALR03A Crafted Grey Textured Finish

N.B. For the most up-to-date availability information, please visit our website - www.johnson-tiles.com
BEVEL BRICK
GLAZED CERAMIC | WALL TILES

One Size Format
Available Size:
200x100mm Bevel
6.5mm thick

One Finish
Available Finish:
G Gloss Finish

N.B. For full details on specification and suitability please see page 48. For advice on technical issues please contact our technical helpline.

Seven Colour Options
Available Colours:

- White
- Cream
- Black
- Red
- Sage
- Light Grey
- Dark Grey
Availability

200x100x6.5mm Bevel
- BVBR1A White Gloss Finish
- BVBR2A Cream Gloss Finish
- BVBR3A Black Gloss Finish
- BVBR4A Red Gloss Finish
- BVBR5A Sage Gloss Finish
- BVBR6A Light Grey Gloss Finish
- BVBR7A Dark Grey Gloss Finish

N.B For the most up-to-date availability information, please visit our website - www.johnson-tiles.com
CITY TOUCHSTONE
GLAZED CERAMIC & PORCELAIN | WALL & FLOOR TILES

Three Size Formats
Available Sizes:

- 600x600mm
  - 9.3mm thick
- 450x450mm
  - 8.2mm thick
- 360x275mm
  - 8mm thick

One Finish
Available Finish:

- Matt Finish

N.B. For full details on specification and suitability please see page 48. For advice on technical issues please contact our technical helpline.

Six Colour Options
Available Colours:

- White
- Beige
- Beige Mix
- Light Grey
- Mid Grey
- Grey Mix
Availability

360x275x8mm ONLY
- CTO1A White Matt Finish
- CTO2A Beige Matt Finish
- CTO3A Light Grey Matt Finish
- CTO4A Mid Grey Matt Finish
- CTO1L Beige Mix Structured Matt Finish
- CTO2L Grey Mix Structured Matt Finish

600x600x9.3mm & 450x450x8.2mm ONLY
- CTO1F White Matt Finish
- CTO2F Beige Matt Finish
- CTO3F Light Grey Matt Finish
- CTO4F Mid Grey Matt Finish

N.B For the most up-to-date availability information, please visit our website - www.johnson-tiles.com
CLASSICS
GLAZED CERAMIC | WALL TILES

One Size Format
Available Size:

300x200mm
8mm thick

Three Finishes
Available Finishes:

G Gloss Finish
S Satin Finish
S Silk Finish

Six Colour Options
Available Colours:

White Carrara
Travertine
Crema Marfil
Brushed Stone
Marblestone
Slate

N.B. For full details on specification and suitability please see page 48. For advice on technical issues please contact our technical helpline.
Availability

300x200x8mm

- CICS1A White Carrara Gloss Finish
- CICS2A Travertine Satin Finish

- CICS3A Crema Marfil Satin Finish
- CICS4A Brushed Stone Silk Finish

- CICS5A Marblestone Gloss Finish
- CICS6A Slate Satin Finish

N.B. For the most up-to-date availability information, please visit our website - www.johnson-tiles.com
COUNTRY STONES
GLAZED VITRIFIED | WALL TILES

Two Size Formats
Available Sizes:

200x100mm
6.5mm thick

100x100mm
6.5mm thick

One Finish
Available Finish:

S Satin Finish

N.B. For full details on specification and suitability please see page 48. For advice on technical issues please contact our technical helpline.

Seven Colour Options
Available Colours:

▲ Clay Brown

▲ Barley Cream

▲ Millstone White

▲ Dovetail

▲ Hearth Grey

▲ Summer Storm

▲ Midnight
### Availability

<table>
<thead>
<tr>
<th>100x100x6.5mm ONLY</th>
<th>200x100x6.5mm ONLY</th>
</tr>
</thead>
<tbody>
<tr>
<td>COS01A Clay Brown Satin Finish</td>
<td>COS01A Clay Brown Satin Finish</td>
</tr>
<tr>
<td>COS02A Barley Cream Satin Finish</td>
<td>COS02A Barley Cream Satin Finish</td>
</tr>
<tr>
<td>COS04A Dovetail Satin Finish</td>
<td>COS03A Millstone White Satin Finish</td>
</tr>
<tr>
<td>COS05A Hearth Grey Satin Finish</td>
<td>COS04A Dovetail Satin Finish</td>
</tr>
<tr>
<td>COS06A Summer Storm Satin Finish</td>
<td>COS07A Midnight Satin Finish</td>
</tr>
</tbody>
</table>

**N.B** For the most up-to-date availability information, please visit our website - www.johnson-tiles.com
COUNTY
GLAZED CERAMIC & PORCELAIN | WALL & FLOOR TILES

Two Size Formats
Available Sizes:

- 305x305mm 8mm thick
- 300x200mm 8mm thick

One Finish
Available Finish:
- Matt Finish

N.B. For full details on specification and suitability please see page 48. For advice on technical issues please contact our technical helpline.

Four Colour Options
Available Colours:

- Old Stone
- Natural Grey
- Rustic Taupe
- Classic White

- Old Stone Wave Effect
- Natural Grey Wave Effect
- Rustic Taupe Wave Effect
Availability

300x200x8mm ONLY
- CNY01A Old Stone Matt Finish
- CNY02A Classic White Matt Finish
- CNY03A Natural Grey Matt Finish
- CNY04A Rustic Taupe Matt Finish

305x305x8mm ONLY
- CNY01W Old Stone Wave Matt Finish
- CNY03W Natural Grey Wave Matt Finish
- CNY04W Rustic Taupe Wave Matt Finish

N.B For the most up-to-date availability information, please visit our website - www.johnson-tiles.com
CRISTAL
GLAZED CERAMIC | WALL TILES

Two Size Formats
Available Sizes:

- 250x200mm
  - 5.5mm thick

- 150x150mm

One Finish
Available Finish:

- Gloss Finish

N.B. For full details on specification and suitability please see page 48. For advice on technical issues please contact our technical helpline.

Five Colour Options
Available Colours:

- White
- White
  - Bumpy Effect
- Cream
  - Bumpy Effect
- White/Blue Stripe Inset
- White/Grey Stripe Border
- White/Grey Stripe Inset
- White/Beige Stripe Border
- White/Beige Stripe Inset
Availability

- CRWHIT White Gloss Finish
- CRWH1B White/Grey Stripe Border Gloss Finish
- CRWH1I White/Grey Stripe Inset Gloss Finish
- CRWH2B White/Beige Stripe Border Gloss Finish
- CRWH2I White/Beige Stripe Inset Gloss Finish
- CRWH3I White/Blue Stripe Inset Gloss Finish

All Sizes

- CBWHIT White Bumpy Gloss Finish
- CBCREM Cream Bumpy Gloss Finish

N.B. For the most up-to-date availability information, please visit our website - www.johnson-tiles.com
DRIFT
GLAZED CERAMIC | WALL TILES

One Size Format
Available Size:

300x200mm
8mm thick

One Finish
Available Finish:

Matt Finish

N.B. For full details on specification and suitability please see page 48. For advice on technical issues please contact our technical helpline.

