



*almanit*  
Sanitary Ware

## *almanit ceramic sanitary ware* **Designed with Emotion**

Good design joins functionality and pretty shapes. Not everything pretty functions well. And not everything functional is pretty.

In today's world of hyper functionality, designers are more and more frequently faced with the need to distinguish themselves by exceptional shapes and designs. Emotion and character are new components of design. This can be seen in our modern-day bathrooms. This is why all "**almanit**" products give priority to design and emotion.

Ceramic is a product composed from natural raw materials. Kaolin, clay, feldspar and silica sand are ground and mixed with water to form a paste. After straining and a series of very exacting quality tests, this mass is cast in plaster or plastic moulds. After some 2 hours, the cast piece can be removed from the mould and further processed by hand. The pieces are pre-dried and are then forwarded to the drying unit. This desiccation process compacts and hardens the ceramic body so strongly that the sanitary unit is already tough enough to handle as it goes to the next stage, the glazing process.

The glazing process lends the rough piece a smooth finish which, in the furnace at 1210°C, melts out as a glassy surface, giving the sanitary unit the desired color and, of course, it's hygienic surface. The glaze is a watery solution of kaolin, frit, pigments and mineral powders. The units then undergo a strict quality check to ensure they comply with the specified ceramics and technical parameters.

Our up-to-date production techniques allows us to offer our ceramic sanitary ware with **Anti-Bacterial** system which prevents the propagation of bacteria by using the silver ion technology. This system does not allow the bacteria to survive on the surface of the ceramic which assures a hygienic environment in the bathroom. Another system is the **Easy Cleaning** system which does not allow water drops and stains to remain on the surface of the ceramic sanitary ware, this assures easy cleaning in a short time.





## Anti-Bacterial & Easy Cleaning

### Brilliantly clean Sanitary Ware - as if by magic!

Ceramic sanitary ware with our special coating are child's play to keep permanently sparklingly clean. Because lime scale, fat and dirt cannot get a firm grip. Germs are destroyed, unpleasant odours and fungi are avoided. At the same time, our special coating is totally non-toxic and free of irritants. The coating is permanently burnt into the ceramic surface and has a practically unlimited lifespan. That is why we guarantee the full effect - permanent.

This special coating process makes the ceramic surface **hydrophilic**. Instead of forming drops, water is distributed as an extremely thin film over the surface area. The decisive advantage: soiling is simply rinsed off and can be wiped away in no time at all. **Harmful germs** which often lead to unpleasant odours, are oxidized and destroyed in a natural way. Conclusion: brilliant cleanliness, freshness and hygiene – permanent and without effort.

**Effective against bacteria:** our products are predestined for use in areas where hygiene is of the important. The surface coating decomposes bacteria, fungi and germs and prevents the development of new pathogenes.

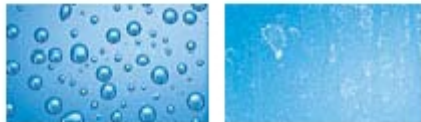
**Effective against dirt:** In addition and thanks to our special coating process, the ceramic surface can be kept clean without great effort. This permits to reduce the use of cleaning agents and thus their costs considerably, and to protect the environment. Thereby reducing the use of cleaning agents to lower maintenance costs and help preserve the environment.

**Effective against odours:** the special surface treatment eliminates unwelcome odours quickly and thoroughly. This effect is already guaranteed at a normal level of indoor lighting. There are no health risks and secondary effects: according to international tests and analyses, the coating is absolutely non-toxic and free of irritating substances.

Even normal room lighting is sufficient in order to activate the catalyst, titanium dioxide ( $\text{TiO}_2$ ), that is contained in the coating. The consequence: the surface tension of water that is to be found on the ceramic surface is reduced and, as a thin film it even rises off stubborn dirt like lime scale and grease. At the same time, the photo catalytic reaction leads to the activation of oxygen in the atmosphere. As a result, bacteria are destroyed and renewed growth reliably prevented.

Modern bathrooms are oases of relaxation. Our "almanit" ceramic sanitary ware with it's special coating make an essential contribution to the feeling of well-being. Because they permit the realization of individual design concepts and are clean again in the twinkling of an eye.

