



Cherishing the living space

WOOSOUNGCHEMICAL CO.,LTD





Cherishing the  
Living Space !!

## Company

Address : 333-1 Mamyung-Ri, Naecheon-Myeon,  
Pocheon-Si, Gyeonggi-Do, South Korea

President : Park Suk Bum

Tel : 82-31-532-2250, Fax : 82-31-532-2254

Homepage : <http://www.woosungchemical.com>

E-mail : [joseph9825@woosungchemical.com](mailto:joseph9825@woosungchemical.com)

Skype : joseph98251

Date of Establishment : 1989-06-01

Employee : 40

**Product : PVC Floor Tile, Luxury Vinyl Tile Flooring**

2013 Jun Acquired CE Certificate  
Jul Acquired RoHS Certificate

2011 Jun Acquired ISO 14001 Certificate by KSA

2005 Sep Launched Automatic Cutting Belt Feeding System

2002 Oct Launched Automatic In-Line System  
Apr Certified KS mark by Korea Standards Association

2001 Oct Acquired ISO 9001 Certificate by KSA

2000 Feb Integrated 1st & 2nd Factories  
Jan Contracted Halstead International, Inc.  
Porcelain Tile

1999 Jun Extended New Press Lamination Lines

1997 Jan Contracted OEM with LG CHEMICAL CO.,LTD

1996 Dec Launched Base & Balance Lines  
Oct Launched the Calendar Lamination Line & Welfare  
Facilities

1989 Jun Established WOOSOUNGCHEMICAL CO.,LTD

## SPECIAL BRAND STORY OF WOOSOUNGCHEMICAL

- For the first time in Korea, we introduced the pressing method to produce PVC floor tiles in 1986. With the accumulated skills and technologies, WoosungChemical was established in 1989. Since then, we have increased productivity and have supplied products to meet the various needs of our customers by continuously improving the quality and production methods of floor tiling. We will strive to provide you with the best product

# Process Drawing

□ Products : PVC TILE(HS 3918.10), Luxury Vinyl Tile and Flooring





## Luxury Vinyl Tile & Flooring



### Various colors and patterns

Our floor tiles come in various colors and patterns, featuring abstract or natural designs such as wood, marble and etc.



### Recycle

Our products are 100% recyclable, contributing to environmental conservation.



### Environmentally-Friendly

Our floor tiles are environmentally – friendly and do not contain formaldehyde



### UV Coating

In addition to wear layer film, products with UV coating have better wear resistance against scratches.



### Nano Silver Coating

Nano silver coated products have better anti-bacteria functions preventing bacterial growth than basic products.

## CHARACTERISTICS

- UV Coating surface Treatment
- Natural designs such as Wood, Carpet, Stone, Marble Embossed
- Beauty
- Long durability
- Easy to install
- Combining with different products
- Outstanding wear and stain resistance
- Excellent elasticity and great dimensional stability
- High sound absorption
- Anti slip

## APPLICATION

- Education place(School, Fitness, Kindergarten)
- Health care place(Hospital, Laboratories)
- Business place(Mall, Market, Hotels, Recreation)
- Sports place(Stadium, Sports center)
- Office place(Office, Conference rooms)
- Industrial place(Factory, Warehouse)
- Transportation place(Airport, Station)
- Home(Home interior, Rooms, Kitchen)



## SIZE & PACKING

### \* Available Size(mm)

180(W) \* 920(L) \* 3(T) - 20 Pieces in a box(3.31sqm)  
 180(W) \* 920(L) \* 2(T) - 30 Pieces in a box(4.96sqm)

100(W) \* 920(L) \* 3(T) - 36 Pieces in a box(3.31spm)  
 100(W) \* 920(L) \* 2(T) - 54 Pieces in a box(4.96sqm)

455(W) \* 455(L) \* 3(T) - 16 Pieces in a box(3.31sqm)  
 455(W) \* 455(L) \* 2(T) - 24 Pieces in a box(4.96sqm)

### \* Available Size(Inch)

7(W) \* 36.2(L) \* 0.11(T) - 20 Pieces in a box(3.31sqm)  
 7(W) \* 36.2(L) \* 0.07(T) - 30 Pieces in a box(4.96sqm)

3.93(W) \* 36.2(L) \* 0.11(T) - 36 Pieces in a box(3.31spm)  
 3.93(W) \* 36.2(L) \* 0.07(T) - 54 Pieces in a box(4.96sqm)

17.9(W) \* 17.9(L) \* 0.11(T) - 16 Pieces in a box(3.31sqm)  
 17.9(W) \* 17.9(L) \* 0.07(T) - 24 Pieces in a box(4.96sqm)

### \* Available wear layers

0.1mm : Residential  
 0.2mm : Residential and Commercial place  
 0.3mm : Commercial place  
 0.5mm : Commercial place and public place

## SHIPPING INFORMATION

### Based on 20ft Container

WIDTH * LENGTH	Total Thickness		
	3mm(2mm)		
	Pieces/Box	Box/Pallet	Pallet/20ft
455 * 455	16(24)/	100/	10/
180 * 920	20(30)/	100/	10/
100 * 920	36(54)/	100/	10/
Square meter	3.31(4.96)	331(496)	3310(4960)

### Based on 20ft Container

WIDTH * LENGTH	Total Thickness		
	0.11inch(0.07inch)		
	Pieces/Box	Box/Pallet	Pallet/20ft
17.9 * 17.9	16(24)/	100/	10/
7 * 36.2	20(30)/	100/	10/
3.93 * 36.2	36(54)/	100/	10/
Square meter	3.31(4.96)	331(496)	3310(4960)



## Woosoung Floor Tile Technical Data

Type	PVC Laminated Floor Covering
Application	Commercial, Residential
Dimension(mm)	455X455, 920X180, 920X100
Thickness(mm)	3.0
Squareness(mm)	0.17
Lightfast	4~5

Wear Layer	0.2
	0.1 / 0.3 / 0.5

UV Coating	YES
Indent quantity(20°C)	0.54
Indent quantity(45°C)	0.92
Residual indent rate(%)	7.0
Dimensional change rate by heation(%)	0.1
Dimensional change rate by absorption(%)	0.02
Contamination - Soy oil	Passed
Contamination - Lubricant	Passed
Contamination - 95% Ethanol	Passed
Contamination - Cement Paste	Passed
Contamination - 10% Ammonia Liquid	Passed
Contamination - Milk	Passed
Contamination - 5% Acetic acid	Passed
Contamination - 5% Hydrochloric acid	Passed
Contamination - Kerosene	Passed
Contamination - Soy sauce	Passed
Contamination - coffee	Passed
Contamination - Tea	Passed

Test Method - KS M 3802, KS M ISO 4892-2  
Woosoung Chemical Standard

## STRUCTURE



## CERTIFICATE





## CERTIFICATE OF APPROVAL

## WOOSOUNG CHEMICAL Co., Ltd.

333-1, MAMYEONG-RI, NAECHON-MYEON, POCHON-SI, GYEONGGI-DO, KOREA

Korean Standards Association hereby certifies that the Environmental Management System of the above organization has been assessed and found to meet the requirements of the standard and scope of certification detailed below:

CERTIFICATION No.  
EMS-1011  
STANDARD  
KS ISO 14001:2009/ISO 14001:2004  
SCOPE OF CERTIFICATION  
PRODUCTION OF FLOORCOVERING-PVC

VALID FROM  
11 July, 2011VALID UNTIL  
10 July, 2014

Original Certification Date : 11 July, 2011

Chang Ryong Kim  
CHAIRMAN OF KSA

Date of Issue : 11 July, 2011

KOREAN STANDARDS ASSOCIATION

701-7, Yeoksam-Dong, Gangnam-Gu, Seoul, Korea

Accredited by Member of the IAF MLA for EMS The Accreditation Mark (KAS) indicates accreditation in respect of these activities covered by the Accreditation Certificate Number KAS-EC-11



## CERTIFICATE OF APPROVAL

## WOOSOUNG CHEMICAL Co., Ltd.

333-1, MAMYEONG-RI, NAECHON-MYEON, POCHON-SI, GYEONGGI-DO, KOREA

Korean Standards Association hereby certifies that the Quality Management System of the above organization has been assessed and found to meet the requirements of the standard and scope of certification detailed below:

CERTIFICATION No.  
QMS-0724  
STANDARD  
KS Q ISO 9001:2009/ISO 9001:2008  
SCOPE OF CERTIFICATION  
PRODUCTION OF FLOORCOVERING -PVC