Three Colour Options
Available Colours:

- Autumn Reeds
  Structured Effect

- Spring Frost
  Structured Effect

- Summer Shadows
  Structured Effect
Availability

300x200x8mm
- DRIF1A Autumn Reeds Structured Matt Finish
- DRIF2A Spring Frost Structured Matt Finish
- DRIF3A Summer Shadows Structured Matt Finish

N.B For the most up-to-date availability information, please visit our website - www.johnson-tiles.com
**ECHO**

**GLAZED CERAMIC | WALL TILES**

**One Size Format**

Available Size:

300x200mm
8mm thick

**One Finish**

Available Finish:

G Gloss Finish

N.B. For full details on specification and suitability please see page 48. For advice on technical issues please contact our technical helpline.

**Three Colour Options**

Available Colours:

- ▲ Glacier
- ▲ Shadow
- ▲ Desert

- ▲ Glacier
  Linear Effect
- ▲ Shadow
  Linear Effect
- ▲ Desert
  Linear Effect
Availability

300x200x8mm
- ECHO1A Glacier Gloss Finish  - ECHO1L Glacier Linear Gloss Finish
- ECHO2A Shadow Gloss Finish  - ECHO2L Shadow Linear Gloss Finish
- ECHO3A Desert Gloss Finish   - ECHO3L Desert Linear Gloss Finish

N.B. For the most up-to-date availability information, please visit our website - www.johnson-tiles.com
GRAIN
GLAZED CERAMIC | WALL TILES

One Size Format
Available Size:

300x200mm
8mm thick

Available Borders:

One Finish
Available Finish:

Matt Finish

N.B. For full details on specification and suitability please see page 48. For advice on technical issues please contact our technical helpline.

Two Colour Options
Available Colours:

Ash
Woodgrain Effect

Driftwood
Woodgrain Effect
Availability

300x200x8mm
- GRIN1A Ash Woodgrain Matt Finish
- GRIN2A Driftwood Woodgrain Matt Finish

300x58x8mm [75x27mm Border]
- GRIN1B Ash, Driftwood & Mahogany Mix Woodgrain Matt Finish

300x58x8mm [27x27mm Border]
- GRIN2B Ash, Driftwood & Mahogany Mix Woodgrain Matt Finish

N.B. For the most up-to-date availability information, please visit our website - www.johnson-tiles.com
GRASMERE
GLAZED CERAMIC | WALL TILES

One Size Format
Available Size:

One Finish
Available Finish:

Matt Finish

N.B. For full details on specification and suitability please see page 48. For advice on technical issues please contact our technical helpline.

Two Colour Options
Available Colours:

Bracken
Slate
Availability

360x275x8mm
- GRA1A Bracken Matt Finish
- GRA2A Slate Matt Finish

N.B. For the most up-to-date availability information, please visit our website - www.johnson-tiles.com
KERASTAR
UN-GLAZED PORCELAIN | WALL & FLOOR TILES

Four Size Formats
Available Sizes:

- 900x450mm 10.2mm thick
- 200x200mm 8.3mm thick
- 300x300mm 10.5mm thick
- 600x600mm 10.5mm thick

Three Finishes
Available Finishes:

- N Natural Finish
- D Discface Finish
- R Rocktop Finish

N.B. For full details on specification and suitability please see page 48. For advice on technical issues please contact our technical helpline.

Sixteen Colour Options
Available Colours:

- Chalk
- Linen
- String
- Mud
- Putty
- Clay
- Shadow
- Night
- Hail
- Biscuit
- Cord
- Fawn
- Granite
- Pumice
- Graphite
- Night Sky

Available Fittings: Skirtings

- 300x95mm Round Top 8.3mm thick
- 300x100mm Cove 8.3mm thick
- 200x100mm Cove 8.3mm thick
- 100x30mm Angles 8.3mm thick

Available Fitting: Step Tread

- 300x95mm Step Tread 8.3mm thick
Availability

200x200x8.3mm ONLY
- KER501 Chalk Natural Finish
- KER502 Linen Natural Finish
- KER503 String Natural Finish
- KER504 Mud Natural Finish
- KER505 Putty Natural Finish
- KER506 Clay Natural Finish
- KER507 Shadow Natural Finish
- KER508 Night Natural Finish
- KER509 Hail Natural Finish
- KER510 Biscuit Natural Finish
- KER511 Cord Natural Finish
- KER512 Fawn Natural Finish
- KER514 Pumice Natural Finish
- KER515 Graphite Natural Finish
- KER516 Night Sky Natural Finish
- KER517 Granite Natural Finish
- KER509 Hail Discface Finish
- KER515 Graphite Discface Finish
- KER517 Granite Discface Finish
- RT509 Hail Rocktop Finish
- RT515 Graphite Rocktop Finish
- RTS17 Granite Rocktop Finish

300x300x8.3mm ONLY
- KER501 Chalk Natural Finish
- KER502 Linen Natural Finish
- KER503 String Natural Finish
- KER504 Mud Natural Finish
- KER505 Putty Natural Finish
- KER506 Clay Natural Finish
- KER507 Shadow Natural Finish
- KER508 Night Natural Finish
- KER509 Hail Natural Finish
- KER510 Biscuit Natural Finish
- KER511 Cord Natural Finish
- KER512 Fawn Natural Finish
- KER514 Pumice Natural Finish
- KER515 Graphite Natural Finish
- KER516 Night Sky Natural Finish
- KER517 Granite Natural Finish
- RT509 Hail Discface Finish
- RT515 Graphite Discface Finish
- RTS17 Granite Discface Finish
- RT515 Graphite Rocktop Finish
- RTS17 Granite Rocktop Finish

600x600x10.5mm & 900x450x10.2mm ONLY
- KER503 String Natural Finish
- KER506 Clay Natural Finish
- KER507 Shadow Natural Finish

All Fittings
- KER503 String Natural Finish
- KER506 Clay Natural Finish
- KER507 Shadow Natural Finish

All Fittings EXCEPT 300x95x8.3mm Step Tread [Fittings]
- KER501 Chalk Natural Finish
- KER502 Linen Natural Finish
- KER504 Mud Natural Finish
- KER505 Putty Natural Finish
- KER508 Night Natural Finish
- KER509 Hail Natural Finish
- KER510 Biscuit Natural Finish
- KER511 Cord Natural Finish
- KER512 Fawn Natural Finish
- KER514 Pumice Natural Finish
- KER515 Graphite Natural Finish
- KER516 Night Sky Natural Finish
- KER517 Granite Natural Finish
- RT509 Hail Rocktop Finish
- RT515 Graphite Rocktop Finish
- RTS17 Granite Rocktop Finish

N.B For the most up-to-date availability information, please visit our website - www.johnson-tiles.com
LAGOS
GLAZED PORCLAIN | WALL & FLOOR TILES

-One Size Format-
Available Size:

330x330mm
8.5mm thick

-One Finish-
Available Finish:

-M- Matt Finish

N.B. For full details on specification and suitability please see page 48. For advice on technical issues please contact our technical helpline.

