

CONCERNED PERSONS: Costumers, Tile Appliers

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1. GENERAL INFORMATION ABOUT CERAMIC TILES

All products of Graniser Seramik are being produced in compliance with TS-EN-ISO (Turkish standards – European Standards and International Standards) standards. We follow the “Graniser Seramik Manufacture Standards” which has been prepared by improving the related standards. We aim for customer satisfaction and our goal is to be a preferred producer among all the producers in the field.

2. DEFINITIONS ABOUT CERAMIC TILES

Ceramic Tiles are stabs that are used mainly for covering wall and floors. Inorganic substances like clay, feldspat, and quartz are first being transformed to dust by grinding, screening, mixing, drying in certain mixtures, then being pressed and shaped into thin stabs. After applying glaze on one side, these stabs are cooked in high temperatures.

Glaze is the Vitreous substance applied on the front side of tile, which may be in transparent, semi-transparent, opaque or mat form and is a non-permeable covering.

Engobe is a covering that is applied under the glaze and is clay based, permeable or non-permeable substance that performs as a lining between body and glaze.

Water Absorption is the percentage by mass value of water absorbed by tile.

Nominal Size is the size that defines the product. (For example: 33x33, 25x33, 45x45, 30x60, 60x60, etc...)

Working Size is the size of tile that should be in compliance with nominal size, within pre-defined variations (For example: O – A – B – C – D – calibers and caliber variations)

True Size: Size that is acquired by measuring the tile.

3. CLASSIFICATIONS OF CERAMIC TILES

Ceramic tiles are being classified by production methods and water absorption percentage.

Graniser Seramik products are in;

“Dry Pressed Tiles” classification as of production method and indicated with letter “B”.

As of water absorption (E) percentages are being classified as:

* **Glazed Granites** (Low Water Absorption) = **Group BIa**, $E \leq 0.5$

“Tiles that has water absorption of less than 0.5%”

* **Floor Tiles** (Low Water Absorption) = **Group BIb**, $0.5 < E \leq 3$

“Tiles that have water absorption between 0.5% - 3%”

* **Wall Tiles** (High Water Absorption) = **Group BIII**, $E > 10$

“Tiles that have water absorption percentage bigger than 10%”

Mentioned EU standards, define size tolerance, physical and chemical states and surface quality. Turkish Standards Institute (TSE) is the establishment that publishes and controls the compliance of products with these standards in Turkey. Graniser products have the certifications of TSE compliance and sufficiency for production. Graniser also has the ISO 9001 Quality Management system certificate and CE conformity declaration.

4. QUALITY CLASSIFICATIONS AND DATA PRINTED ON BOXES

Our products are classified and boxed as 1. Quality, 2. Quality and Defected.

Main costumer complaints regarding tiles are the differences on tonality or size, noticed during or after applying tile. Main reason for these complaints are;

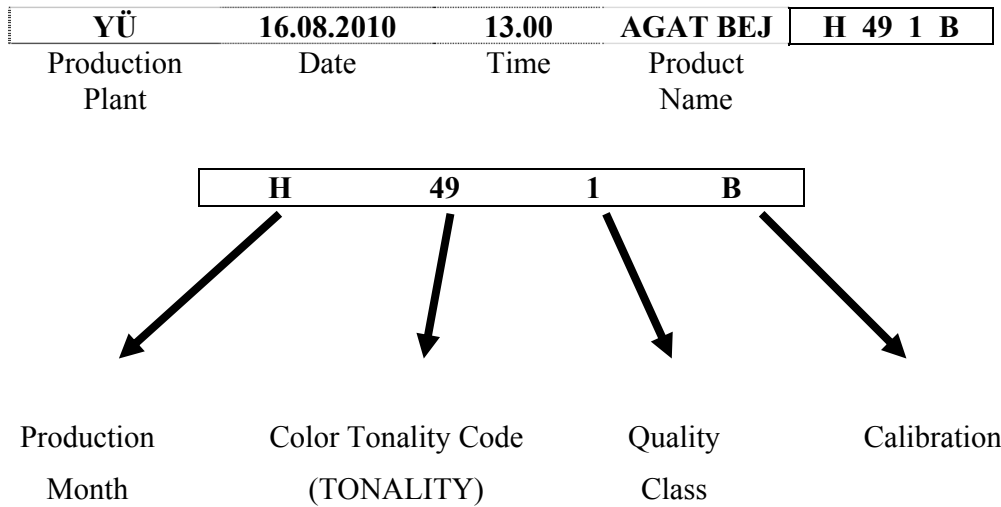
***tonality differences caused by applying different production dated or different shaded tiles of same product together,