VALID FROM  
13 October, 2013VALID UNTIL  
12 October, 2016

Original Certification Date : 13 October, 2011

Chang Ryong Kim  
CHAIRMAN OF KSA

Date of Issue : 04 August, 2013

KOREAN STANDARDS ASSOCIATION

305, Teheran-Ro, Gangnam-Gu, Seoul, Korea

Accredited by Member of the IAF MLA for QMS The Accreditation Mark (KAS) indicates accreditation in respect of these activities covered by the Accreditation Certificate Number KAS-QC-30



## CERTIFICATE OF APPROVAL

## WOOSOUNG CHEMICAL Co., Ltd.

333-1, MAMYEONG-RI, NAECHON-MYEON, POCHON-SI, GYEONGGI-DO, KOREA

Korean Standards Association hereby certifies that the Environmental Management System of the above organization has been assessed and found to meet the requirements of the standard and scope of certification detailed below:

CERTIFICATION No.  
EMS-1011  
STANDARD  
KS ISO 14001:2009/ISO 14001:2004  
SCOPE OF CERTIFICATION  
PRODUCTION OF FLOORCOVERING-PVC

VALID FROM  
11 July, 2011VALID UNTIL  
10 July, 2014

Original Certification Date : 11 July, 2011

Chang Ryong Kim  
CHAIRMAN OF KSA

Date of Issue : 11 July, 2011

KOREAN STANDARDS ASSOCIATION

701-7, Yeoksam-Dong, Gangnam-Gu, Seoul, Korea

Accredited by Member of the IAF MLA for EMS The Accreditation Mark (KAS) indicates accreditation in respect of these activities covered by the Accreditation Certificate Number KAS-EC-11



## DECLARATION OF CONFORMITY

European Union Directive 2011/65/EU (RoHS)

Supplier Name: WOOSOUNG CHEMICAL CO., LTD.

Product Marketing Model Name : PVC floor covering

We declare that the product specified above has been designed in compliance with the essential requirements and other relevant provisions of European Union Directive 2011/65/EU (RoHS).

We declare that the above product manufacturing process is in compliance with the essential requirements and other relevant provisions of European Union Directive 2011/65/EU (RoHS).

Conforms to the EU Directive 2011/65/EU (RoHS) and to the generally accepted maximum concentration values (MCVs) of 0.1% for hexavalent chromium (Cr VI), mercury (Hg), lead (Pb), polybrominated biphenyls (PBBs), polybrominated diphenyl ethers (PBDEs), and 0.01% for cadmium (Cd) at the homogeneous level.

Signature :  
Printed Name : Suk - Bum Park  
Title : President  
Date : JULY 22, 2013

Contact Phone Number and Email : + 82-31-532-2250  
(FAX) + 82-31-532-2254

РОССИЙСКАЯ ФЕДЕРАЦИЯ  
СЕРТИФИКАТ СООТВЕТСТВИЯ  
(обязательная сертификация)

№ C-KR.HIE57.B.00572

ТР 0851291  
(технический регламент)

ЗАЯВИТЕЛЬ: Фирма "WOOSOUNG CHEMICAL CO., LTD", Адрес: 333-1, MAMYEONG-RI, NAECHON-MYEON, POCHON-SI, GYEONGGI-DO, KOREA, Республика Корея. Телефон: +82-31-532-2250-3, факс: +82-31-532-2254.

ИЗГОТОВИТЕЛЬ: Фирма "WOOSOUNG CHEMICAL CO., LTD", Адрес: 333-1, MAMYEONG-RI, NAECHON-MYEON, POCHON-SI, GYEONGGI-DO, KOREA, Республика Корея. Телефон: +82-31-532-2250-3, факс: +82-31-532-2254.

ОРГАН ПО СЕРТИФИКАЦИИ: ООО "ТехСтандарт", 121433, г. Москва, ул. Мясницкая, 25, тел. (495) 980-12-40, (495) 730-66-48, факс (495) 645-31-00, e-mail: info@techstandart.ru, Адрес: пер. № ТРБД, РИ, 1147, выдан 23.11.2010. Допущен к работе на основании приказа МРП России.

ПОДТВЕРЖДАЕТ, ЧТО ПРОДУКЦИЯ: Паркетная плитка из поливинилхлорида (ПВХ) с м. «LAFLORE», «REFLORE TELE HOME», толщиной 3 и 2 мм, выпускаемая по технической документации производителя. Серийный выпуск.

СООТВЕТСТВУЕТ ТРЕБОВАНИЯМ ТЕХНИЧЕСКОГО РЕГЛАМЕНТА (ТЕХНИЧЕСКИХ РЕГЛАМЕНТОВ): Технический регламент о требованиях пожарной безопасности (Федеральный закон от 22.07.2008 N 123-ФЗ), глава 18, статья 80, п. 1, глава 19, статья 81, п. 1, глава 20, статья 82, п. 1, глава 21, статья 83, п. 1, Приложение, таблицы 3, 27. Согласно приложению на 1 листе (бланк № 0211059). Класс пожарной опасности материала КМ5.

ПРОВЕДЕННЫЕ ИССЛЕДОВАНИЯ (ИЗМЕРЕНИЯ) И ИЗМЕРЕНИЯ: Протокол сертификационных испытаний №ПНПБ756/08-11 от 26.08.2011 г., ИЛ ООО "ТехСтандарт", пер. № ТРБД, РИ, 1147 от 23.11.2010, адрес: 153531, Новгородская обл., Новгородский район, с. Лобанов Луг, ул. Старая Котельная, стр. 1.

ПРЕДСТАВЛЕННЫЕ ДОКУМЕНТЫ: Сертификат соответствия системы менеджмента качества изготовителя требованиям ГОСТ Р ИСО 9001:2008 (ИСО 9001:2008), №РОСС RU.146.CDC.11 от 04.08.2011 г., до 04.08.2014 г., выдан ОС «СДС-СЕРТ», пер. № РОСС RU.3791.040.0001.

СРОК ДЕЙСТВИЯ СЕРТИФИКАТА СООТВЕТСТВИЯ с 07.09.2011 по 06.09.2014



Руководитель (заместитель) органа по сертификации  
имя, фамилия, отчество

Н.Е. Теренина

Эксперт (эксперты)  
имя, фамилия, отчество

С.А. Мамыкин



## KS CERTIFICATE

This is to certify that the Korean Industrial Standard Mark (KS mark) of :

WOOSOUNG CHEMICAL CO., Ltd  
333-1, MAMYEONG-RI, NAECHON-MYEON, POCHON-SI,  
GYEONGGI-DO, KOREA  
PARK SUK BUM

has been approved by Korean Standards Association  
to the following Korean Industrial Standard :

KS M 3802  
Floorcovering -PVC  
Homogeneous vinyl floor tile(HVT) end

in accordance with the Korean Industrial Standardization Act.

Certificate Number : 02-2599

Certification Date : 11-Apr-2002

Current Certificate : 17-Aug-2011

Certified by Chang Ryong Kim

President

Korean Standards Association

Korea Technology Center, 701-7, Yeoksam-dong, Gangnam-gu, Seoul, Korea



Strong at wear resistance

# PREMIUM TILE

Wood Noble



Home Noble



Wood



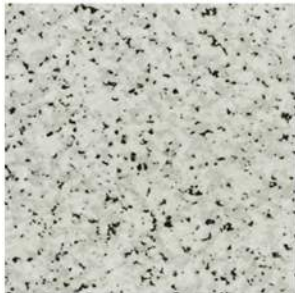
Carpet / Ceramic



Marble / Office



Stone



Pastel / Marblion



Mosaic

- By using precision computer cutting, It is possible to produce a variety of designs, and it fits on such as high-end stores.





# PREMIUM TILE WOOD NOBLE

Dim : 3.0 \* 180 \* 920mm



PREMIUM WOOD NOBLE – WS8860



PREMIUM WOOD NOBLE – WS8850



PREMIUM WOOD NOBLE – WS8841



PREMIUM WOOD NOBLE – WS8840

## The strong wear resistance

- A range of natural wood designs with special PU Coating
- Outstanding wear resistance
- Excellent stain resistance
- Great dimensional stability for any circumstance.



PREMIUM WOOD NOBLE – WS8830



PREMIUM WOOD NOBLE – WS8821



PREMIUM WOOD NOBLE – WS8820



PREMIUM WOOD NOBLE – WS8812



# PREMIUM TILE WOOD NOBLE

Dim : 3.0 \* 180 \* 920mm



PREMIUM WOOD NOBLE – WS8811

## The strong wear resistance

- A range of natural wood designs with special PU Coating
- Outstanding wear resistance
- Excellent stain resistance
- Great dimensional stability for any circumstance.