-Five Colour Options-
Available Colours:

▲ White
Slate Effect

▲ Beige
Slate Effect

▲ Light Grey
Slate Effect

▲ Dark Grey
Slate Effect

▲ Black
Slate Effect
Availability

330x330x8.5mm

- LAGO1F Dark Grey Slate Matt Finish
- LAGO2F Black Slate Matt Finish
- LAGO3F Light Grey Slate Matt Finish
- LAGO4F White Slate Matt Finish
- LAGOSF Beige Slate Matt Finish

N.B. For the most up-to-date availability information, please visit our website - www.johnson-tiles.com
MELFORD MARBLE
GLAZED CERAMIC & PORCELAIN | WALL & FLOOR TILES

Three Size Formats
Available Sizes:

- 600x300mm
  - 10mm thick
- 495x495mm
  - 8mm thick
- 300x200mm
  - 8mm thick

One Finish
Available Finish:

- Matt Finish

N.B. For full details on specification and suitability please see page 48. For advice on technical issues please contact our technical helpline.

Two Colour Options
Available Colours:

- Light Grey
- Dark Grey
Availability

600x300x10mm & 300x200x8mm ONLY
- MEL01A Light Grey Matt Finish
- MEL02A Dark Grey Matt Finish

495x495x10mm ONLY
- MEL01F Light Grey Matt Finish
- MEL02F Dark Grey Matt Finish

N.B. For the most up-to-date availability information, please visit our website - www.johnson-tiles.com
MICROS
GLAZED CERAMIC | WALL TILES

One Size Format
Available Size:

150x150mm
6.5mm thick

One Finish
Available Finish:

G Gloss Finish

N.B. For full details on specification and suitability please see page 48. For advice on technical issues please contact our technical helpline.

Six Colour Options
Available Colours:

▲ White
▲ Magnolia
▲ Shark
▲ Black
▲ White/Shark
▲ Magnolia/Redwood
MICROS WHITE, BLACK AND WHITE/SHARK

Availiability
150x150x6.5mm
- PRG1 White Gloss Finish
- PRG20 Magnolia Gloss Finish
- PRG11 Shark Gloss Finish
- PRG6 Black Gloss Finish
- PRM57 White/Shark Gloss Finish
- PRM60 Magnolia/Redwood Gloss Finish

N.B. For the most up-to-date availability information, please visit our website - www.johnson-tiles.com
POLAR
GLAZED CERAMIC | WALL TILES

Two Size Formats
Available Sizes:

- 300x200mm 6.5mm thick
- 200x200mm

Two Finishes
Available Finishes:
- Gloss Finish
- Satin Finish

N.B. For full details on specification and suitability please see page 48. For advice on technical issues please contact our technical helpline.

One Colour Option
Available Colours:

- White
  - Scored One Way
  - Scored Two Ways
  - Wave Effect
  - Structured Effect
  - Bumpy Effect
Availability

300x200x8mm ONLY
- PURE1A White Gloss Finish
- PURE1E White Scored One Way Gloss Finish
- PURE1F White Scored Two Ways Gloss Finish
- PURE1W White Wave Gloss Finish

- CLAS1A White Satin Finish
- CLAS1E White Scored One Way Satin Finish
- CLAS1L White Structured Satin Finish

N.B. For the most up-to-date availability information, please visit our website - www.johnson-tiles.com
SANCTUARY
GLAZED CERAMIC | WALL TILES

One Size Format
Available Size:
300x200mm
8mm thick

Two Finishes
Available Finishes:
G Gloss Finish
S Satin Finish

N.B. For full details on specification and suitability please see page 48. For advice on technical issues please contact our technical helpline.

Five Colour Options
Available Colours:

- Bianco Carrara
- Matlock
- Horizon
- Buxton
- Bath
Availability

300x200x8mm

- CTBC1A  Bianco Carrara  Gloss Finish
- CTBC2A  Bianco Carrara  Satin Finish
- MLOCKA  Matlock  Gloss Finish
- MLOCKS  Matlock  Satin Finish
- HORI01  Horizon  Gloss Finish
- BXTONA  Buxton  Satin Finish
- BATH1A  Bath  Gloss Finish
- BATH2A  Bath  Satin Finish

N.B. For the most up-to-date availability information, please visit our website - www.johnson-tiles.com
# SHIMMER
**GLAZED CERAMIC & VITRIFIED | WALL & FLOOR TILES**

## Two Size Formats
**Available Sizes:**
- **600x200mm**
  - 9.5mm thick
- **316x316mm**
  - 9.5mm thick

## One Finish
**Available Finish:**
- **S** Satin Finish

*N.B.* For full details on specification and suitability please see page 48. For advice on technical issues please contact our technical helpline.

## Three Colour Options
**Available Colours:**
- **Warm White**
- **Platinum**
- **Buff Steel**

*AVAILABLE WHILE STOCKS LAST 600X200MM SIZE FORMAT ONLY*
Availability

600x200x9.5mm ONLY
- SHI01A Warm White Satin Finish
- SHI02A Platinum Satin Finish
- SHI03A Buff Steel Satin Finish

316x316x9.5mm ONLY
- SHI01F Warm White Satin Finish
- SHI03F Buff Steel Satin Finish

N.B. For the most up-to-date availability information, please visit our website - www.johnson-tiles.com
STUDIO
GLAZED CERAMIC | WALL TILES

One Size Format
Available Size:

360x275mm
8mm thick

Two Finishes
Available Finishes:

G Gloss Finish
S Satin Finish

N.B. For full details on specification and suitability please see page 48. For advice on technical issues please contact our technical helpline.

Four Colour Options
Available Colours:

- Tundra
- Haze
- Sand
- Mist
- Beige Mix
  Structured Effect
- Grey Mix
  Structured Effect
Availability

360x275x8mm
- TUND1A Tundra Gloss Finish
- TUND2A Tundra Satin Finish
- TUND2E Tundra Scored One Way Satin Finish
- TUND2L Tundra Structured Satin Finish
- STUD2G Haze Gloss Finish
- STUD2S Haze Satin Finish
- STUD2E Haze Scored One Way Satin Finish
- STUD2L Haze Structured Satin Finish

360x50x8mm [Border]
- STUD1B Beige Mix Structured Satin Finish
- STUD1B Grey Mix Structured Satin Finish

N.B. For the most up-to-date availability information, please visit our website - www.johnson-tiles.com
THREADS
GLAZED CERAMIC | WALL TILES

One Size Format
Available Size:
300x200mm
8mm thick

One Finish
Available Finish:
S Satin Finish

N.B. For full details on specification and suitability please see page 48. For advice on technical issues please contact our technical helpline.

