

# Ironclad

porcelain tiles & slabs



**COBSA USA**  
NEW YORK | NEW JERSEY | MIAMI

Ironclad  
**BLACK**





BLACK

**48"X106"** (120CM X 270CM) **SLABS**

6mm Thickness | Rectified Edge | 8 faces\*



DOMIRBK48106

**24"X48"** (60CM X 120CM) **TILES**

9mm Thickness | Rectified Edge | V3 Shade Variation | 12 faces\*



DOMIRBK2448

**12"X24"** (30CM X 60CM) **TILES**

9mm Thickness | Rectified Edge | V3 Shade Variation | 25 faces\*



DOMIRBK1224

*\*faces shown for visual variety. not intended for individual selection.*



Ironclad  
**BLUE**





**48"X106"** (120CM X 270CM) **SLABS**

6mm Thickness | Rectified Edge | 8 faces\*



DOMIRBL48106

**24"X48"** (60CM X 120CM) **TILES**

9mm Thickness | Rectified Edge | V3 Shade Variation | 12 faces\*



DOMIRBL2448

**12"X24"** (30CM X 60CM) **TILES**

9mm Thickness | Rectified Edge | V3 Shade Variation | 26 faces\*



DOMIRBL1224

*\*faces shown for visual variety. not intended for individual selection.*



Ironclad  
**DARK GREY**





# DARK GREY

## 48"X106" (120CM X 270CM) SLABS

6mm Thickness | Rectified Edge | 8 faces\*



DOMIRDG48106

## 24"X48" (60CM X 120CM) TILES

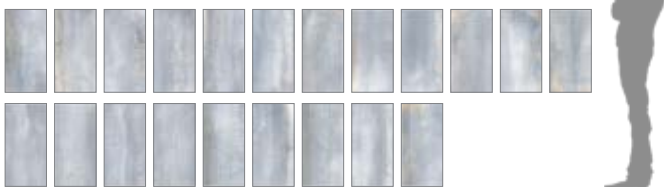
9mm Thickness | Rectified Edge | V3 Shade Variation | 12 faces\*



DOMIRDG2448

## 12"X24" (30CM X 60CM) TILES

9mm Thickness | Rectified Edge | V3 Shade Variation | 21 faces\*



DOMIRDG1224

*\*faces shown for visual variety. not intended for individual selection.*



Ironclad  
LIGHT GREY







LIGHT GREY

**48"X106"** (120CM X 270CM) **SLABS**

6mm Thickness | Rectified Edge | 8 faces\*



DOMIRLG48106

**24"X48"** (60CM X 120CM) **TILES**

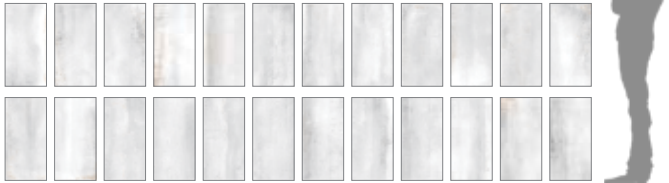
9mm Thickness | Rectified Edge | V3 Shade Variation | 12 faces\*



DOMIRLG2448

**12"X24"** (30CM X 60CM) **TILES**

9mm Thickness | Rectified Edge | V3 Shade Variation | 24 faces\*



DOMIRLG1224

\*faces shown for visual variety. not intended for individual selection.

Ironclad  
RUST







# RUST

## 48"X106" (120CM X 270CM) SLABS

6mm Thickness | Rectified Edge | 8 faces\*



DOMIRRU48106

## 24"X48" (60CM X 120CM) TILES

9mm Thickness | Rectified Edge | V3 Shade Variation | 12 faces\*



DOMIRRU2448

## 12"X24" (30CM X 60CM) TILES

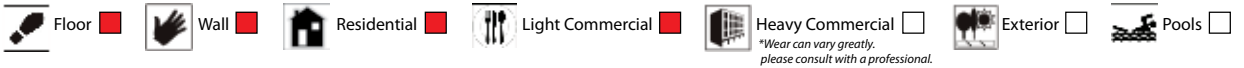
9mm Thickness | Rectified Edge | V3 Shade Variation | 21 faces\*



DOMIRRU1224

\*faces shown for visual variety. not intended for individual selection.

# Suggested Applications



# Installation Suggestions

Plank Installation\*  Modular Setting  Joint Size

\*Install the offset the width of the plank. For professional installation, the use of leveling spacers for all plank and rectangular (ie. 12x24) format tiles is recommended.