PREMIUM WOOD NOBLE – WS8604



PREMIUM WOOD NOBLE – WS8704



PREMIUM WOOD NOBLE – WS8603



PREMIUM WOOD NOBLE – WS8702



PREMIUM WOOD NOBLE – WS8601



PREMIUM WOOD NOBLE – WS8701



PREMIUM WOOD NOBLE – WS8504



# PREMIUM TILE WOOD NOBLE

Dim : 3.0 \* 180 \* 920mm

## The strong wear resistance

- A range of natural wood designs with special PU Coating
- Outstanding wear resistance
- Excellent stain resistance
- Great dimensional stability for any circumstance.



PREMIUM WOOD NOBLE – WS8503



PREMIUM WOOD NOBLE – WS7805



PREMIUM WOOD NOBLE – WS8404



PREMIUM WOOD NOBLE – WS7804



PREMIUM WOOD NOBLE – WS8402



PREMIUM WOOD NOBLE – WS7802



PREMIUM WOOD NOBLE – WS8401



PREMIUM WOOD NOBLE – WS7801



# PREMIUM TILE WOOD NOBLE

Dim : 3.0 \* 180 \* 920mm

## The strong wear resistance

- A range of natural wood designs with special PU Coating
- Outstanding wear resistance
- Excellent stain resistance
- Great dimensional stability for any circumstance.



PREMIUM WOOD NOBLE – WS7704



PREMIUM WOOD NOBLE – WS7513



PREMIUM WOOD NOBLE – WS7703



PREMIUM WOOD NOBLE – WS7512



PREMIUM WOOD NOBLE – WS7700



PREMIUM WOOD NOBLE – WS7302



PREMIUM WOOD NOBLE – WS7516



PREMIUM WOOD NOBLE – WS7300



# PREMIUM TILE WOOD NOBLE

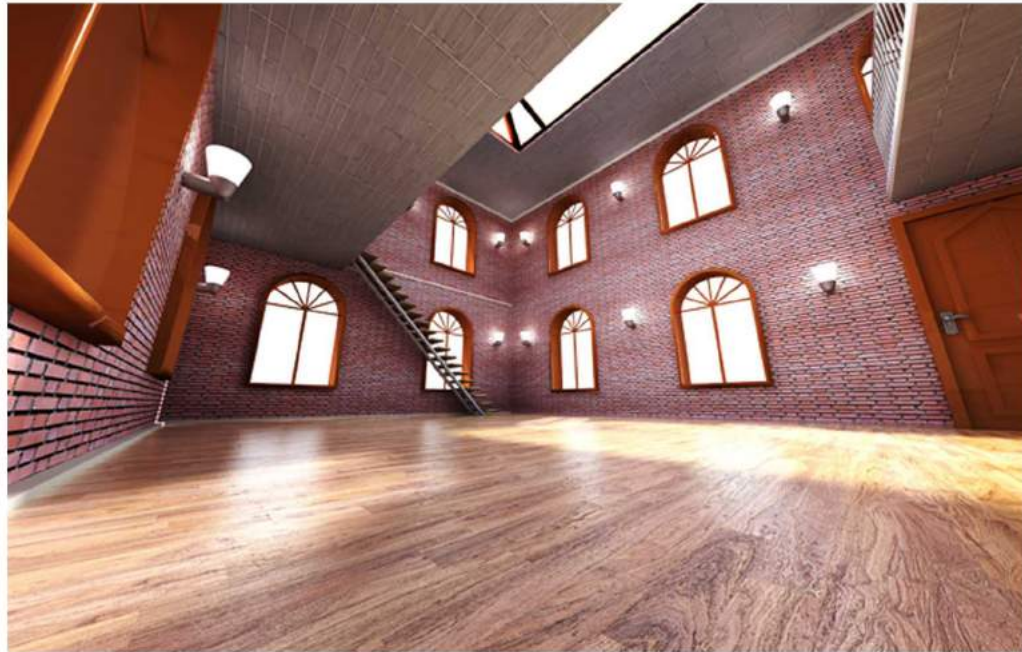
Dim : 3.0 \* 180 \* 920mm



PREMIUM WOOD NOBLE – WS7204



PREMIUM WOOD NOBLE – WS7203



## The strong wear resistance

- A range of natural wood designs with special PU Coating
- Outstanding wear resistance
- Excellent stain resistance
- Great dimensional stability for any circumstance.





# PREMIUM TILE HOME NOBLE

Dim : 3.0 \* 180 \* 920mm



PREMIUM HOME NOBLE – WS701



PREMIUM HOME NOBLE – WS711



PREMIUM HOME NOBLE – WS721



PREMIUM HOME NOBLE – WS722

## The strong wear resistance

- A range of natural wood designs with special PU Coating
- Outstanding wear resistance
- Excellent stain resistance
- Great dimensional stability for any circumstance.



PREMIUM HOME NOBLE – WS731



PREMIUM HOME NOBLE – WS741



PREMIUM HOME NOBLE – WS8801



PREMIUM HOME NOBLE – WS8802



# PREMIUM TILE WOOD

Dim : 3.0 \* 100 \* 920mm



PREMIUM WOOD – WS811



PREMIUM WOOD – WS813



PREMIUM WOOD – WS818



PREMIUM WOOD – WS821



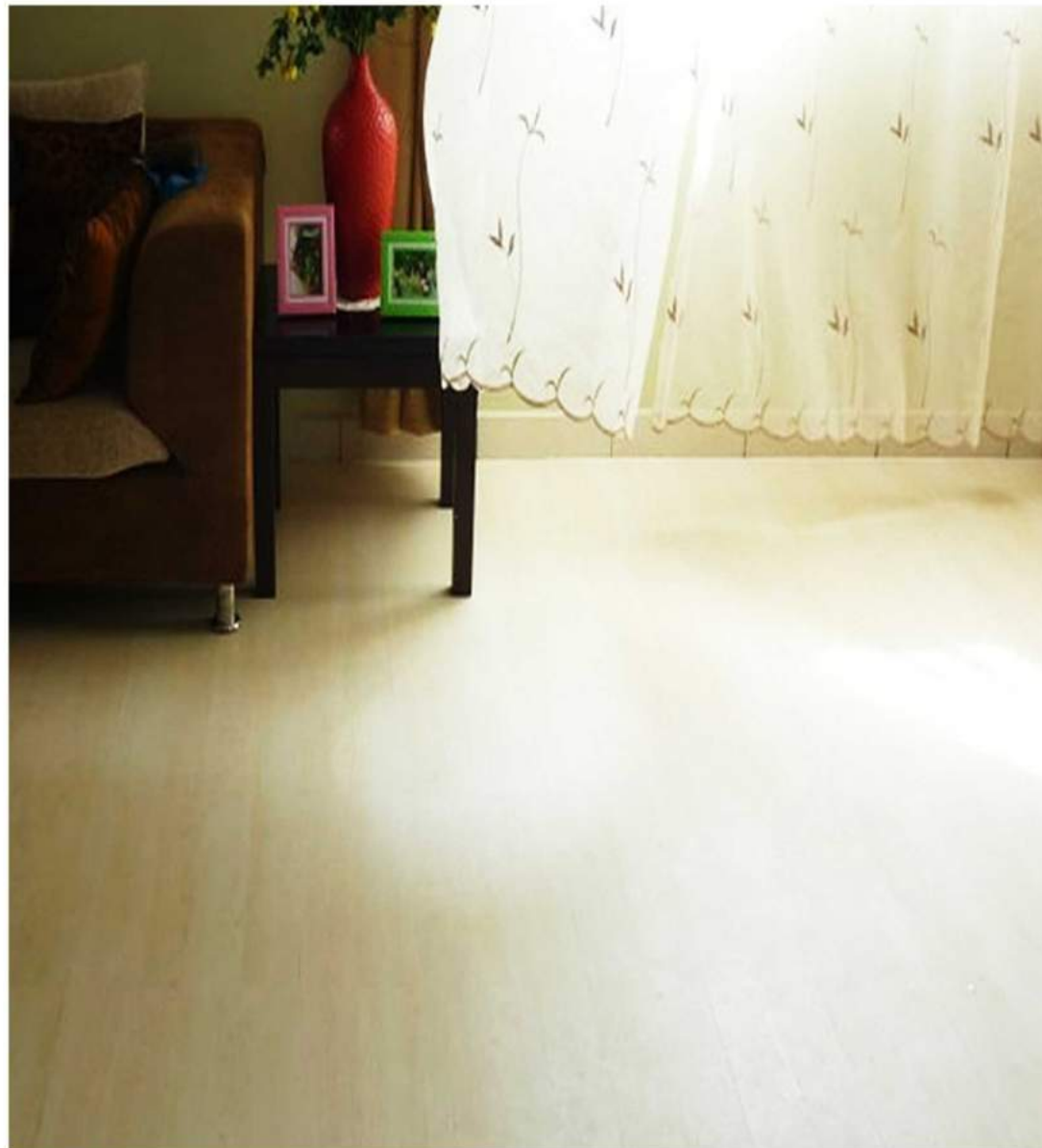
PREMIUM WOOD – WS823



PREMIUM WOOD – WS824

## The strong wear resistance

- A range of natural wood designs with special PU Coating
- Outstanding wear resistance
- Excellent stain resistance
- Great dimensional stability for any circumstance.