Three Colour Options
Available Colours:
▲ Cotton
Linear Effect
▲ Taupe
Linear Effect
▲ Flax
Linear Effect
Availability

300x200x8mm
- THRD1A Cotton Linear Satin Finish
- THRD2A Taupe Linear Satin Finish
- THRD3A Flax Linear Satin Finish

N.B. For the most up-to-date availability information, please visit our website - www.johnson-tiles.com
TUNDRA
GLAZED CERAMIC | WALL TILES

**One Size Format**
Available Size:

360x275mm
8mm thick

**Two Finishes**
Available Finishes:

G Gloss Finish
S Satin Finish

N.B. For full details on specification and suitability please see page 48. For advice on technical issues please contact our technical helpline.

**One Colour Option**
Available Colour:

▲ White
▲ White Dimensions Effect
▲ White Polygon Effect
Availability

360x275x8mm
- TUND1A White Gloss Finish
- TUND2A White Satin Finish
- DMNS1A White Dimensions Gloss Finish
- DMNS2A White Dimensions Satin Finish
- POLY1A White Polygon Satin Finish

N.B. For the most up-to-date availability information, please visit our website - www.johnson-tiles.com
URBANIQUE
GLAZED CERAMIC | WALL TILES

One Size Format
Available Size:
360x275mm
8mm thick

One Finish
Available Finish:
Matt Finish

N.B. For full details on specification and suitability please see page 48. For advice on technical issues please contact our technical helpline.

Three Colour Options
Available Colours:

- Stone
- Honey
- Mink

- Stone
  Scored Two Ways

- Honey
  Scored Two Ways

- Mink
  Scored Two Ways
Availability

360x275x8mm
- URBN1A Stone Matt Finish
- URBN1S Stone Scored Two Ways Matt Finish
- URBN2A Honey Matt Finish
- URBN2S Honey Scored Two Ways Matt Finish
- URBN3A Mink Matt Finish
- URBN3S Mink Scored Two Ways Matt Finish

N.B For the most up-to-date availability information, please visit our website - www.johnson-tiles.com
TECHNICAL INFORMATION

DETAILED INFORMATION ON SPECIFICATION, FLOOR VALUES, COLOUR NOTATIONS, PHYSICAL PROPERTIES, INSTALLATION ADVICE AND CLEANING & MAINTENANCE.
### Technical Information

#### Specification

<table>
<thead>
<tr>
<th>Range</th>
<th>Size</th>
<th>Wall Usage</th>
<th>Floor Usage</th>
<th>CSV</th>
<th>Material</th>
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<tr>
<td>Ashlar</td>
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<td>V3</td>
<td>Glazed Ceramic [BIII]</td>
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<tr>
<td>Bevel Brick</td>
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<tr>
<td></td>
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<td>City Touchstone</td>
<td>450x450x8.2mm</td>
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<td>Glazed Porcelain [BIIa]</td>
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<tr>
<td>Country Stones</td>
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<td>V2</td>
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<td>Country</td>
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<td>–</td>
<td>V3</td>
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<td>305x305x8mm</td>
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<td>V3</td>
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<td>Cristal</td>
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<td>–</td>
<td>V1</td>
<td>Glazed Ceramic [BIII]</td>
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<td>Drift</td>
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<td>–</td>
<td>V2</td>
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<td>–</td>
<td>V2</td>
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<tr>
<td>Grain</td>
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<td>–</td>
<td>V2</td>
<td>Glazed Ceramic [BIII]</td>
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<td>–</td>
<td>V2</td>
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<td>Internal &amp; External</td>
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<td>Melford Marble</td>
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<td>–</td>
<td>V2</td>
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<td></td>
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<td>Polar</td>
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<td>Sanctuary</td>
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<td>–</td>
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<tr>
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<td>316x316x9.5mm</td>
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<td>V2</td>
<td>Glazed Vitrified [BIIa]</td>
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<td>Studio</td>
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<td>–</td>
<td>V1</td>
<td>Glazed Ceramic [BIII]</td>
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<tr>
<td>Threads</td>
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<td>–</td>
<td>V2</td>
<td>Glazed Ceramic [BIII]</td>
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<tr>
<td>Tundra</td>
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<td>–</td>
<td>V1</td>
<td>Glazed Ceramic [BIII]</td>
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<td>Urbanique</td>
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<td>–</td>
<td>V2</td>
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#### Floor Values

<table>
<thead>
<tr>
<th>Range [Finish]</th>
<th>Colour</th>
<th>Pendulum 4S</th>
<th>R Value</th>
<th>Wet Ramp</th>
<th>Wet Barefoot</th>
<th>PEI</th>
<th>Traffic</th>
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<tbody>
<tr>
<td>City Touchstone [Matt]</td>
<td>White</td>
<td>Dry 36+</td>
<td>Wet 25 - 35</td>
<td>-</td>
<td>-</td>
<td>IV</td>
<td>Commercial</td>
</tr>
<tr>
<td>All Other Colours</td>
<td>Dry 36+</td>
<td>Wet 25 - 35</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>III</td>
<td>Light Commercial</td>
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</table>
## Floor Values

<table>
<thead>
<tr>
<th>Range [Finish]</th>
<th>Colour</th>
<th>Pendulum 4S</th>
<th>R Value</th>
<th>Wet Ramp</th>
<th>Wet Barefoot</th>
<th>PEI</th>
<th>Traffic</th>
</tr>
</thead>
<tbody>
<tr>
<td>County [Matt]</td>
<td>All Colours</td>
<td>Dry 36+ Wet 25 - 35</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>III</td>
<td>Light Commercial</td>
</tr>
<tr>
<td>Kerastar [Natural]</td>
<td>All Colours</td>
<td>Dry 36+ Wet 36+</td>
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<td>Kerastar [Discface]</td>
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<td>Kerastar [Backstop]</td>
<td>All Colours</td>
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<td>Lagos [Matt]</td>
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<td>Dry 36+ Wet 0 - 24</td>
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<td>-</td>
<td>-</td>
<td>IV</td>
<td>Commercial</td>
</tr>
<tr>
<td>Shimmer [Satin]</td>
<td>Buff Steel</td>
<td>Dry 36+ Wet 25 - 35</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>IV</td>
<td>Commercial</td>
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</table>

**N.B** Due to the manufacturing process of all floor tiles there may be small variations in slip resistance. Given this, please refer to our website or call our technical helpline for the most up-to-date information.