*** size differences caused by using different calibrations of same product together.

In order to avoid these problems, tiles that will be applied to same space, must be of same TONALITY CODE and CALIBRATION CODE. Warehouse workers and loading operators must be educated about this and costumers should be warned regarding these differences.

(Content of each pallet belongs to same tonality and calibration.)

Let's see an example of information and codes written on boxes:



YÜ	:	Code of the production plant
16.08.2010	:	Date of packing
13.00	:	Time of Packing
AGAT BEJ	:	Product name
H	:	Code of the month that production has started
49	:	Tonality Code
1	:	Quality
B	:	Caliber (Size) Code

4.1 Production Month Codes

Month		Code
January	→	A
February	→	B
March	→	C
April	→	D
May	→	E
June	→	F
July	→	G
August	→	H
September	→	I
October	→	J
November	→	K
December	→	L

4.2 Tonality Code

...	45	46	47	48	49	50	51	52	53	54	55	...
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Main Tonality

It's never possible to work with same tonality in ceramic production. Especially in different lots (productions made on different dates) this is inevitable as tonality is in the nature of this production.

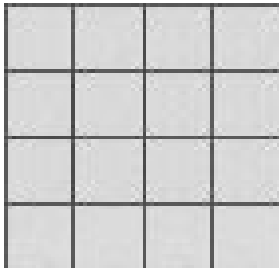
Because of Mineralogical differences of raw materials, differences of production conditions etc., tonality is inevitable.

- Two digit tonality codes are used with 50 as main tonality code.
- It's necessary to use a code with two digit code together with month code, for traceability or especially in separation of same product produced on different lines with in same month and/or produced on the same line, two times with in the same month.
- Main tonality is 50,
 - ** for ex; D 50 means Tonality 50 that was produced on April.
 - ** Tonality codes that are bigger then 50 (50-51-52-53...) means darker then main color, while smaller then 50 (49-48-47...) means lighter then main color.
 - ** This does not mean that the tonality codes have to be consecutive. For example Production may jump to 52 after 50 without 51 in the middle.
- Products that have the same tonality code but different month code may have differences on tonality. (For Example C51, D51 or K51 may have differences) In order to have the same tonality, both month code and tonality code must be the same.
 - ** For these reasons, tiles that will be applied to same surface must have same color, month code and production year. Otherwise it will cause a mixed tonality look that will lead to dissatisfaction. There is information on boxes, under "Attention" topic about this.
- All boxes with in a certain pallet, has the same tonality value. So all pallets has been stabilized regarding tonality.

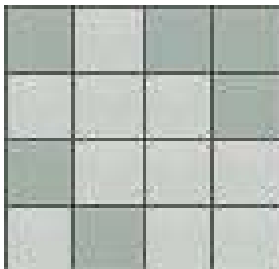
4.3 Changes in color shades

Some products are produced in Random Print and has print (effect) differences and therefore may have tonality differences. Or may have both print and color differences according to V1 – V2 - V3 - V4 type classification.

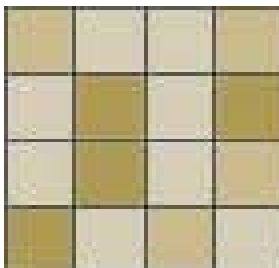
V1 Group; tiles that has same look;



V2 Group; small differences;



V3 Group; tiles that have important differences;



V4 Group; tiles that have random colors (irrelevant colors).