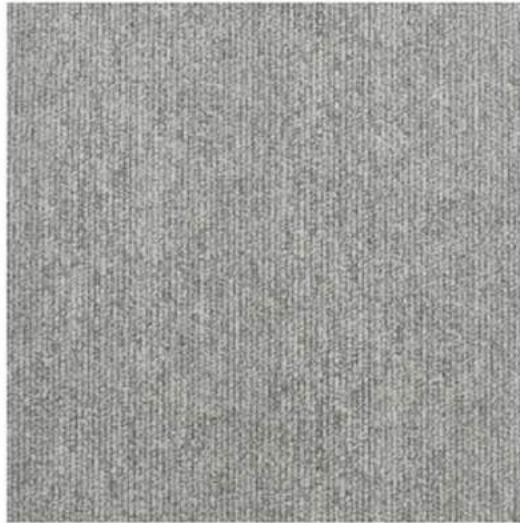
# PREMIUM TILE

# CARPET

## The strong wear resistance

- A range of Carpet designs with special PU Coating
- Outstanding wear resistance
- Excellent stain resistance
- Great dimensional stability for any circumstance.

Dim : 3.0 \* 455 \* 455mm



PREMIUM CARPET – WC001



PREMIUM CARPET – WC002



PREMIUM CARPET – WC004



PREMIUM CARPET – WC006



PREMIUM CARPET – WC008



PREMIUM CARPET – WC009



# PREMIUM TILE

# CARPET

## The strong wear resistance

- A range of Carpet designs with special PU Coating
- Outstanding wear resistance
- Excellent stain resistance
- Great dimensional stability for any circumstance.

Dim : 3.0 \* 455 \* 455mm



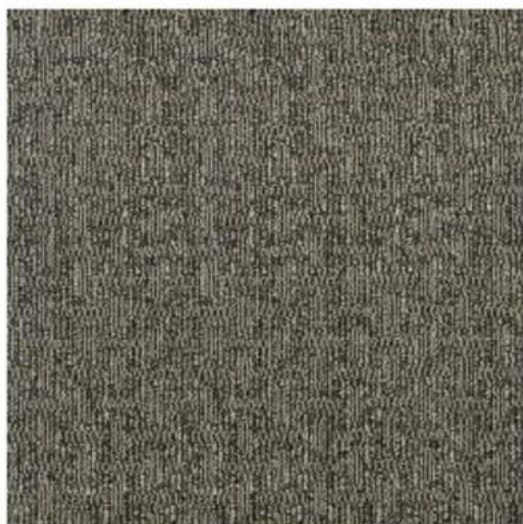
PREMIUM CARPET – WC010



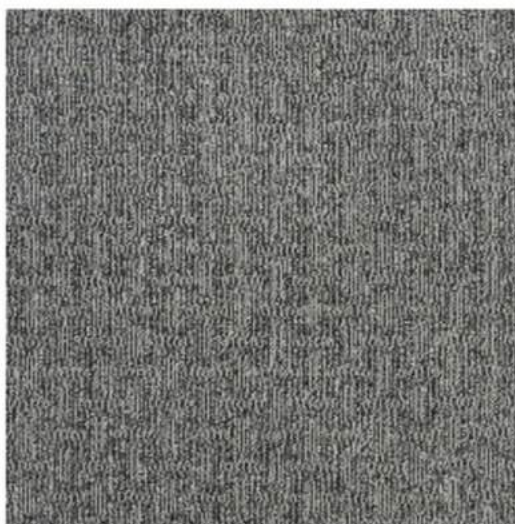
PREMIUM CARPET – WC011



PREMIUM CARPET – WC012



PREMIUM CARPET – WC041



PREMIUM CARPET – WC042



PREMIUM CARPET – WC051



# PREMIUM TILE

# CARPET

## The strong wear resistance

- A range of Carpet designs with special PU Coating
- Outstanding wear resistance
- Excellent stain resistance
- Great dimensional stability for any circumstance.

Dim : 3.0 \* 455 \* 455mm



PREMIUM CARPET – WC053



PREMIUM CARPET – WC054



PREMIUM CARPET – WC056





# PREMIUM TILE CERAMIC

## The strong wear resistance

- A range of Ceramic Tile designs with special PU Coating
- Outstanding wear resistance
- Excellent stain resistance
- Great dimensional stability for any circumstance.

Dim : 3.0 \* 455 \* 455mm



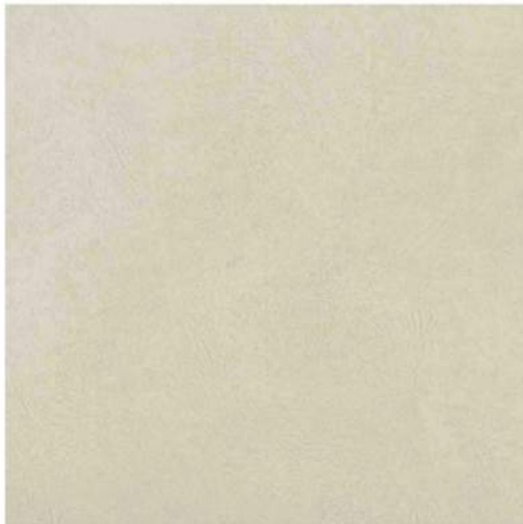
PREMIUM CERAMIC – WS902



PREMIUM CERAMIC – WS903



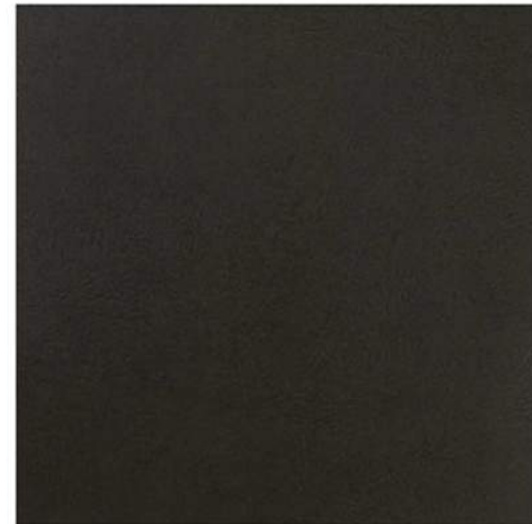
PREMIUM CERAMIC – WS904



PREMIUM CERAMIC – WS951



PREMIUM CERAMIC – WS952



PREMIUM CERAMIC – WS954



# PREMIUM TILE MARBLE

## The strong wear resistance

- A range of Marble Tile designs with special PU Coating
- Outstanding wear resistance
- Excellent stain resistance
- Great dimensional stability for any circumstance.

Dim : 3.0 \* 455 \* 455mm



PREMIUM MARBLE – WS9440



PREMIUM MARBLE – WS9430



PREMIUM MARBLE – WS9410



PREMIUM MARBLE – WS9340



PREMIUM MARBLE – WS9320



PREMIUM MARBLE – WS9310



# PREMIUM TILE MARBLE

## The strong wear resistance

- A range of Marble Tile designs with special PU Coating
- Outstanding wear resistance
- Excellent stain resistance
- Great dimensional stability for any circumstance.