## Colour Notations

<table>
<thead>
<tr>
<th>Range</th>
<th>Colour</th>
<th>NCS</th>
<th>LRV</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ashlar</td>
<td>Crafted Grey</td>
<td>2002-Y50R</td>
<td>55</td>
</tr>
<tr>
<td></td>
<td>Warm Taupe</td>
<td>1505-Y50R</td>
<td>62</td>
</tr>
<tr>
<td></td>
<td>Weathered White</td>
<td>1002-Y50R</td>
<td>73</td>
</tr>
<tr>
<td></td>
<td>Black</td>
<td>9000-N</td>
<td>4</td>
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<tr>
<td></td>
<td>Cream</td>
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<td>Dark Grey</td>
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<td>Light Grey</td>
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<td></td>
<td>Red</td>
<td>1580-Y90R</td>
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<td>Sage</td>
<td>3005-G50Y</td>
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<td>White</td>
<td>1002-Y50R</td>
<td>73</td>
</tr>
<tr>
<td>Bevel Brick</td>
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<td>Beige</td>
<td>3005-Y20R</td>
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</tr>
<tr>
<td></td>
<td>Light Grey</td>
<td>3502-Y</td>
<td>38</td>
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<td></td>
<td>Mid Grey</td>
<td>5005-Y80R</td>
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<td>White</td>
<td>2002-Y50R</td>
<td>55</td>
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<tr>
<td></td>
<td>Desert</td>
<td>2005-Y30R</td>
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<td>Glacier</td>
<td>1005-Y50R</td>
<td>73</td>
</tr>
<tr>
<td></td>
<td>Shadow</td>
<td>1502-Y50R</td>
<td>64</td>
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<td>Light Grey</td>
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<td>38</td>
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<td></td>
<td>Mid Grey</td>
<td>5005-Y80R</td>
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</tbody>
</table>

**N.B** Due to the colour variation of Beige Mix and Grey Mix, accurate Light Reflectance values and Colour Notations cannot be calculated. For further information, please contact our Technical Helpline.

## Range | Colour | NCS | LRV
<table>
<thead>
<tr>
<th></th>
<th></th>
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</thead>
<tbody>
<tr>
<td>Cristal</td>
<td>Cream</td>
<td>1005-Y20R</td>
<td>71</td>
</tr>
<tr>
<td></td>
<td>White</td>
<td>0500-N</td>
<td>86</td>
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</tbody>
</table>

**N.B** Due to the colour variation of Beige Stripe Border, Beige Stripe Inset, Grey Stripe Border, Grey Stripe Inset and Blue Stripe Inset, accurate Light Reflectance values and Colour Notations cannot be calculated. For further information, please contact our Technical Helpline.

## Drift

**N.B** Due to the variation in colour of all tiles in Drift, accurate NCS and LRV readings cannot be calculated. For further information, please contact our technical helpline below.

## Echo

<table>
<thead>
<tr>
<th>Range</th>
<th>Colour</th>
<th>NCS</th>
<th>LRV</th>
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</thead>
<tbody>
<tr>
<td>Desert</td>
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</tr>
<tr>
<td>Glacier</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Shadow</td>
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<td></td>
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</tbody>
</table>

**N.B** Due to the colour variation of Glacier Linear, Shadow Linear and Desert Linear accurate Light Reflectance values and Colour Notations cannot be calculated. For further information, please contact our Technical Helpline.

## Grain

<table>
<thead>
<tr>
<th>Range</th>
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<th>NCS</th>
<th>LRV</th>
</tr>
</thead>
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<td>Ash</td>
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<td></td>
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<td>Driftwood</td>
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**N.B** Due to the variation in colour of all tiles in Grain, accurate NCS and LRV readings cannot be calculated. For further information, please contact our technical helpline below.

## Grasmere

**N.B** Due to the variation in colour of all tiles in Grasmere, accurate NCS and LRV readings cannot be calculated. For further information, please contact our technical helpline below.

## Kerastar

<table>
<thead>
<tr>
<th>Range</th>
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<th>LRV</th>
</tr>
</thead>
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<tr>
<td>Chalk</td>
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**N.B** Due to the variation in colour of all tiles in Kerastar, accurate NCS and LRV readings cannot be calculated. For further information, please contact our technical helpline below.
# Technical Information

## Colour Notations

<table>
<thead>
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<th>Range</th>
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<th>NCS</th>
<th>LRV</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kerastar</td>
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<td>2005-Y30R</td>
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</tr>
<tr>
<td></td>
<td>Mud</td>
<td>5005-Y80R</td>
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</tr>
<tr>
<td></td>
<td>Night</td>
<td>8000-N</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>Night Sky</td>
<td>8000-N</td>
<td>8</td>
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<td></td>
<td>Pumice</td>
<td>3502-Y</td>
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<td>Putty</td>
<td>4502-Y</td>
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<td>Shadow</td>
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<td>String</td>
<td>2005-Y40R</td>
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<td>Lagos</td>
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<td>White</td>
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<td>Melford Marble</td>
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<td>Shark</td>
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<td>White</td>
<td>0500-N</td>
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<td>Bath</td>
<td>1000-N</td>
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<td>Bianco Carrara</td>
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<td>Buxton</td>
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<td>Horizon</td>
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<td>Matlock</td>
<td>0603-Y40R</td>
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**N.B.** Due to the colour variation of Black and Magnolia, accurate Light Reflectance values and Colour Notations cannot be calculated. For further information, please contact our Technical Helpline.

<table>
<thead>
<tr>
<th>Range</th>
<th>Colour</th>
<th>NCS</th>
<th>LRV</th>
</tr>
</thead>
<tbody>
<tr>
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<td>6005-Y80R</td>
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<td>Warm White</td>
<td>1000-N</td>
<td>74</td>
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<td>Studio</td>
<td>Haze</td>
<td>1005-Y30R</td>
<td>70</td>
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<td>Mist</td>
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<td>Tundra</td>
<td>0500-N</td>
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<td>4005-Y50R</td>
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<td>Honey</td>
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<td>Mink</td>
<td>3010-Y40R</td>
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<tr>
<td></td>
<td>Stone</td>
<td>1005-Y20R</td>
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</tr>
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</table>

**N.B.** These results are from Johnson Tiles’ internal test reports and are to be used for guidance only. NCS: Natural Colour System. LRV: Light Reflectance Value (Reflectance Y).
## Physical Properties - Ceramic Tiles

<table>
<thead>
<tr>
<th>Test</th>
<th>Standard</th>
<th>Requirements</th>
<th>Typical Test Result</th>
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</thead>
<tbody>
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<td>Length / Width</td>
<td>EN ISO 10545 - 2</td>
<td>±0.5% ± 2mm</td>
<td>Pass</td>
</tr>
<tr>
<td>Thickness</td>
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<td>±10% ± 0.5mm</td>
<td>Pass</td>
</tr>
<tr>
<td>Straightness of Side</td>
<td>EN ISO 10545 - 2</td>
<td>±0.3% ± 1.5mm</td>
<td>Pass</td>
</tr>
<tr>
<td>Water Absorption</td>
<td>EN ISO 10545 - 3</td>
<td>10% to 20%</td>
<td>Pass</td>
</tr>
<tr>
<td>Modulus of Rupture</td>
<td>EN ISO 10545 - 4</td>
<td>Min 15N / mm²</td>
<td>Pass</td>
</tr>
<tr>
<td>Frost Resistance</td>
<td>EN ISO 10545 - 12</td>
<td>Not suitable for installations where temperatures may fall below freezing.</td>
<td></td>
</tr>
</tbody>
</table>

