# TECHNICAL SHEET OF ORIGIN, USE AND MAINTENANCE OF THE MARBLE TYPES

#### BRIEF INTRODUCTION TO THE NATURE OF MARBLE

MARBLE IS A NATURAL MATERIAL WITH A SEDIMENTARY ORIGIN AND IT IS MAINLY COMPOSED OF CALCIUM CARBONATE (CACO3).

A METAMORPHIC PROCESS FROM SEDIMENTARY ROCKS GIVES ORIGIN TO THE MARBLE. THIS PROCESS CAUSES COMPLETE RECRYSTALLIZATION OF CALCIUM CARBONATE.

THE COLOUR OF THE MARBLE MAY VARY DEPENDING ON THE PRESENCE OF MINERAL IMPURITIES (SUCH AS CLAY, SAND, IRON OXIDES, LOAM, FLINT) IN GRAINS OR STRATUM INSIDE OF THE ORIGINAL SEDIMENTARY ROCK OR ON THE METAMORPHIC PROCESS OF CALCAREOUS ROCKS WITH NO IMPURITIES.

AS A NATURAL MATERIAL PROCESSED IN SUCH A WAY AS TO MAINTAIN THIS CARACHTERISTIC, IT IS NECESSARY TO KEEP IN MIND THAT IT MAY SHOW PECULIARITIES SUCH AS VEINS, SLIGHT SUPERFICIAL IRREGULARITIES, LITTLE HOLES AND VARIOUS COLOURWAYS THAT MAKE IT UNIQUE, WITHOUT COMPROMISING THE QUALITY OR STRUCTURE.

THE MARBLE STONE HAS A LOW RESISTANCE TO ACIDIC SUNBSTANCES (VINEGAR, LEMON JUICE, TEA, COFFEE, ETC.) THAT, EVEN IF IN SMALL QUANTITY CAN CORRODE THE SURFACE AND PENETRATE THE PORES BY LEAVING OPAQUE SPOTS.

THERE IS NO PRODUCT WHICH IS ABLE TO PROVIDE AN ABSOLUTE RESISTANCE AND DEFENCE AGAINST THESE SUBSTANCES.

#### WHITE CARRARA MARBLE

THIS MARBLE COMES FROM THE APUANE ALPS AND IT IS CHARACTERIZED BY A BASIC COLOUR THAT MAY VARY FROM OFF WHITE TO LIGHT GRAY WITH THICK DARK GRAY VEINS.

IN ITS NATURAL CONDITION IT MAY HAVE BOTH "MICROHOLES" AND "CRYSTALS" THAT HAVE TO BE CONSIDERED A CHARACTERISIC OF THE MARBLE.

POSSIBLE VISIBLE "IMPERFECTIONS" ARE CHARACTERISTICS OF THE MARBLE, GIVEN THAT IT IS ARTISANALLY PROCESSED WITH LAST-GENERATION MACHINERY AND POLISHED WITH NATURAL WAXES THAT RESPECT THE INNER ESSENCE OF THE MARBLE. FOR A LONGLASTING RESISTANCE OF THIS MATERIAL AND ITS POLISHING, IT IS RECOMMENDED NOT TO SPILL (OR TO IMMEDIATELY CLEAN) ACIDIC SUBSTANCES SUCH AS SPARKLING BEVERAGES, ALCOHOLICS, OIL, WINE, VINEGAR, CITRUSES. CLEAN WITH MILD DETERGENTS, WITH NO DILUENTS OR ABRASIVE CHEMICALS. WITH THE GLOSSY POLISHING, THE PERIODIC USE OF SPECIFIC WAXES MAY BE USEFUL TO ENHANCE THE BRILLIANCE OF THE MATERIAL.

PRECISELY, THE MANUFACTURER MAKES USE OF WHITE CARRARA GIOIA MARBLE AND C-QUALITY WHITE CARRARA MARBLE.

(the pictures below are purely indicative and the marble colours may vary depending on the availability of the material)

EXAMPLE OF VEINS IN A SLAB WITH CRYSTALS







**EXAMPLE OF CARRARA MARBLE VEINS** 





## **MARQUINIA MARBLE**

THE MARQUINIA IS A FINE GRAIN MARBLE WITH INTENSE BLACK BASE AND IRREGULAR WHITE VEINS, COMING FROM SPAIN.

AT THE SIGHT IT IS A RATHER UNVARYING MATERIAL, EVEN IF IT IS CHARACTERIZED BY THE PRESENCE OF MANY FOSSIL REMAINS, LIKE TINY SHELLS COMING FROM SEAFLOOR DEPOSITS.