EDGE:  Straight/Pressed  Rustic  Rectified

FINISH:  Matte  Polished  Structured  
 Honed  Semi-Polished

# Porcelain Type

through-body  color-bodied  glazed  unglazed  double-loaded  other \_\_\_\_\_

# Shade Variation

V1 Uniform Appearance  V2 Slight Variation  V3 Moderate Variation  V4 Substantial Variation

THICKNESS: **9mm 6mm** # OF FACES: **see color pages**

# Slip Resistance

DCOF	Values	Applications
<input checked="" type="checkbox"/> .56	0.42	Recommended Standard DCOF value for wet/dry commercial flooring
<input type="checkbox"/>	0.65	Recommended Standard DCOF value for ADA ramps

DIN 51130 \*R9: Industry Standard/ADA Requirements \*\*R11: Recommended For Exteriors

R9\* (3-10°)  R10 (10-19°)  R11\*\* (19-27°)  
 R12 (27-35°)  R13 (>35°)

DIN 51097

Class	Typical Applications	Critical Angle
<input checked="" type="checkbox"/> A	Barefoot, but mainly dry aisles and walkways, dry changing areas	≥12°
<input type="checkbox"/> B	Shower rooms, pool surrounds, wet changing areas, disinfectant spray areas (plus all Class A areas)	≥18°
<input type="checkbox"/> C	Areas constantly under water, e.g. steps into pools, foot baths, included pool surrounds, jacuzzis (plus all Class A&B areas)	≥24°

ASTM C-1028  
ANSI A137.1  
DIN 51097/51130

# Scratch Resistance

MINERAL

1. Talc (Talc)	6. Microline (Glass, Glazed Tile)
2. Gypsum (Fingernail)	7. Quartz (Unglazed Porcelain)
3. Calcite (Penny)	8. Topaz (Granite)
4. Fluorite (Some Marbles)	9. Corundum (Ruby)
5. Apatite (Knife Blade)	10. Diamond (Diamond)

Industry standard ≤175mm<sup>2</sup>

# Wear Resistance

PEI RATING UNI EN ISO 10545.7

Class 1: Walls only  
 Class 2: Residential floors w/minimal abrasive traffic  
 Class 3: Residential interiors/light commercial traffic  
 Class 4: Medium commercial applications  
 Class 5: All commercial applications/heavy traffic

\*Wear can vary greatly. please consult with a professional.

# Stain Resistance

- 5: Removed after 5 minutes (hot water running)
- 4: Removed by manual cleaning (weak detergent)
- 3: Removed by mechanical cleaning (strong detergent)
- 2: Removed by immersion (24 hrs in suitable solvent)
- 1: Stain not removed

ASTM C1378-04  
UNI EN ISO 10545.14

# Water Absorption

ASTM C-373  
UNI EN ISO 10545.3

<input checked="" type="checkbox"/> Absorbs 0-.5%	<input type="checkbox"/> Absorbs .5-3%	<input type="checkbox"/> Absorbs 3-7%	<input type="checkbox"/> Absorbs 7% +
Impervious Interior/Exterior Frost Resistant	Vitreous Interior/Exterior Frost Resistant	Semi-Vitreous Indoor Use Only	Non-Vitreous Indoor Use Only

# Breaking Strength

Industry standard should be greater than  
250 lbs  
or  
50 N/MM<sup>2</sup>

ASTM C648  
UNI EN ISO 10545.4

# Facial Dimension

ASTM c499-09  
UNI EN ISO 10545.02

	Standard	Tolerance	Result
flatness	±5mm	±.5%	PASS
thickness	±6mm	±.5%	PASS
straightness	±4.5mm	±.5%	PASS
squareness	±5.4mm	±.6%	PASS
sides L/W	±1.1mm ±4.5mm	±.5%	PASS

# Chemical Resistance

ASTM C650  
UNI EN ISO 10545.13

Allowances for:

result

Acid  B

Bases  B

Chemicals  B

# Leed Information

REQUIREMENTS FOR COMMERCIAL INTERIORS/NEW CONSTRUCTION

Sustainable Sites	1 Point
Site selection	
SS CREDIT 1 Heat Island Effect-non roof Material with a solar reflectant index of at least 29.	<input type="checkbox"/>
Energy & Atmosphere	1 Point
EA CREDIT 4 Green Power: Products that optimize energy performance for floors and walls using thermal conductivity. BTU-FT	<input type="checkbox"/>
Indoor Environmental Quality	1 Point
IEQ CREDIT 3.1-7 Green Cleaning: Reducing occupants exposure to hazardous cleaning chemicals.	<input type="checkbox"/>
IEQ CREDIT 4.1 Low Emitting Adhesives: Products less than 65 G/L VOC	<input checked="" type="checkbox"/>
IEQ CREDIT 4.3 Low Emitting Materials: Flooring systems.	<input type="checkbox"/>

Materials & Resources	1 Point	2 Points
M&R CREDIT 2 Construction Waste Management: Recycling salvaged construction waste in to new reusable materials.	50% <input checked="" type="checkbox"/>	70% <input type="checkbox"/>
M&R CREDIT 4.1-4.2 Recycled Content: The sum of post consumer plus 1/2 of the pre consumer reps at least 10-20% of total value of materials.	10% <input type="checkbox"/>	20% <input checked="" type="checkbox"/>
M&R CREDIT 5 Regional Materials: Materials manufactured within 500 miles of the project site.	10% <input checked="" type="checkbox"/>	20% <input type="checkbox"/>
Innovation in Design	1-5 Points	
ID CREDIT 1 Innovation in Design Measurable exemplary environmental performance.	<input type="checkbox"/>	

Type: **Porcelain Stoneware**

Product Line: **Ironclad**

\*The marketing name for this product is property of Cobsa-USA. This same product may be marketed under different names.\*