## Anti-Bacterial & Easy Cleaning



Ceramic surface with standard glazing:  
Water drops form, and dirt as well as  
lime is left on the surface after drying.

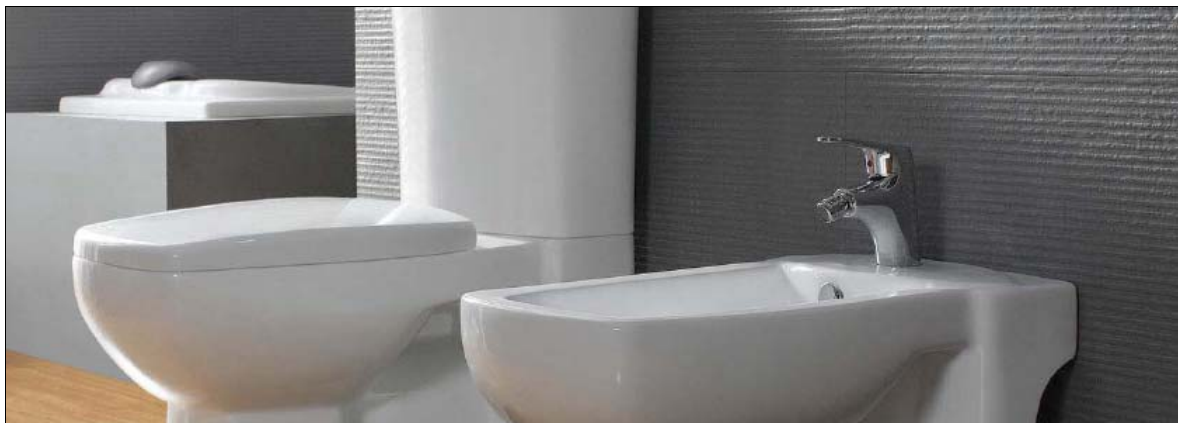


Ceramic surface with special glazing:  
The water spreads as a thin film on  
the surface and lifts dirt from the  
surface.

Our unique coating is burnt into the ceramic surface. As a result, it is absolutely indestructible – for the entire life of a product. We assure permanent effortless cleaning and hygienic effectiveness with its long-term guarantee.

The surface is an integrated part of the ceramic manufacturing process. The coating material (Titanium Dioxide) is applied during the glazing and subsequently baked onto the surface of the tile. The photo catalytic reaction is permanent and is activated by a normal level of indoor lighting.

No potentially harmful materials are used – Titanium Dioxide ( $\text{TiO}_2$ ) is contained in many household products such as lipsticks and toothpaste.



## Water Saving



Dual-Flush Button



**“almanit”** cistern fittings are specially designed to assure maximum water saving. They are tested and approved as “low consumption units” in accordance with DIN 1358-6 standard. Our toilets use a maximum of 6 litres per flush. This means that a 4 to 5 person household can save up to 27.000 litres per year (compared with conventional 9 litre cisterns).

All cistern fittings are supplied with a dual flushing button; the smaller button flushes 3 litres and the larger one flushes 6 litres. This helps to even reach a higher water saving per year.



**Tips for Taking care of your ceramic sanitary ware**

A) *ceramic sanitary ware has a glazed surface that is hard and strong and easy to keep clean. To retain the shine over time:*

1. Clean your bathroom porcelain once a week using water and a multi-purpose cleaning agent.
2. Do not use anything that contains abrasives. Do not use caustic soda that damages the glaze.
3. To avoid calcium deposits, spray an acidic reacting agent such as citric acid or acetic acid mixed in the ratio of one part acid to five parts water. Once a week is sufficient. You can also use a commercial decalcifying agent of the type found in shops.
4. Discoloration or deposits in the WC unit can be removed with water and a dishwasher agent. Add a couple of tablespoons of dishwasher agent to five liters of water at a temperature of 50°C (water from the hot water tap is approximately 50°C). Pour it into the bowl and leave it for about 15 minutes.