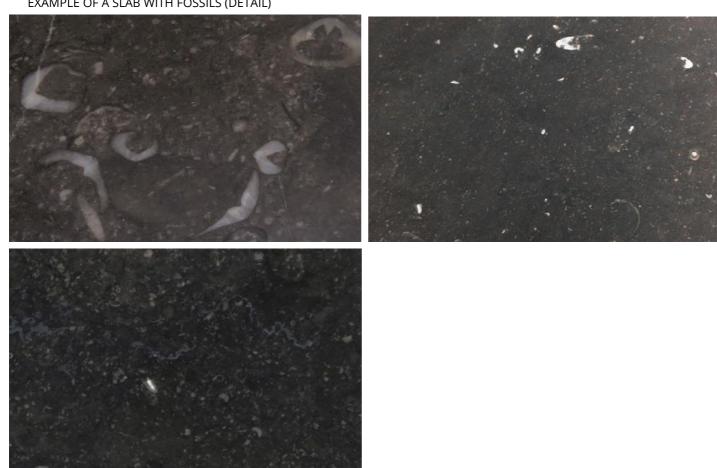
FURTHERMORE, SOFT SHADES AND STRIPINGS FROM WHITE, TO GRAY, TO BLACK CAN BE MORE OR LESS VISIBLE DEPENDING ON THE FINISHING.

IT IS A COMPTACT MATERIAL, YET IT MAY SHOW SOME SUPERFICIAL TINY CRACK LINES THAT ARE PART OF ITS NATURAL HERITAGE.

DUE TO ITS CALCIUM BASED COMPOSITION, THE MARQUINIA REQUIRES SOME CARE AND MAINTENENANCE PRECAUSTIONS.

REGARDLESS OF THE PRE-APPLIED TREATMENT WITH WAXES AND STAIN-PROOF PRODUCTS, IN ORDER TO PREVENT THE MATERIAL FROM GETTING STAINED WITH OILS AND COLOURED SUBSTANCES, IT IS GOOD NORM TO IMMEDIATELY CLEAN THE SURFACE IN CASE IT GETS IN CONTACT WITH ACID SUBSTANCES LIKE WINE, BEVERAGES, VINEGAR, ETC.

EXAMPLE OF A SLAB WITH FOSSILS (DETAIL)



EXAMPLE OF VEINING



#### **EMPERADOR DARK MARBLE**

THIS MATERIAL COMING FROM SPAIN IS BROWN-COLOURED WITH SPOTS AND SHADES OF DARKER OR LIGHTER BROWN AND WHITE VEINS.

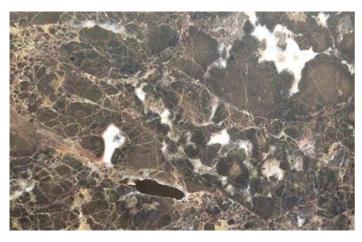
BY NATURE, IT IS CHARACTERIZED BY "HOLES" THAT GET SEALED WITH EPOXIES AND/OR PIECES OF THE SAME MATERIAL DURING THE PROCESSING.

THE SURFACE IS THEREFORE IRREGULAR DUE TO THE PRESENCE OF NATURAL MICRO-HOLES CARACHTERIZING THE MARBLE.

EMPERADOR IS A NATURAL PRODUCT, THE VISIBLE "DEFECTS" OF WHICH ARE A PECULIARITY OF THE MATERIAL THAT IS ARTISANALLY PROCESSED WITH LAST GENERATION MACHINERY AND POLISHED WITH NATURAL WAXES NOT COMPROMISING THE NATURE OF THE MARBLE. FOR A LONGLASTING RESISTANCE OF THIS MATERIAL AND ITS POLISHING, IT IS RECOMMENDED NOT TO SPILL (OR TO IMMEDIATELY CLEAN) ACIDIC SUBSTANCES SUCH AS SPARKLING BEVERAGES, ALCOHOLICS, OIL, WINE, VINEGAR, CITRUSES.

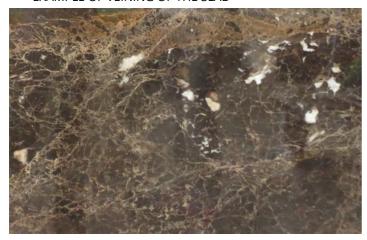
CLEAN WITH MILD DETERGENTS, WITH NO DILUENTS OR ABRASIVE CHEMICALS.
WITH THE GLOSSY POLISHING, THE PERIODIC USE OF SPECIFIC WAXES MAY BE USEFUL TO ENHANCE THE BRILLIANCE OF THE MATERIAL.

#### EXAMPLE VEINING AND STRUCTURE OF THE SLAB WITH STUCCO WORK





EXAMPLE OF VEINING OF THE SLAB







#### CALACATTA GOLD MARBLE

CALACATTA GOLD IS A MARBLE COMING FROM THE EXTRACTION AREA OF THE APUAN ALPS (CARRARA MARBLES). DESPITE SHARING THE ORIGIN WITH THE CARRARA MARBLES (USUALLY "WHITE"), IT STANDS OUT FOR ITS IVORY/BUTTER COLOUR WITH BOLD VEINS VARYING FROM GOLD TO ALL THE SHADES OF BROWNS. UP TO THE GREENS AND GREYS.