**Stain Resistance**

<table>
<thead>
<tr>
<th>Test</th>
<th>Standard</th>
<th>Requirements</th>
<th>Typical Test Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>EN ISO 10545 - 14</td>
<td>Min Class 3</td>
<td>Pass</td>
<td></td>
</tr>
</tbody>
</table>

**Note:** Classed as BIII products [Glazed Ceramic]. All products comply with BS EN 14411.

## Physical Properties - Porcelain Tiles

<table>
<thead>
<tr>
<th>Test</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Length / Width</td>
<td>EN ISO 10545 - 2</td>
<td>±0.6% ± 2mm</td>
<td>Pass</td>
</tr>
<tr>
<td>Thickness</td>
<td>EN ISO 10545 - 2</td>
<td>±5% ± 0.5mm</td>
<td>Pass</td>
</tr>
<tr>
<td>Straightness of Side</td>
<td>EN ISO 10545 - 2</td>
<td>±0.5% ± 1.5mm</td>
<td>Pass</td>
</tr>
<tr>
<td>Water Absorption</td>
<td>EN ISO 10545 - 3</td>
<td>3% to 6%</td>
<td>Pass</td>
</tr>
<tr>
<td>Modulus of Rupture</td>
<td>EN ISO 10545 - 4</td>
<td>Min 22N / mm²</td>
<td>Pass</td>
</tr>
<tr>
<td>Frost Resistance</td>
<td>EN ISO 10545 - 12</td>
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**Note:** Classed as BIIa products [Glazed Porcelain]. All products comply with BS EN 14411.

## Physical Properties - Vitrified Tiles

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**Note:** Classed as BIIa products [Glazed Vitrified]. All products comply with BS EN 14411.
## Technical Information

### Colour Shade Variation

Colour Shade Variation (CSV) values are assigned to wall and floor tiles within this booklet. These values are to be used for guidance only. Shade, colour and pattern variation are inherent characteristics of all ceramic, vitrified and porcelain tiles. Before fixing, several cartons should be opened and their contents mixed to ensure that the shade variation and/or patterning are acceptable. Colour Shade Variation (CSV) is split into four categories:

- **V1 [Low Shade Variation]**
  - Least possible shade variation between tiles in a box. When installed and mixed correctly the effect is a consistent overall appearance.

- **V2 [Low to Moderate Shade Variation]**
  - Low to moderate shade variation within a box. When installed and mixed correctly the effect is a finish with subtle shade differences. These differences are a design feature of V2 rated tiles.

- **V3 [Moderate to High Shade Variation]**
  - Considerable shade variation within a box. When installed and mixed correctly the effect is a finish with a high degree of shade variation. These differences are a design feature of V3 rated tiles.

- **V4 [High Shade Variation]**
  - Highest possible shade variation within a box. Colours vary from tile to tile and when mixed and fixed correctly create a high degree of shade variation. This high shade variation is a design feature of V4 rated tiles.

### Pendulum 4S Results

The slip resistance of a floor finish is the most important safety consideration. Effective and suitable slip-resistant characteristics will reduce the likelihood of slipping, particularly for older, mobility impaired and visually impaired people.

The Pendulum Test is the standard and preferred Health and Safety Executive (HSE) test method for the assessment of floor slipperiness in dry and contaminated conditions. This portable test can be used to test floor products in the laboratory or in-situ and uses a swinging test apparatus, which simulates the act of walking over the flooring materials.

The 4S Slider 96 [Pendulum 4S] replicates typical shod trafficking. Products are tested dry and with a water lubricant and are then classed into one of the following three groups as an indication of their suitability:

- **0 - 24 [High Slip Potential]**
- **25 - 35 [Moderate Slip Potential]**
- **36+ [Low Slip Potential]**

The Pendulum 4S results contained in this booklet are based on Johnson Tiles’ internal test results along with information available at the time of print and are to be used for guidance purposes only. Project-specific requirements should be used and checks should be made so that the requirements at the time of specification are incorporated. Further information is available from - www.hse.gov.uk

### R Values

The German ramp test is used to generate the R Value ratings [DIN 51130] used commonly in North Europe. This test can only be carried out in a laboratory, so does not allow in-situ testing of materials.

This is a shed foot test which uses oil as a contaminant. These results are then interpreted into one of the following five groups:

- **R9 [6º to 10º]**
  - Entrances and stairways accessed from outside, restaurants, shops, hospitals, clinic, schools etc.

- **R10 [10º to 19º]**
  - Shared toilets and showers, small kitchens in restaurants and cafes, garages and basements etc.

- **R11 [19º to 27º]**
  - Food production facilities; mid sized kitchens in restaurants and cafes, working environments where there is a lot of water, laboratories, laundries, hangers etc.

- **R12 [27º to 35º]**
  - Production facilities for foods rich in fats; such as dairy products, food oils and cured meats, large kitchens in restaurants and cafes, industrial areas where slippery substances are used etc.

- **R13 [>35º]**
  - Areas where large quantities of fats are used; food processing areas etc.

R Value ratings have generally been used to assess product suitability in the UK. However, this is changing dramatically following recommendations from the HSE with the preferred test method being the Pendulum test.

### PEI Ratings and Traffic

Porcelain Enamel Institute (PEI) ratings refer to the surface abrasion resistance of a glazed floor tile. The test is only used for glazed tiles – through-body porcelain and un-glazed porcelain are tested using the EN ISO 10545-6 Deep Abrasion Test.

All glazed floor tiles within this booklet are rated with a PEI value along with a foot traffic suitability recommendation, these values and recommendations are split into the following five categories:

- **PEI I [Light Domestic Traffic]**
  - Floors walked on with soft soled footwear with no scratching dirt – for example; residential bathrooms without direct outside access, en-suite bathrooms etc.

- **PEI II [Domestic Traffic]**
  - Floors walked on with soft soled or normal footwear with occasional small amounts of scratching dirt – for example rooms in living areas of home, but not kitchens.

- **PEI III [Light Commercial Traffic]**
  - Floors walked on with normal footwear with small amounts of scratching dirt – for example; residential halls, corridors, kitchens or conservatories.

- **PEI IV [Commercial Traffic]**
  - Floors walked on by regular traffic with the presence of some scratching dirt but more severe than PEI III’s – for example; hotels, restaurants and shops without direct external access.

- **PEI V [Heavy Commercial Traffic]**
  - Floors subject to severe pedestrian traffic over sustained periods with the presence of some scratching dirt – for example; shopping centres, hotel foyers, commercial floors, institutional uses etc.
Wet Ramp

The German ramp test is used to generate the ABC ratings [DIN 51907] used commonly in North Europe. These tests can only be carried out in a laboratory, so does not allow in-situ testing of materials.