Dim : 3.0 \* 455 \* 455mm



PREMIUM MARBLE – WS364



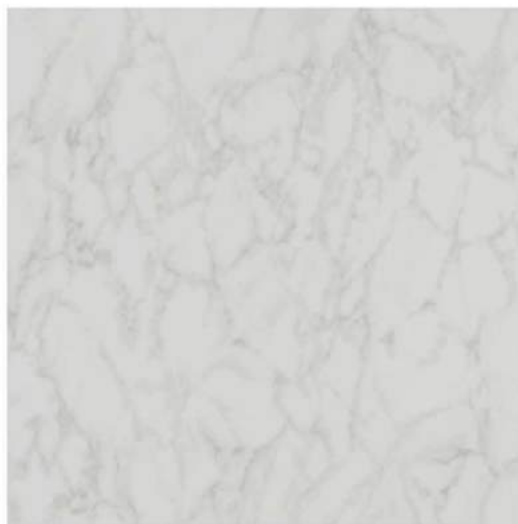
PREMIUM MARBLE – WS363



PREMIUM MARBLE – WS361



PREMIUM MARBLE – WS350



PREMIUM MARBLE – WS343



PREMIUM MARBLE – WS342

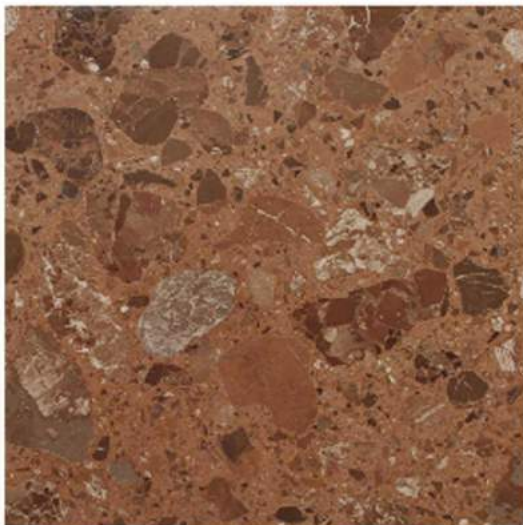


# PREMIUM TILE MARBLE

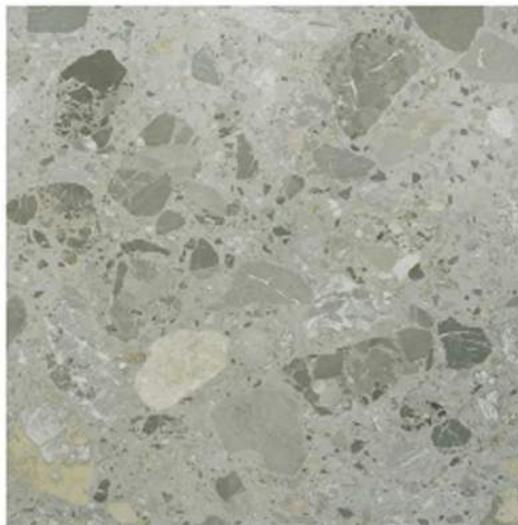
## The strong wear resistance

- A range of Marble Tile designs with special PU Coating
- Outstanding wear resistance
- Excellent stain resistance
- Great dimensional stability for any circumstance.

Dim : 3.0 \* 455 \* 455mm



PREMIUM MARBLE – WS312



PREMIUM MARBLE – WS311



PREMIUM MARBLE – WS310



PREMIUM MARBLE – WS304



PREMIUM MARBLE – WS303



PREMIUM MARBLE – WS301



# PREMIUM TILE OFFICE

Dim : 3.0 \* 455 \* 455mm



PREMIUM OFFICE – WS01



PREMIUM OFFICE – WS03

## The strong wear resistance

- A range of Office designs with special PU Coating
- Outstanding wear resistance
- Excellent stain resistance
- Great dimensional stability for any circumstance.



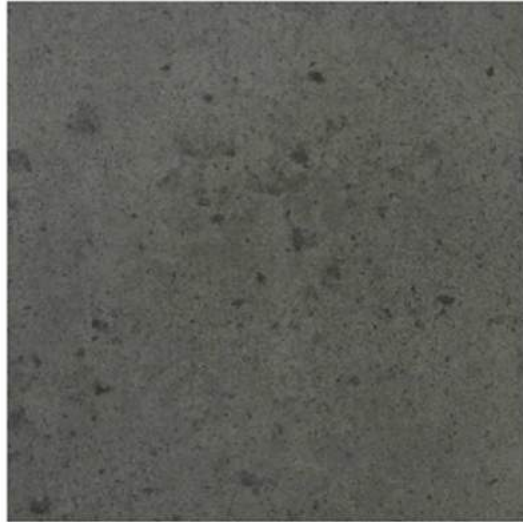


# PREMIUM TILE STONE

## The strong wear resistance

- A range of Natural stone designs with special PU Coating
- Outstanding wear resistance
- Excellent stain resistance
- Great dimensional stability for any circumstance.

Dim : 3.0 \* 455 \* 455mm



PREMIUM STONE – WS144



PREMIUM STONE – WS143



PREMIUM STONE – WS142



PREMIUM STONE – WS141



PREMIUM STONE – WS131



PREMIUM STONE – WS111



# PREMIUM TILE

# STONE

Dim : 3.0 \* 455 \* 455mm



PREMIUM STONE – WS023



PREMIUM STONE – WS021

## The strong wear resistance

- A range of Natural stone designs with special PU Coating
- Outstanding wear resistance
- Excellent stain resistance
- Great dimensional stability for any circumstance.



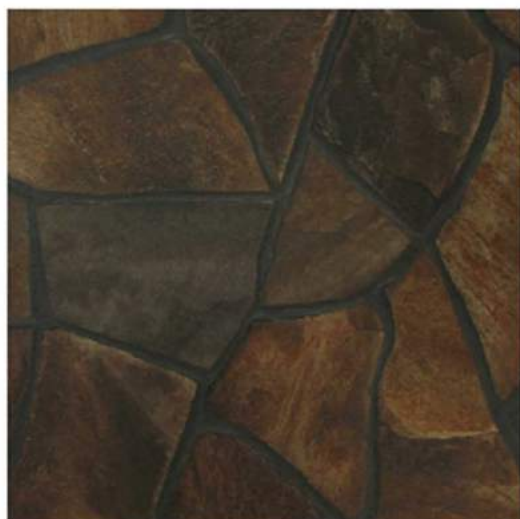


# PREMIUM TILE MARBLION

Dim : 3.0 \* 455 \* 455mm



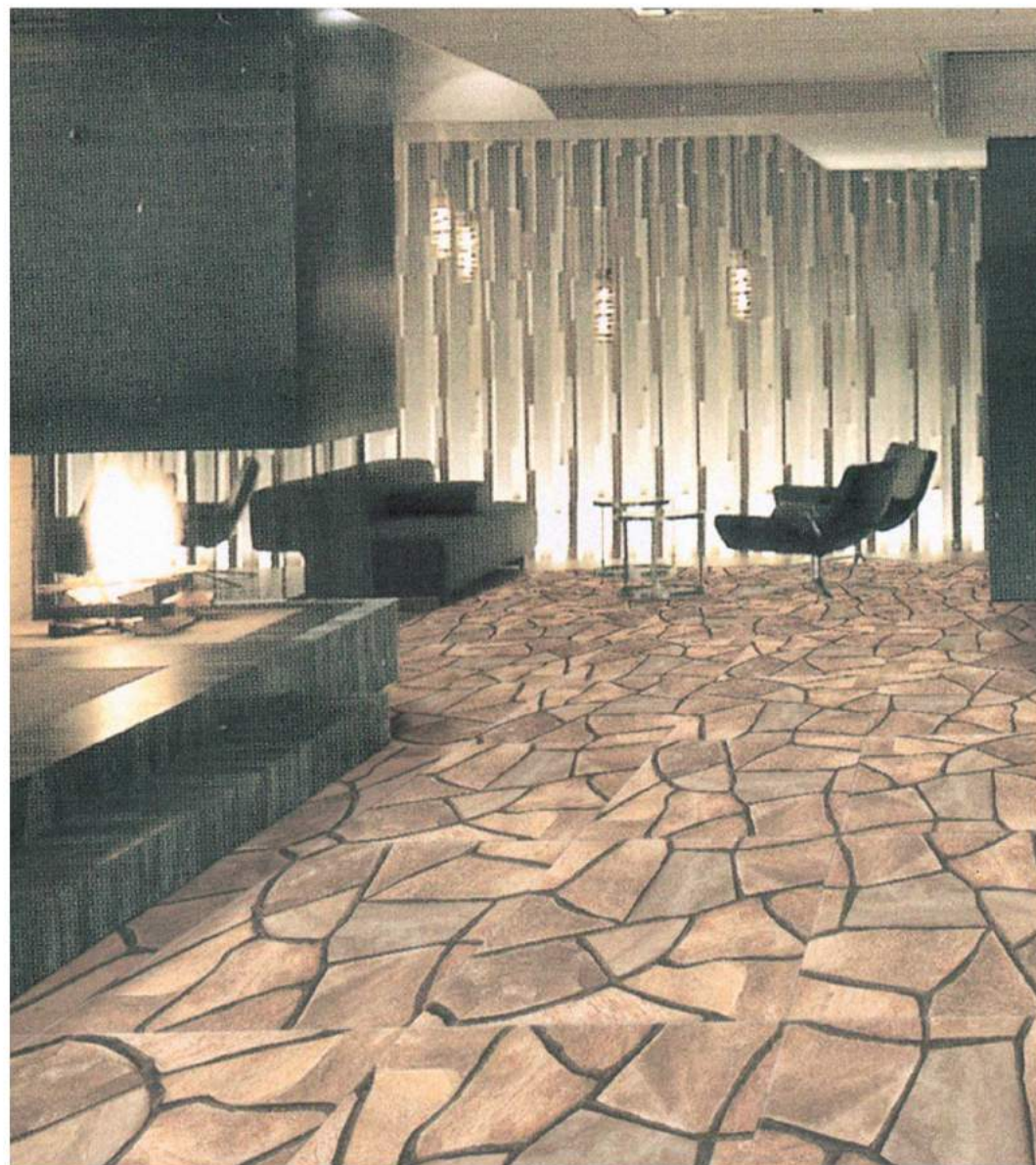
PREMIUM MARBLION – WS2004



PREMIUM MARBLION – WS2005

## The strong wear resistance

- A range of Natural stone designs with special PU Coating
- Outstanding wear resistance
- Excellent stain resistance
- Great dimensional stability for any circumstance.