B) *To ensure lasting satisfaction with your WC-seat fittings/cover, you should observe the following points carefully:*

1. Clean the fitting, including the hinges, regularly with warm water and a mild detergent. Afterward rub dry.
2. Do not use any caustic or scouring agents.
3. Protect the fitting with a thin coating of colorless furniture polishing.
4. The fitting and hinges must not come into contact with WC cleansing agents. When using WC-cleansing agents, please lift up the lid and the seat/cover for urinal and do not put them down again until the cleansing agent has been completely rinsed from the bowl/urinal, since the vapors from the cleanser may attack the surface of the fitting.

C) *Dealing with cracks / Hairlines on the ceramic surface:*

1. Metal abrasions are often identified as cracks. They can be removed with abrasive from ceramic surfaces.
2. Impact damage (example: bottle falling into the washbasin) can not be repaired and the appearance will remain permanently impaired.



**Tips for taking care of your bathroom furniture**

*our bathroom furniture is specially designed and produced for use in bathrooms – in other words, damp rooms. To assure long life for your furniture:*

1. Position the bathroom furniture so that it cannot be hit by direct splashes of water.
2. Choose a shower enclosure rather than a shower curtain.
3. If water is splashed on your bathroom furniture, wipe immediately and the furniture will stay in better shape for a longer period of time.
4. The simplest way to clean the furniture is to wipe it with a damp cloth and perhaps add a little cleaning agent.
5. Do not use furniture polish, ammonia or other strong solvents.

**Tips for taking care of your shower and bath**

*You can easily increase the life of your shower cubicle or shower enclosure by cleaning it frequently:*

1. Use normal multi-purpose cleaning agent and a soft cloth or sponge. Both the glass and other surfaces are completely smooth, which makes them easy to clean.
2. Use a rubber scraper to clean the shower cubicles and the shower enclosures after every shower. This will help to keep the surfaces fresh looking and avoid calcium deposits.
3. For shower trays and bathtubs made of enameled steel plate, use a standard multi-purpose non-acidic cleaning agent. Use a soft cloth or sponge for soap residue or normal dirt. If calcium deposits have built up, from a dripping tap for example, you can normally use citric acid.
4. For shower trays, bathtubs, and whirlpools made of acrylic, the same cleaning tips are to be applied. However, normal window polish should also be avoided in addition to strong acids and alkaline when cleaning acrylic baths. If the surface has turned matt, the luster can be restored by polishing it.





Hamburg - Germany

## Standards & Norms

Our „**almanit sanitary ware**“ products are manufactured in accordance with European EN standards which specifies the sizes, dimensional tolerances, mechanical, physical and chemical requirements, surface quality requirements and marking of ceramic parts.

The most important European standards for testing ceramic parts are:

Test Methods	
<b>Sampling</b>	
Batching, sampling, inspection & acceptance/rejection	EN-ISO 10545-1
<b>Physical properties</b>	
Scratch hardness of surface	EN 101
Modulus of rupture and breaking strength	EN-ISO 10545-4
Impact resistance	EN-ISO 10545-5

Other European standards for testing ceramics are:

<b>Connecting Dimensions</b>	
Wall-hung hand rinse basins	EN 111
Wash basins excl. appliances of width <530 mm or > 750 mm	EN 32
Pedestal WC pans with close-coupled flushing cistern having an exposed outlet on the horizontal or vertical axis or a concealed outlet	EN 33
Wall-hung WC pans with close-coupled cistern whatever materials used in their manufacture (excl. siphonic action WC pans)	EN 34
Pedestal WC pans with an independent water supply having an exposed outlet on the horizontal or vertical axis or a concealed outlet (excl. siphonic action WC pans)	EN 37
Wall-hung WC pans with an independent water supply (excl. siphonic action WC pans)	EN 38
Wall-hung urinals without built-in trap	EN 80
Wall-hung urinals of the socket inlet and spigot outlet type	EN 80
<b>Physical properties</b>	
A norm that deals with performance criteria and requirements for sanitary appliances of sewage systems on private ground	EN 128
Specifies principles of construction, functional requirements on hygiene for purpose and test methods of wall-hung urinals made of ceramics	EN 13407