THE VEINING PATTERN VARIES CONTINUALLY ON THE SLABS AND IT IS POSSIBLE TO HAVE ZONES WITH BOLD VEINS AND ALTERNATED WITH LARGE WHIRE AREAS, CREATING A PECULIAR MOTIVE WHICH IS VERY MUCH APPRECIATED IN THE PRODUCTION OF TABLES AND BATHROOM SURFACES.

BEING A MARBLE OF SEDIMENTARY SANDY ORIGIN, IT CONTAINS VARIOUS TYPES OF CRYSTALS AND UNEVENLY-SPREAD GRAY STONES THAT HAVE TO BE CONSIDERED AN INNER CARACHTERISTIC OF THE MARBLE ITSELF.

DUE TO THE COMPOSITION OF CALCIUM CARBONATE MICROCRYSTALS, FOR A LONGLASTING RESISTANCE OF THIS MATERIAL AND ITS POLISHING, IT IS RECOMMENDED NOT TO SPILL (OR TO IMMEDIATELY CLEAN) ACIDIC SUBSTANCES SUCH AS SPARKLING BEVERAGES, ALCOHOLICS, OIL, WINE, VINEGAR, CITRUSES.

CLEAN WITH MILD DETERGENTS, WITH NO DILUENTS OR ABRASIVE CHEMICALS.
WITH THE GLOSSY POLISHING, THE PERIODIC USE OF SPECIFIC WAXES MAY BE USEFUL TO ENHANCE THE BRILLIANCE OF THE MATERIAL.

#### EXAMPLE VEINING AND COLORATION OF THE SLAB (DETAIL)

#### CONFORMATION WITH GRAY PEBBLES









## **VAGLI ARABESQUE MARBLE**

VAGLI ARABESQUE MARBLE IS TYPICAL OF THE APUAN/VERSIGLIA TERRITORY AND IT IS NAMED AFTER ITS SPECIFIC EXTRACTION AREA, VAGLI. IT ALSO TAKES ITS NAME FROM THE TYPICAL VEINING WHAT ARE CALLED "ARABESCHI".

IT IS A NATURAL AND PRECIOUS STONE CHARACTERIZED BY AN EXTREMELY ELEGANT AND RECOGNIZABLE BACKGROUND PATTERN.

THE BASE IS WHITE, WITH GREISH/GREENISH/DARK IVORY VEINS THAT SOMETIMES TEND TO PINK SHADES AS WELL.

IT IS VERY SIMILAR TO THE VEINED MARBLE, BUT, IT DIVERGES FROM IT WITH ITS DARKER "EGG-SHAPED" VEINS.

THIS REFINED MATERIAL IS WIDELY USED IN THE PRODUCTION OF FLOORS AND INDOOR COVERING AND IT ADAPTS ITSELF BOTH TO MODERN AND CLASSIC ENVIRONMENTS.

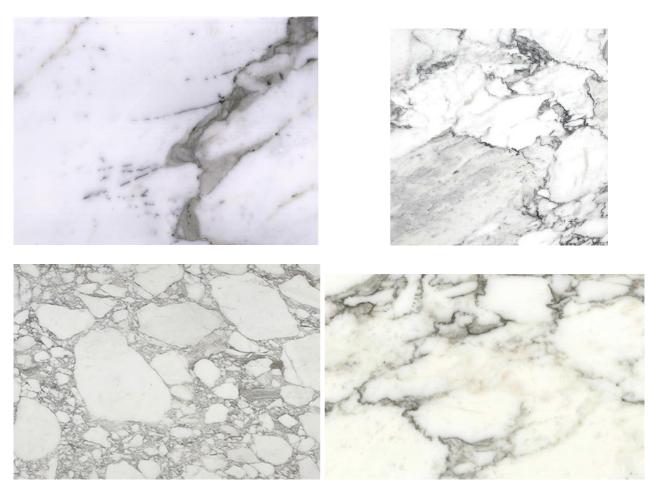
IT IS CHARACTERIZED BY THE PRESENCE OF CRYSTALS AND SUPERFICIAL PORES.

THE COLOUR OF THE MARBLE DEPENDS ON THE PRESENCE OF MINERAL IMPURITIES (CLAY, SAND, IRON OXIDES, LOAM, FLINT) IN GRAINS OR STRATUM INSIDE OF THE ORIGINAL SEDIMENTARY ROCK.