This a wet barefoot test where a soap solution is applied as a contaminant, the results from this test are placed into one of the following three categories:

Class A [12° to 17°]
Dry areas including dry changing room areas, dry barefoot corridors etc.

Class B [18° to 23°]
Same as Class A with the addition of swimming pool surrounds, communal showers, pool beach areas, disinfectant spray areas, wet changing room areas etc.

Class C [>23°]
Same as Class A and Class B with the addition of swimming pool surround inclines, walk through pools, jacuzzi floors and seats, inclined pool edges and steps etc.

The Pendulum TRRL results contained in this booklet are based on Johnson Tiles' internal test reports along with information available from the HSE with the preferred test method being the Pendulum test.

Wet Barefoot Areas

The slip resistance of a floor finish is the most important safety consideration. Effective and suitable slip-resistant characteristics will reduce the likelihood of slipping, particularly for older, mobility impaired and visually impaired people.

The Pendulum Test is the standard and preferred Health and Safety Executive [HSE] test method for the assessment of floor slipperiness in dry and contaminated conditions. This portable test can be used to test floor products in the laboratory or in-situ and uses a swinging test apparatus, which simulates the act of walking over the flooring materials.

The Slider 55 [Pendulum TRRL] replicates wet barefoot trafficking for areas such as; wet changing rooms, swimming pool surrounds, shower areas, etc. Products are tested with a water lubricant and are then given a ‘Yes’ classification if they’re suitable for Wet Barefoot areas.

The Pendulum TRRL results contained in this booklet are based on Johnson Tiles’ internal test reports along with information available at the time of print and are to be used for guidance purposes only.

Project-specific requirements should be used and checks should be made so that the requirements at the time of specification are incorporated. Further information is available from – www.hse.gov.uk

Accessibility and Support

The Equality Act 2010 has replaced the Disability Discrimination Act and in general, carries forward the protection that the Disability Discrimination Act provided for disabled people. The Disability Discrimination Act was repealed in October 2010.

The Equality Act requires accessible environments to be provided for disabled people, either in their place of work or for access to goods, services or facilities [public spaces]. Those commissioning new buildings or adaptations to existing buildings must consider the implications of the Equality Act and their ability to provide buildings that do not discriminate against disabled people [physical or mental impairments].

Colour Reflectance [Contrast]

The Equality Act gives guidance on good visual contrast for the visually impaired between various elements of a building by the use of Light Reflectance Values [LRV].

LRV is a general term for contrast and is measured as the proportion of useful light reflected by a coloured object, floor, wall or ceiling. LRV is measured on a scale of 0 to 100 where 0 is perfect black and 100 perfect white (in reality 0 and 100 are unobtainable colours). According to NCS Colour Centre in practical terms black is approx 6 and white approx 85.

The current guidelines from Building Regulations Approved Document M on contrast are that a minimum difference of 30 LRV points should be specified for adjacent surfaces to ensure that visually impaired people are not discriminated against. In a specific example of ceramic tiles this difference should be between:

Floors to Walls
Ceiling to Walls
Handrails to Walls
Sanitary Fittings to Walls

The visual contrast between floors and walls is important in enabling visually impaired people to assess and gauge the size and shape of a room. The greatest visual contrast must occur where the floor meets the wall [skirting] as this gives the most accurate visual indication of the extent of the room. Where provided, skirting’s should contrast visually with the floor and be similar in colour and tone to the wall surface.

This information is not exhaustive and the requirements at the time of specification must be checked.

BS8300:2001 Amendment 1 indicates that there is anecdotal evidence to suggest that a 20 point LRV difference may be sufficient – especially where large adjacent areas are involved. It must be noted that the guidance on LRV values given in this booklet is correct at the time of print. This is a subject that may be reviewed by the regulatory body at any time so it is advisable to check the guidelines at the time of specification of product.

The Equality Act details given in this brochure are to be used as an outline guide only and are the details as Johnson Tiles understand them at the time of print. Further qualified advice should be sought if any of the details given above are in doubt.

Light Reflectance Values

LRV is a general term for contrast and is measured as the proportion of useful light reflected by a coloured object, floor, wall or ceiling. LRV is measured on a scale of 0 to 100 where 0 is perfect black and 100 is perfect white.

The current guidelines from Building Regulations Approved Document M on contrast are that a minimum difference of 30 LRV points should be specified for adjacent surfaces to ensure that visually impaired people are not discriminated against.

Colours are notated by the Natural Colour System (NCS).

© Property of and used under the Licence from Scandinavian Colour Institute AB, SCI Sweden AB, Stockholm, 2001. See your local NCS distributor for original NCS standard samples.
### Technical Information

#### Installation Advice

**Codes of Practice**

All fixing of floor and cladding tiles should be in accordance with the following codes of practice guidelines:

- **BS5385 Part 1 - 1995**  
  [Code of practice for the design and installation of internal wall tiling and mosaics in normal conditions]

- **BS5385 Part 2 - 2006**  
  [Code of practice for the design and installation of external ceramic wall tiling and mosaics]

- **BS5385 Part 3 - 1989**  
  [Code of practice for the design and installation of ceramic floor tiles and mosaics]

- **BS5385 Part 4 - 1992**  
  [Code of practice for ceramic tiling and mosaic in specific conditions]

- **BS8000 Section 11.1 - 1989**  
  [Workmanship on Building Sites, Part 11, Code of practice for wall and floor tiling]

Floor and cladding tiles are made from quality refined raw materials and are classed as B1a [Porcelain] products, as such they require the use of polymer modified adhesives [classification C2*] and grouts specially formulated for fixing and grouting of porcelain tiles.

* Check with adhesive manufacturer for additional C1 product suitability.

**Substrates**

Before tiling is commenced it is important to ensure that the correct minimum curing periods have been observed for all substrates:

- **Concrete**  [6 Weeks]
- **Screed - Non Modified**  [3 Weeks]
- **Rendering - Non Modified**  [2 Weeks]
- **Gypsum Plastering**  [4 Weeks]
- **Brickwork / Blockwork**  [6 Weeks]

Accuracy of the substrate must be checked to ensure that the guidance given in BS5385 has been achieved i.e. “local variations in level for a nominally flat floor or wall should be such that, when checked with a 2m straightedge, any gap under the straightedge between points of contact does not exceed 3mm”.

**Movement Joints**

The location, type and scope of all movement joints must be ascertained prior to any fixing works. All structural joints must be followed through to the face of the tile at full width with intermediate movement joints [minimum 6mm wide] being situated at:

**Changes of Plane**

**Wall / Floor Junctions**

Where tiling abuts other materials:

Additionally at 3 to 4.5m maximum centres for wall tiling and 8 to 10m maximum bay centres for floor tiling [in suspended floors the bay dimensions should be reduced by providing additional joints over supporting walls and beams].

Movement joints can either be filled with a suitable backer, bond breaker and filler [e.g. epoxy polysulphide – please check with manufacturer for suitability] or be of the pre-formed variety.