These types of products have different prints, effects and colors in different tiles. This is a specialty of the product has been done intentionally to achieve a natural look when the tile is applied to surface.

So these products should not be perceived as mixed tonality or defected products. In addition to that, according to standards, even the first quality materials may have minimal tonality differences caused by firing.

4.4 Quality Classification

It shows the quality classification of the product.

4.5 Calibration Classification

0	A	B	C	D	E
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(Information regarding how many calibers are worked for item has been printed on boxes. First caliber is the smallest one, while the last one shows the biggest size.)

Since there is a big difference in allowed min and max sizes in standards, we are using calibration classifications to ensure customer satisfaction.

Calibration codes are applied all tiles except 9,7x9,7 floor tiles, 25x33 and 20x25 wall tiles. Information about how many caliber there are in each size and differences between calibrations in mm. and working sizes are written on boxes. In order to avoid size problems, tiles that will be applied to same surface must be of same calibration code.

Calibration Codes

- Are shown with codes like 0 (zero), A, B, C, D and E and while the 0 shows the smaller size, it gets bigger by each following code.
- So if a product has five calibers like ; 0 – A – B – C – D ; “0” is the smallest and, “D” is the biggest size or another has 5 calibers like A – B – C – D – E “A” is the smallest and “E” is the biggest size and all these information is printed and defined on the box.
- All items in one pallet have same calibration code and have size difference only within defined standards...
- If two different calibers are mixed during application, there will be size difference. Especially if calibers are not consecutive, size difference will be much bigger.

- For example difference between caliber “0” and “D” is so big that, they cannot be used together.
- Tonality and calibration coding is only applied for first quality materials. So there can be different tonality and calibrated products in second quality and deferred pallets.

5. EXPLANATIONS ABOUT RELATED NATIONAL AND EUROPEAN STANDARDS PRINTED ON BOXES

TS – EN
14411 : Turkish and European Standard code for ceramic production

GBIa → Glazed Porcelains

HB1a → Floor tiles

LBIII → Wall tiles

G : Glazed Porcelain

H : Floor Tile

L : Wall tile

B : Dust form Dry Pressed Tiles (Classification regarding production method)

Ia : Tiles that have water absorption of % 0,5 or less (Glazed Porcelain)

Ib : Tiles that have water absorption between % 0,5 to % 3 (Floor Tiles)

III : Tiles that have water absorption over 10% (Wall Tiles)

6. NOTICE INFORMATION ABOUT APPLIANCE AND USAGE OF TILES

Due to mistakes made during the APPLIANCE or usage of tiles, final costumers may miss the aesthetic look they desire or may lose the hygienic features. For these reasons, following remarks should be taken into notice:

6.1 Notice information about appliance of tiles:

- It's important the tile applier is agile and preferably certified.
- Field of the surface that will be covered should be measured before application.
- Before application, tonality, calibration, type and quality marking should be read carefully.
- Different tonalities (regarding info on the box) should be separated and remaining items should be mixed during application.
- If possible, tiles should be laid on floor before application, to distribute possible tonalities.
- Floor should be absorbed as much water as it can take, 24 hours before application.
- There should be enough light during application.
- During application, surface should be clean.
- Necessary tools for application should be ready.
- In case of applying under dry and hot weather conditions, tiles must be moisture in order to prevent the sudden moisture losses on grout.
- If there is a chance of frost, necessary precautions should be taken and application should not take place under subzero temperatures.
- During application, a plastic hammer usage is a must.
- Use a mask during the preparation of grout, in order to protect from dust.
- During the preparation of grout, instructions on packing must be followed.
- If there is a planetary problem on tile or the surface (leveling problem) it should be fixed before application.
- After laying tiles, tile spacers must be put to joint points. This will leave space between tiles for grout application.
- Tiles must be applied with minimum 2-3 mm space.
- Ceramics must be applied from bottom (to top (on walls). Starting from top may lead tiles to slide and prevent proper application.
- When applying with mortar, 400 dosed mortars should be used and well washed, thin grained sand should be used for mortar.