DUE TO THE COMPOSITION OF CALCIUM CARBONATE MICROCRYSTALS, FOR A LONGLASTING RESISTANCE OF THIS MATERIAL AND ITS POLISHING, IT IS RECOMMENDED NOT TO SPILL (OR TO IMMEDIATELY CLEAN) ACIDIC SUBSTANCES SUCH AS SPARKLING BEVERAGES, ALCOHOLICS, OIL, WINE, VINEGAR, CITRUSES.

CLEAN WITH MILD DETERGENTS, WITH NO DILUENTS OR ABRASIVE CHEMICALS.
WITH THE GLOSSY POLISHING, THE PERIODIC USE OF SPECIFIC WAXES MAY BE USEFUL TO ENHANCE THE BRILLIANCE OF THE MATERIAL.

#### **EXAMPLE VEINING AND COLORATION OF THE SLAB**



## **Technical Sheet MARQUINIA**

- Origin: Spagna
- Compressive breaking load: 629 kg/cm<sup>2</sup>
- Breaking load after freezing cycles: 512 kg/cm<sup>2</sup>
- Unit tensile strength in bending:137 kg/cm²
- Thermal expansion coefficient: 0,0028 mm/m°C
- Water imbibition coefficient: 0,001700
- Impact resistance: 38 cm
- Weight per unit volume: 2690 kg/m<sup>3</sup>

## **Technical Sheet WHITE CARRARA**

- · Origin: Italy
- Compressive breaking load: 1426 kg/cm<sup>2</sup>
- Breaking load after freezing cycles: 1338 kg/cm<sup>2</sup>
- Unit tensile strength in bending: 192 kg/cm<sup>2</sup>
- Thermal expansion coefficient: 0,0052 mm/m°C
- Water imbibition coefficient: 0,002400
- Impact resistance: 82 cm
- Frictional Wear: 3,64 mm
- Weight per unit volume: 2680 kg/m³

## **Technical Sheet ALPS GREEN**

- Origin: Italy
- Compressive breaking load: 1945 kg/cm<sup>2</sup>
- Breaking load after freezing cycles: 1875 kg/cm<sup>2</sup>
- Unit tensile strength in bending: 340 kg/cm<sup>2</sup>
- Thermal expansion coefficient: 0,0060 mm/m°C
- Water imbibition coefficient: 0,009500
- Impact resistance: 79 cm
- Frictional Wear: 0,70 mm
- Weight per unit volume: 2680 kg/m³

# **Technical Sheet EMPERADOR DARK**

- · Origin: Spain
- Compressive breaking load: 1580 kg/cm<sup>2</sup>
- Breaking load after freezing cycles: 1584 kg/cm<sup>2</sup>
- Unit tensile strength in bending: 210 kg/cm<sup>2</sup>
- Water imbibition coefficient: 0,004000

Impact resistance: 35 cmFrictional Wear: 1,90 mm

• Weight per unit volume: 2702 kg/m³

## **Technical Sheet EMPERADOR LIGHT**

• Origin: Spain

Compressive breaking load: 1580 kg/cm<sup>2</sup>

Breaking load after freezing cycles: 1584 kg/cm<sup>2</sup>

• Unit tensile strength in bending: 210 kg/cm<sup>2</sup>

Water imbibition coefficient: 0,004000

Impact resistance: 35 cmFrictional Wear: 1,90 mm

• Weight per unit volume: 2702 kg/m³

# **Technical Sheet CALACATTA GOLD**

- Origin: Italy

- Compressive tensile strength:1180 kg/cm<sup>2</sup>

- Unit tensile strength by bending: 125 kg/cm<sup>2</sup>

- Coefficient of thermal expansion: 0.0032 mm/m°C

- Coefficient of water imbibition: 0.002100

- Impact strength: 36 cm - Wear by friction: 0.58 mm

- Weight per unit volume: 2313 kg/m<sup>3</sup>

# **Technical Sheet ARABESQUE VAGLI**

Compressive breaking load: 14/2 kg/cm²
Breaking load after freezing cycles: 1352 kg/cm <sup>2</sup>
Unit breaking load in bending: 102 kg/cm <sup>2</sup>
Coefficient of thermal expansion: 0.0041 mm/m°C
Coefficient of water imbibition: 0.005400
Impact strength: 41 cm
Wear by friction: 0.44 mm
Weight per unit volume: 2714 kg/m

# **Technical Sheet ABSOLUTE WHITE**

- Origin: Greece
- Compressive breaking load: 1408 kg/cm<sup>2</sup>
- Breaking load after freezing cycles: 1376 kg/cm<sup>2</sup>
- Unit breaking load in bending: 181 kg/cm<sup>2</sup>
- Coefficient of thermal expansion: 0.0059 mm/m°C
- Coefficient of water imbibition: 0.002300
- Impact strength: 49.50 cm
- Weight per unit volume: 2795 kg/m³