

PAREX Render Systems and Façade Solutions

TECHNICAL INFORMATION SHEET

Benefits of using factory produced mineral render

Site mixed loose purchased or pre-bagged sands

In the UK, general building sand or plastering sand supplied through sand suppliers or builders merchants is generally sourced on a price basis first or through the most local aggregate supplier.

Other than sources in Aberdeen or Inverness, most other sands excavated in the UK contain high clay particles (when compared against sands used by Parex in their renders) and they may also have natural impurities such as salts which may affect the way a render reacts when mixed and applied. This in certain situations may escalate potential failure issues in the render system. It is not always associated with just hand mixed mortars but can even occur when sourced through more controlled environments such as site silo supplied products.

Salts in particular can often be seen leaching out of mortars (as a white residue) and clay impurities can result in iron stains protruding through the surface finish, together with causing possible shrinkage cracks within the render etc. This will still occur even if they are proportion mixed properly by silo and mortar suppliers.

Some of the reasons issues are created with site mixed mortars e.g. by hand filled cement mixers

- a) All mortar mixes should be correctly gauged. E.g. a 1:1:6 mortar = 1 part cement, 1 part lime and 6 parts sand. This means exactly equal portions of each must be used. This accuracy can only be achieved by using a gauging box continuously.
- b) A gauging box is a technical term for something as simple as a bucket or anything which allows a proper proportional mix to be achieved but in our experience a gauging box / bucket is not generally used.
- c) The gauging process is generally a shovel which also relies on a proper counting process. If this process was followed then issues of cracking and delamination would be greatly reduced. However, when too much water is added in the initial mix, the mix is often then added to with additional sand and cement and generally not in equal proportions. This then alters the correct mortar mix ratio and is often the beginning of several future problems which cannot be easily rectified.
- d) Additive's such as waterproofing or plasticiser agents used within the mix should again be added in correct proportional mixes to every batch produced, along with set mixing times. These are designed to ensure the mix is not over air entrained which can weaken the mix. Failure to follow the guidelines can create further issues e.g. weaken the render strength.
- e) Even if all the above precautions are carefully taken it still doesn't alter the fact you cannot remove clay or other impurities on site from the poorer grades of sand we have in the UK. From experience we are fully aware these can and do cause renders to crack, craze and potentially delaminate.

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Benefits of Parex factory produced, pre-bagged mineral renders.

France has available a natural bed of high quality sand with minimal impurities. With this knowledge, Parex Ltd has all their pre-bagged mineral and lime heritage render products manufactured in our manufacturing facility based in Malesherbes, France, (just south of Paris). This is a high tech computerised facility with its own QA laboratory which is also linked to the group's seven testing laboratories globally where we share our knowledge base to ensure all operations benefit from new ideas and continuous improvement.

This is one of 5 Parex manufacturing facilities in France and any one facility has the yearly capacity to supply the whole of the UK render market more than 4 times. In addition, Parex has a further 56 manufacturing facilities across the globe.

Parex mineral renders are manufactured with computer controlled supplies of high quality sands, of varying particle sizes, grains and fillers, which are graded and sieved to remove impurities. These are added to, with a range of polymers and additives which provide a range of benefits such as controlled air entrainment, hygroscopic benefits, elasticity, antifungal, adhesion and workability to name but a few. In simple terms these procedures ensure we can guarantee our products consistency continually.

Our render range, when using the correct product have been tested to work on many masonry substrates, which some, such as lightweight aircrete blockwork are prepared with a sealer, suction control product supplied by Parex to ensure good adhesion is achieved and to prevent early hydration (early setting) of the render. In addition we supply a range of accessories and reinforcement meshes to deal with common substrate problems.

A range of substrates which we have solutions for are;

- medium density concrete blocks
- brick
- stone
- rubble stone
- clay terracotta blocks - e.g. Porotherm
- lightweight aircrete concrete blocks - e.g. Celcon, Thermolite, Ytong/Durox, etc.
- cast concrete
- existing well bonded rendered substrates
- painted well bonded existing rendered substrates
- wood fibre blocks – e.g. Durisol
- terracotta blocks

Where coloured renders are offered, most are produced in a choice of 48 standard colours, with special colours available to order and subject to a minimum supply of 50 bags.

Mixing of pre-blended renders

With the benefit of Parex pre-blended renders, site mixing issues and product quality are generally eliminated as it has an inherent control element which become easily apparent when mixing.

Only the addition of clean water is required on site. The product is so well blended in the factory it also allows short mixing times by paddle mixer in a suitable mixing tub or if required can be machine mixed and applied through a spraying process.

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If too much water is added into the mix it will be too runny to apply and the only way to deal with this is to add more pre-blended product until the mix consistency is achieved. If not enough water is added it will be too difficult to apply and thus more water is added. This process will generally ensure the correct consistency of render is produced and thus applied, which ensures a trouble free and quality render application.

All Parex render systems if applied in accordance with a Parex supplied specification will provide exceedingly long-term weather resistance and come with a 10 year insurance backed design and material warranty.

For additional information or other Technical Information Sheets, please visit our Web site link http://www.parex.co.uk/Render_Systems/Technical_Information_Sheets_and_FAQs

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