**Design / Layout**

Consideration to locations of plane changes and room sizes should be undertaken to ensure the best tile size is selected to minimise cutting and improve aesthetics.

**Adhesives**

Adhesives should be in accordance with BS EN 12004, Class C2*. Particular adhesive choice will be governed by the substrate.

* Check with adhesive manufacturer for additional C1 product suitability.

Johnson Tiles recommend the use of Norcros Adhesives products, see below:

<table>
<thead>
<tr>
<th>Substrate</th>
<th>Product</th>
</tr>
</thead>
<tbody>
<tr>
<td>Concrete</td>
<td>Rapid Set / Rapid Set Flexible</td>
</tr>
<tr>
<td>Sand / Cement Screed</td>
<td>Rapid Set / Rapid Set Flexible</td>
</tr>
<tr>
<td>Wood Floors</td>
<td>Speed Flex</td>
</tr>
<tr>
<td>Brickwork / Blockwork</td>
<td>One Part Flexible</td>
</tr>
<tr>
<td>Sand / Cement Render</td>
<td>One Part Flexible</td>
</tr>
<tr>
<td>Plasterboard</td>
<td>One Part Flexible</td>
</tr>
</tbody>
</table>

**Grouts**

The choice of grout type should reflect the expected service conditions of the installation.

For general floor tiling grouts should be class CG2 i.e. Wide Joint Flexible Grout.

For floors subject to frequent wetting i.e. showers and pool halls grout should be class CG2 for hard water areas or RG1 for soft water areas i.e. Wide Joint Flexible Grout [CG2], Easy Clean Epoxy [RG1].

Where hygiene is important ie commercial kitchens and hospitals grout should be class RG1 i.e. Easy Clean Epoxy.

**Fixing Tiles**

All floor tiles should be fixed with a solid bed of adhesive, this ensures maximum durability and strength within the installation and long term adhesion performance. This is achieved with the use of a notched solid bed trowel. It is good practice to periodically remove a recently fixed tile to ensure that the correct bedding is being achieved and maintained. When fixing all tiles care must be taken to ensure that no lipping of tiles occurs.
Cleaning and Maintenance

Maintaining the appearance and characteristics [especially slip resistance values] of floor tiles is achieved with the implementation of a suitable cleaning regime. It must be stressed that the cleaning material manufacturers instructions must be followed at all times. Regular and correctly undertaken cleaning should maintain a flooring product as close to its original state as possible. Incorrect or infrequent cleaning will adversely affect the properties of the flooring material and increase potential hazards. Generally the smoother the surface of the tile the easier it is to clean. However, it should be noted that textured products, required to give adequate slip resistance when wet, can be satisfactorily cleaned – the cleanability of a surface is more a function of the contaminant than the texture of the surface. It is therefore essential when selecting and specifying a floor finish that the use of the area and likely contaminants, safety, aesthetic and hygiene requirements are all taken into account at the specification stage.

Cleaning can be split into several categories, each of which is dependent upon installation type [i.e. wet barefoot areas, shopping malls, public toilets, etc] and frequency of usage [i.e. high, medium or low traffic].

Builders Clean
This should be undertaken before a floor is being brought into service. The builders clean removes any residual film leftover from the grouting operation and is a one-off cleaning process. This must be carried out as any grout residues left behind will act as a key for dirt resulting in the installation being difficult to clean. Temporary sealers may be used to facilitate cleaning off after laying which can be removed with the use of alkaline detergents.

Cementitious Grouts
The use of a mild acid de-cementing solution followed by thorough rinsing will remove all but the most stubborn of cement residues.

Epoxide Grouts
It is essential that ALL residue must be removed from the surface of the tiles during the grouting process and before the resin cures. Failure to achieve this will result in a very difficult and expensive process using gel-type epoxide removers.

Routine Cleaning
The regular use of detergents or other cleaning agents, which are excessively acidic or alkaline could cause irreversible damage to the ceramic tile surface. Degreasing agents that contain wax, sodium silicate or other additives which leave sticky deposits and thus retain dirt should be avoided. Oil residues or build-ups of wax can be removed with a proprietary wax and polish remover.

Manual Cleaning
In normal conditions tiles require little maintenance and can be easily kept clean by sweeping and then mopping with warm water to which a neutral or nearly neutral detergent has been added. The cleaning solution should remain on the floor for 5 to 15 minutes [see manufacturers instructions] to allow it to penetrate and emulsify the dirt after which it should be removed by rinsing thoroughly with clean water. The rinsing process removes the dirt so the use of clean water is important.

Mechanical Cleaning
For larger floor areas or areas of textured tiles the use of a rotary scrubbing machine is recommended [machines should not be used at speeds in excess of 450rpm]. The choice of brush type is especially heavy. The cleaning solution should remain on the floor for 5 to 15 minutes [see manufacturers instructions] after which a secondary scrubbing action and clean mop or suction should be undertaken to remove the solution and dirt.

High Pressure Cleaning
Tiles seldom require the use of high-pressure cleaning. Whilst the process will not damage the tiles care must be taken to avoid erosion of the grout. To minimise grout erosion ensure that the water beam is continually moved from side to side and not allowed to concentrate on the grouted joints. Water containing abrasives or steam cleaners should not be used on ceramic tiles.

Wet Areas
Wet barefoot areas may attract build-ups of body fats, soaps, oil residues and organic growth. To prevent these a mildly acidic cleaning agent used regularly is preferable. If build-up has been allowed a preliminary deep clean with a proprietary cleaner is required followed by regular use of a mildly acidic cleaning agent solution.

Periodic Deep Cleaning
Occasionally foreign matter may cause surface marks that cannot be removed with the usual cleaning processes and materials. If the surface mark cannot be removed, other materials should be considered [it is advisable to experiment on a small inconspicuous area].

Paint – Paint Remover

Organic Stains – Bleach / one off treatment with Washing Soda

Rust – Masonry Cleaner

Oil / Fat / Grease – Detergent or Degreaser

Mould Growth – Household Bleach / Proprietary Cleaner

Tea / Coffee / Ink – Household Bleach / Proprietary Cleaner

Abrasive powders or cleaners should never be used on ceramic tiles.

Important Information

During the manufacturing process of ceramic, vitrified and porcelain tiles, some variation in shade or pattern can occur. Before fixing any tiles, several cartons should be opened and their contents mixed, to ensure that the size, shade, colour and patterning are acceptable. The tiles shown in the booklet are quality products and conform to the physical properties listed in this booklet.

For specific suitability and fit-for-purpose details, contact our Technical Helpline. Johnson Tiles cannot accept responsibility for any tiles that have been fixed.

Every effort has been made to ensure the accuracy of the information given in this booklet.

In the interest of progress, Johnson Tiles reserves the right to change specifications and availability without prior notice.

Nothing in these statements does or will affect the statutory rights of the consumer.

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