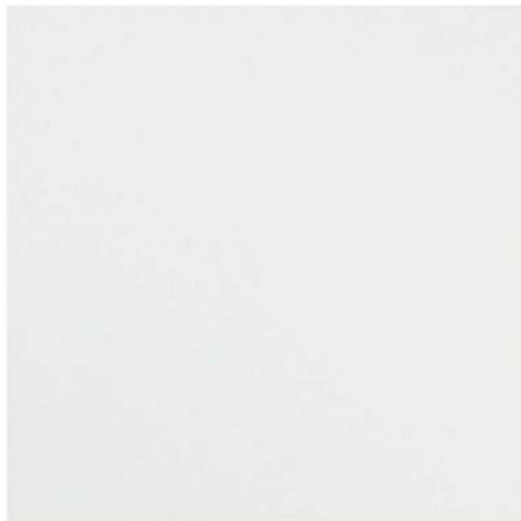


# PREMIUM TILE PASTEL

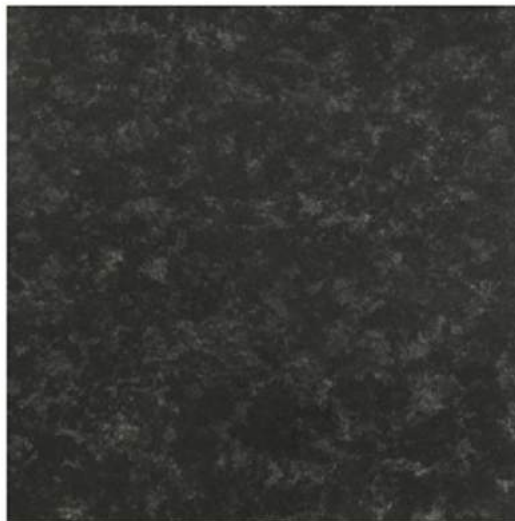
## The strong wear resistance

- A range of Pastel color designs with special PU Coating
- Outstanding wear resistance
- Excellent stain resistance
- Great dimensional stability for any circumstance.

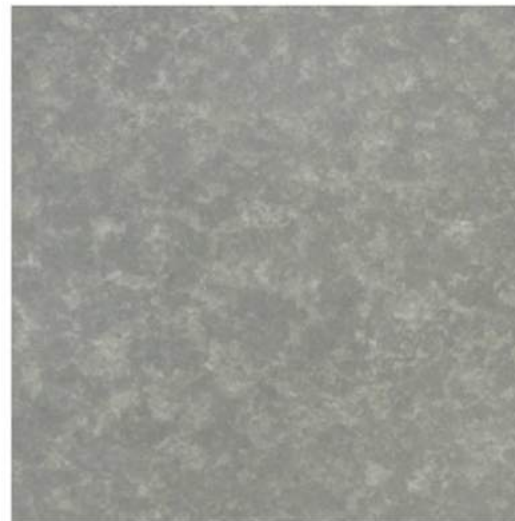
Dim : 3.0 \* 455 \* 455mm



PREMIUM PASTEL – WS1221



PREMIUM PASTEL – WS1212



PREMIUM PASTEL – WS1211



PREMIUM PASTEL – WS1203



PREMIUM PSTEL – WS1204



PREMIUM PASTEL – WS1203



# PREMIUM TILE PASTEL

Dim : 3.0 \* 455 \* 455mm



PREMIUM PASTEL – WS1222



PREMIUM PASTEL – WS1201

## The strong wear resistance

- A range of Pastel color designs with special PU Coating
- Outstanding wear resistance
- Excellent stain resistance
- Great dimensional stability for any circumstance.





# PREMIUM TILE MOSAIC

## The strong wear resistance

- Outstanding wear resistance
- Excellent stain resistance
- Great dimensional stability for any circumstance.



PREMIUM MOSAIC-MO1008



PREMIUM MOSAIC-MO1007



PREMIUM MOSAIC-MO1006



PREMIUM MOSAIC-MO1002



PREMIUM MOSAIC MO-1001

3 \* 910 \* 910 / 1set per Box

By using precision computer cutting,  
It is possible to produce a variety of  
designs, and it fits on such as  
high-end stores



More Economic

## PLUS TILE





# PLUS TILE PLUS WOOD

Dim : 3.0 \* 180 \* 920mm



PLUS WOOD - WS1501



PLUS WOOD - WS1507



PLUS WOOD - WS1502



PLUS WOOD - WS1508



PLUS WOOD - WS1503



PLUS WOOD - WS1509



PLUS WOOD WS1506



PLUS WOOD - WS1510

## The more economic

- A range of natural wood designs with special PU Coating
- Outstanding wear resistance
- Excellent stain resistance
- Great dimensional stability for any circumstance.



# PLUS TILE PLUS WOOD

Dim : 3.0 \* 180 \* 920mm



PLUS WOOD - WS1511

## The more economic

- A range of natural wood designs with special PU Coating
- Outstanding wear resistance
- Excellent stain resistance
- Great dimensional stability for any circumstance.



PLUS WOOD - WS1515



PLUS WOOD - WS1512



PLUS WOOD - WS1530



PLUS WOOD - WS1513



PLUS WOOD - WS1531



PLUS WOOD - WS1514



PLUS WOOD - WS1533



# PLUS TILE PLUS WOOD

Dim : 3.0 \* 180 \* 920mm



PLUS WOOD – WS1540



PLUS WOOD – WS1551



PLUS WOOD – WS1541



PLUS WOOD – WS1552



PLUS WOOD – WS1542



PLUS WOOD – WS1560



PLUS WOOD – WS1550



PLUS WOOD – WS1561

## The more economic

- A range of natural wood designs with special PU Coating
- Outstanding wear resistance
- Excellent stain resistance
- Great dimensional stability for any circumstance.



# PLUS TILE PLUS WOOD

Dim : 3.0 \* 180 \* 920mm



PLUS WOOD - WS1562



PLUS WOOD - WS1563



PLUS WOOD - WS1564



PLUS WOOD - WS1565

## The more economic

- A range of natural wood designs with special PU Coating
- Outstanding wear resistance
- Excellent stain resistance
- Great dimensional stability for any circumstance.





# PLUS TILE PLUS SQUARE

Dim : 3.0 \* 455 \* 455mm

## The more economic

- A range of natural Marble, stone designs with special PU Coating
- Outstanding wear resistance
- Excellent stain resistance
- Great dimensional stability for any circumstance.



PLUS SQUARE - WS1601



PLUS SQUARE - WS1602



PLUS SQUARE - WS1603



PLUS SQUARE - WS1604



PLUS SQUARE - WS1611



PLUS SQUARE - WS1612



# PLUS TILE PLUS SQUARE

Dim : 3.0 \* 455 \* 455mm

## The more economic

- A range of natural Marble, stone designs with special PU Coating
- Outstanding wear resistance
- Excellent stain resistance
- Great dimensional stability for any circumstance.



PLUS SQUARE - WS1613



PLUS SQUARE - WS1621



PLUS SQUARE - WS1622



PLUS SQUARE - WS1623



PLUS SQUARE - WS1631



PLUS SQUARE - WS1632



# PLUS TILE PLUS SQUARE

Dim : 3.0 \* 455 \* 455mm

## The more economic

- A range of natural Marble, stone designs with special PU Coating
- Outstanding wear resistance
- Excellent stain resistance
- Great dimensional stability for any circumstance.



PLUS SQUARE - WS1633



PLUS SQUARE - WS1634



PLUS SQUARE - WS1641



PLUS SQUARE - WS1642



PLUS SQUARE - WS1643



PLUS SQUARE - WS1644



# PLUS TILE PLUS SQUARE

Dim : 3.0 \* 455 \* 455mm

## The more economic

- A range of natural Marble, stone designs with special PU Coating
- Outstanding wear resistance
- Excellent stain resistance
- Great dimensional stability for any circumstance.