- Usage of grout is a must. There may be changes in volume of tile because of heat or movement in building in time. If no grout is used, all force because of these movements will be applied on tile, which will detach it from the surface or create glaze detachments on the edges of tile.
- Spaces must be filled with in 24-48 hours after finishing application. Overages must be taken with the help of a spatula, 20-30 minutes after the grout is applied and surfaces of tile must be cleaned with a sponge.
- Application of decors and listellos must be done with precision and surface must be protected from grout, mortar, etc. In case any contact with these substances, cleaning must be very gentle and usage of sharp, metal objects or acid based products, thinners must be avoided.
- Application of grout with cement or marble dust is not recommended due to water absorption. Biggest problem with high water absorber mixtures like this is that, glue under the tile expands by water and makes tile detach from surface.
- Glue adhesive must contact minimum 80% of the surface at the back of tile.
- If you encounter any problems, before or after applying tiles, please contact your retailer or company to ask their opinions.
- One piece of tile and one box must be kept to help solve a possible future problem.

Notice information about applying ceramics;

- Pay attention about broken, cracked or defected tiles.
- Tiles must have equal space and must be laid on the ground neatly.
- There should be no leveling (for ex. should not be like stair case).

6.2 Notice Information about Usage of Tiles

When reporting a complaint, make sure to give product name, production date, tonality, caliber and quality information. Saving one piece of tile and box would be a reference for solution.

All types of dirt on the surface of tile must be cleaned with Standard cleaners and stain removers. Using sharp objects, heavy acids or bases is not recommended.

Claims regarding surface errors are not accepted after the application of tiles.

7. CAUSE OF COSTUMER COMPLAINTS AND POINTS OF NOTICE

Quality control is not just about solving problems but to make sure they don't happen again.

One of the below may cause discomfort regarding tile appliances among costumers;

- Tile producers
- Person in charge of selecting tiles (pickers)
- Retailers
- Tile appliers (professionals or such)
- Users

7.1 Producer as the Source of Complains

Tile production has certain domestic and international standards. Products that have been sent to market must comply with these standards. Despite all these standards and controls, tiles must still be checked before applying them. Problems that are related to production cannot be solved for applied tiles.

7.2 Product Pickers as Source of Complaint

Products must be picked correctly according to usage purpose.

- Wall tiles have high porosity and must never be used outside or any place that has a risk of frost. For example a glossy tile must not be picked for a high traffic surface.
- Tiles with high water absorption should never be used outside.

7.3 Retailers as the Source of Complaint

Retailers must have good knowledge the ceramic. Especially information on boxes like caliber, tonality, quality, production date etc. must be carefully examined. If there are any mistakes on this complying all other rules won't change anything about results. Ceramic tiles are technically produced materials. Tiles are fragile items and must be carried and transferred with care.

7.4 Faulty Appliance as Source of Complaint

Tile appliers are the key persons to ensure trouble free, long lasting, aesthetic look that is expected of applied tiles. It must be beard in mind at all times that tiles are technically produced industrial materials and following producer recommendations and making appropriate application regarding the nature of used tile is essential. To give a few example of this application; detached tiles, tonality issues, non-aesthetic looks, defects etc.

Ceramic tiles must be applied to surface with adequate adhesive and with minimum 2-3mm space. Adhesive must be applied to surface homogeneously. Attention must be paid to direction of prints when lying.

7.5 Users as the Source of Complaint

Tiles will be long lasting, if users pay attention especially when cleaning tiles. Welding must be avoided in places with ceramic surfaces. At least they should not splash on to the tile. Thermal shocks and frost conditions must be avoided for places with ceramic tiles.