PLUS SQUARE - WS1645



PLUS SQUARE - WS1648



PLUS SQUARE - WS1650



PLUS SQUARE - WS1651



PLUS SQUARE - WS1652

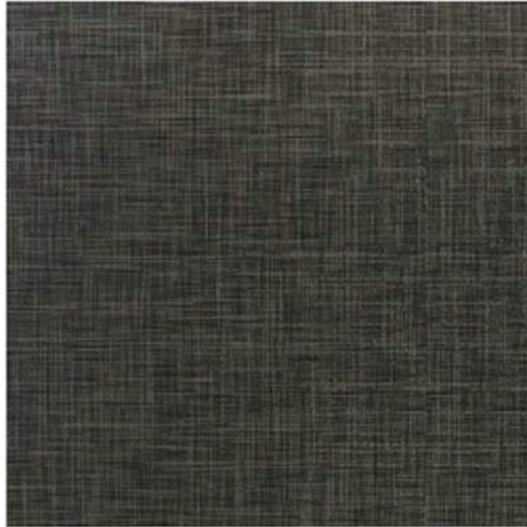


PLUS SQUARE - WS1660

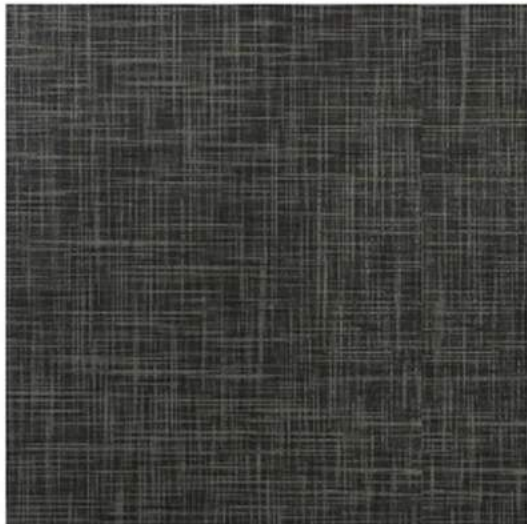


# PLUS TILE PLUS SQUARE

Dim : 3.0 \* 455 \* 455mm



PLUS SQUARE – WS1661



PLUS SQUARE – WS1662

## The more economic

- A range of natural Marble, stone designs with special PU Coating
- Outstanding wear resistance
- Excellent stain resistance
- Great dimensional stability for any circumstance.





## TEST REPORT

APPLICANT : WOO SOUNG CHEMICAL CO., LTD.

REPORT NO. : H217-11-00300

SAMPLE RECEIVED DATE : 2011-06-30

TEST STARTED DATE : 2011-06-30

REPORT ISSUED DATE : 2011-07-14

PAGE : 1 OF 4

SAMPLE DESCRIPTION : ONE(1) PIECE OF SUBMITTED SAMPLE SAID TO BE TILE.

ITEM : PVC FLOOR TILE

TEST CONDUCTED : AS REQUESTED BY THE APPLICANT, FOR DETAILS PLEASE SEE ATTACHED PAGES.

PREPARED AND CHECKED BY  
FOR FITI



YOU KYUM, KIM  
QUALITY MANAGER

AUTHORIZED BY  
FOR FITI



MOON-OK NOH  
PRESIDENT



REPORT NO. : H217-11-00300  
PAGE : 2 OF 4

TEST CONDUCTED

TEST RESULT

(01) ANTIMICROBIAL ACTIVITY AND EFFICACY (FILM-CONTACT METHOD, JIS Z 2801:2006 )

: CFU/PIECE, VALUE OF ANTIMICROBIAL ACTIVITY: log

		BLANK	#1
BACTERIA-1:	AT BEGINNING	$2.9 \times 10^5$	$2.9 \times 10^5$
	AFTER 24HRS.	$2.0 \times 10^5$	<10
	VALUE OF ANTI-MICROBIAL ACTIVITY	-	4.3
BACTERIA-2:	AT BEGINNING	$1.9 \times 10^5$	$1.9 \times 10^5$
	AFTER 24HRS.	$2.2 \times 10^7$	< 10
	VALUE OF ANTI-MICROBIAL ACTIVITY	-	6.3

NOTE) STANDARD FILM : STOMACHER® 400 POLY-BAG

TEST CONDITION : THE SOLUTION ARE FIXED AT  $(35 \pm 1) ^\circ\text{C}$ , RH 90 % FOR 24 h,  
AND DETERMINE BACTERIA CELL GROWTH INHIBITION RATE BY  
POUR AGAR PLATE METHOD.

TEST BACTERIA : BACTERIA-1 - *Staphylococcus aureus* ATCC 6538P.  
BACTERIA-2 - *Escherichia coli* ATCC 8739.

ANTIMICROBIAL EFFICACY : THE VALUE OF ANTIMICROBIAL ACTIVITY  
SHALL NOT BE LESS THAN 2.0 log

SEE ATTACHED PHOTOS

SAMPLE :



REPORT NO. : H217-11-00300

PAGE : 3 OF 4

TEST CONDUCTED

TEST RESULT

- ANTIMICROBIAL ACTIVITY AND EFFICACY PHOTO : BACTERIA-1 : BLANK -



- ANTIMICROBIAL ACTIVITY AND EFFICACY PHOTO : BACTERIA-1 : #1 -





REPORT NO. : H217-11-00300

PAGE : 4 OF 4

TEST CONDUCTED

TEST RESULT

- ANTIMICROBIAL ACTIVITY AND EFFICACY PHOTO : BACTERIA-2 : BLANK -



- ANTIMICROBIAL ACTIVITY AND EFFICACY PHOTO : BACTERIA-2 : #1 -





# TEST REPORT

1. No : CT14-032858

Reissuance (R1)

2. Client :

Date : Mar. 26, 2014

○ Name : WOOSOUNG CHEMICAL.CO.,LTD

○ Address : 29, Buma-ro 265beon-gil, Naechon-myeon, Pocheon-si, Gyeonggi-do

○ Date of Receipt : Mar 12, 2014


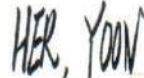
○ Date of Issued : Mar 26, 2014

3. Use of Report : Quality control

4. Test Sample : PVC Floor Tile

5. Method :

(1) KS M 3802:2008

Affirmation	Tested By Name : Kim Sang Do 	Technical Manager Name : Her, Yoon 
Our report apply only to the standards or procedures identified and to the sample(s) tested unless otherwise specified. The test results are not indicative of representative of the qualities of the lot from which the sample was taken or of apparently identical or similar products.		

Korea Conformity Laboratories

President Song Jae Bin



Address : 487-826 59, Hoguk-ro, Soheul-eup, Pocheon-si, Gyeonggi-do, Korea 82-31-544-3463

Result Inquiry : North Gyeonggi Branch 82-31-544-3463



# TEST REPORT

No : CT14-032858

## 6. Test Results

### 1) PVC Floor Tile

Test Item(s)	Unit	Test method used	Test Result(s)
Length	mm	(1)	455.0
Width	mm	(1)	454.9
Thickness	mm	(1)	2.99
Magnitude of dent[20 °C]	mm	(1)	0.55
Magnitude of dent[45 °C]	mm	(1)	0.82
Residual dent percentage	%	(1)	3.1
Percentage of loss on heating	%	(1)	0.1
Variation in length due to heating	%	(1)	0.09
Staining resistance - Soybean Oil	-	(1)	Pass
Staining resistance - Lubricating Oil	-	(1)	Pass
Staining resistance - 95 % Ethyl alcohol	-	(1)	Pass
Staining resistance - Cement paste	-	(1)	Pass
Staining resistance - 10 % Aqueous ammonia	-	(1)	Pass
Staining resistance - Cow's milk	-	(1)	Pass
Staining resistance - 5 % Acetic acid	-	(1)	Pass
Staining resistance - 5 % Hydrochloric acid	-	(1)	Pass
Staining resistance - Kerosine	-	(1)	Pass
Staining resistance - Soy sauce	-	(1)	Pass

----- End of Report -----





## Woosoung Chemical Floor Tile Specifications

### 1. General Information

#### 1.1 Scope

This article is subject to the area where the PVC vinyl flooring is required, and the flooring range is subject to the PVC vinyl tile flooring completion to which the architectural drawings assign.

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#### 1.2 Conveyance, Storage and Handling

1.2.1 The materials should be carried to the site as wrapped in packaging and stored undamaged in a clean and well ventilated area.

1.2.2 The materials should be carried and handled with care not to be damaged, and the damaged ones should be taken out in no time.

#### 1.3 Requirements for the Conditions of the Flooring Site

1.3.1 There should be proper lights at the flooring site.

1.3.2 Installation of tile-flooring should come only after the completion of walls, ceilings, windows and so forth.

1.3.3 Tiles and adhesives should be stored at the site, 24 hours prior to the flooring. Maintain the site at a room temperature (18~22°C) in the winter. In case of a site that needs floor heating, heating should be off 3 hours before commencing tile-flooring.

1.3.4 Flooring sites should be maintained to be well ventilated.

.

### 2. Materials

#### 2.1 Material Details

##### 2.1.1 Specifications and Properties

Item		Woosoung Floor Tiles	Remarks
Thickness		3.0±0.15	KS M 3802
Size(mm)		455X455±0.1%	
		920X100±0.1%	
		920X180±0.1%	
		455X227.5±0.1%	
Pressure(mm)	20°C	0.25 or/and more	
	45°C	1.20 or/and less	
Remaining Pressure Rate (%)		8.0 or/and less	
Length Variation Rate by Heating (%)		0.25 or/and less	
Heating Loss Rate (%)		0.5 or/and less	

### 3. Tile-flooring

#### 3.1 Flooring Steps

(1) Clean the existing floor thoroughly → (2) Line up the boxes of tile by lot → (3) Snapping the ink line in the center → (4) Spread the adhesive → (5) Start laying down the tiles lining them up with the lines → (6) Finish up by mudding and taping the joint of the wall → (7) Press each tile gently → (8) Remove the access and all the haze left over on the tile and clean up the site

#### 3.2 Preparation before Commencing Tile-flooring

##### 3.2.1 Check the Floors

- (1) Check the followings with the flooring drawings of the site
- (2) Before tile proceeding, the floor should be sufficiently and properly dried up to be under 4.5% of water content.
- (3) Check the hardness of the floor and if there is any spot that is too soft or dust, make up the surface with mortar and wait until the water content rate goes down less than 4.5% before proceeding.
- (4) Clean up the contaminants on the floor such as varnish, paint, lacquer, wax, and the like before commencing tile flooring. Cover up with the contamination preventing tape should there be any surface with no further cleaning up is possible.
- (5) Remove the existing floor and the adhesive in order to prevent the products from possible contraction and expansion in case of laying up tiles to wood (plywood) and existing PVC tiles (tiles / light, heavy weight bearing linoleum).
- (6) Make sure before proceeding that the floor is flat with no unevenness or curves.
- (7) It is important that the concrete and the mortar on the floor is hard enough and that the floor made of artificial marble for watering tools (artificial marble) should be sufficiently dried up with mortar as the adhesiveness could not be strong enough particularly due to its dampness.
- (8) Fill up the crack on the floor if any with proper substance.
- (9) The floor repair substance of Epoxy may migrate the hardener to the product surface. Therefore, it is crucial to finish the area with contamination preventing tapes.

##### 3.2.2 Material Check and Storage

- (1) The materials should be carried in the site prior to tile flooring. Through inspections over the packaging, carry out the damaged ones if any.
- (2) In order to prevent the bicolouration, Tiles should be arranged by same lot number prior to tile flooring and the builder should use the tiles from the same lot.
- (3) In winter, a room temperature (18~22°C) should be maintained. The tiles and the adhesive should be carried in the site 24 hours prior to flooring for adaptation to the conditions of the site. In the area with heating, stop heating at least 3 hours prior to the commencement of flooring.
- (4) Supplementary materials should be ready before the commencement of flooring and should be used after the completion of flooring.



### 3.3 Rules in Tile-flooring

- (1) Draw chalk lines according to the construction drawings and the approval of the supervisor should advance to tile flooring.
- (2) No other adhesive should be used than the applicable adhesives. User manual should be carefully studied before tile flooring.
- (3) Install the square tiles in the same direction according to the mark on the back to prevent the bicolouration and maintain the dimensional stability.
- (4) Make sure that tiles are tight to the floor at all time with no gaps. Check them frequently and press down for any gap found.
- (5) Remove the adhesive left over on tiles at once.
- (6) During the winter, the supervisor or the manager at the site should prevent lights from coming directly down to the tiles that may cause expanding and swelling of tiles.

### 3.4. How to Install Floor Tiles

- (1) Set up the ink line in the center of the floor.
- (2) How to Mark the Center Line
  - Length of one side of the room  $\div$  Length of one side of the tile = An odd number, which makes the central spot the center line.
  - Length of one side of the room  $\div$  Length of one side of the tile = An even number, which makes the spot 1/2 of the length of the tile away from the center line.
- (3) Spray the adhesive appropriately considering the work speed due to time limit.
- (4) Press onto the outer edges of tiles with hands and feet after having the tiles bonded onto the floor. After flooring, finish up with 50Kg roller to press down with no gaps allowed.

### 3.5 Watch points after Tile-flooring

- (1) Keep the room temperature for at least 48 hours at least to prevent the swelling of the outer edges of tiles that may happen due to possible changes in the nature of the adhesive caused by air conditioning and heating before the adhesive gets hardened enough.
- (2) Carefully keep the tiles from any damages that can be done during heavy-carries by being dragged or dipped.
- (3) Do not use strong solvent such as acetone or thinner but alcohol to remove contaminants on the surface of tiles.
- (4) Take special care against contamination that may occur after flooring on the surface of products as contaminants (acid substances) might drop on.
- (5) Neither moving household stuff nor heating rooms is allowed until 48 hours after flooring, except for walking after 24 hours, as it takes 48 hours for the oil-based adhesive to get completely hardened.
- (6) After flooring, install supplementary components and fix the floor by taping the area that is over-layered in order to prevent them from being shoved.

(7) After flooring, regularly coat the tiles with wax for on-going maintenance and durability increase of Woosoung floor tiles.

### 3.6 Floor Maintenance, Warnings in flooring and Watch points

#### 3.6.1 Warnings

(1) Remove water, oil and sand that may cause the floor slippery. Do not use any polish that may cause the floor slippery.

(2) Neither a rough handling nor a high-stacking of the products is allowed. It may cause injuries and property damages as well as products break downs due to the heavy weight.

#### 3.6.2 Watch points

(1) Do not use strong solvent such as acetone or thinner but alcohol to remove contaminants on the surface of tiles.

(2) Clean up the drops of chemical agents like bleach and dyeing in no time because it may cause spots and speckles to accelerate changing colors as the transparent chemical substances penetrate into the floors.

(3) Burning the left over after construction would cause the noxious fumes. Entrust industrial waste treatment companies to handle such disposal.

(4) Do not wrap off boxes and keep them in a flat area. Staking tiles on layers for a long term or standing tiles up may cause them distorted in shapes. Direct sunlight and being wet may also cause distortion of the quality and colors.

(5) Avoid furniture paint, insecticide and preservatives that may cause tiles contaminated. Take a special care when using them not to stain tiles.

(6) Woosoung floor tiles are only for floors.

### 3.7 Adhesive of Woosoung floor tiles

#### 3.7.1 Adhesive Types and Application Scope

Item	Oil-based Adhesive	Water-based Adhesive
Basic Component	Polyurethane (Oil-based)	Acryl (water-based)
Scope of Use	Winter season New construction(winter,summer) Basement Under floor heating Water-cleaning area Balcony or Extended area	Summer season Renovations (cureable floors with little damp) No under floor heating No water-cleaning area
Package unit	4kg, 20kg	10kg
Std. Coating	0.3 ~ 0.4 kg/m <sup>2</sup>	0.3 ~ 0.4 kg/m <sup>2</sup>

#### 3.7.2 How to Use the Adhesive

(1) Place the adhesive case upside down for 20 minutes and then shake before using adhesive for



coating.

(2) Spray only the instructed amount of the adhesive over an appropriate area of the floor for one time work. (It is important to use a proper amount of adhesive as instructed for quality bonding to avoid defect that may occur by using adhesive on a larger area at once for one time work as it gets hardened fast.)

(3) Pay attention and keep the open-time because the open time and the pot life depend on the season and weather.

(4) Neither moving household stuff nor heating rooms is allowed until 48 hours after flooring, except for walking after 24 hours, as it takes 48 hours for the oil-based adhesive to get completely hardened.

### 3.7.3 Warning and Watch point When Using the Adhesive

(1) Warning: The adhesive for tiles installation contains organic solvents harmful to human body and may cause an addiction or a hallucination once inhaled over certain amount. Wearing a protective gear is mandatory. Frequently ventilate the area and inhale fresh air.

(2) Watch point: Right after the construction, there could be peculiar smell of the adhesive remained. Sufficient ventilation is required about 2~3days after installation.