

Application & Product Guidelines

For the use of Dry-dashing aggregates onto render

This guide is to give all parties involved in the application of Dry-dashing aggregates an indication as to the correct way to use the products. This guide will only deal with issues relating to the aggregates being used and will not attempt to offer guidance or advice regarding the render that they are being applied on to. The current British Standard Code of practice for External Renderings (BS 5262:1991) offers little guidance regarding the specific process used to apply dry-dashing and this document is intended to provide good practice methods that when used on all applications will reduce the likelihood of problems. Derbyshire Aggregates Limited has been processing aggregates for use in the Dry-dashing market for over 20 years. During this time the processes used have been developed to ensure a clean consistent product can be supplied at all times. By working with contractors, system designers and specifier's our range has developed into the most comprehensive set of products available.

Production

To ensure a continuous quality, material must be selected from reliable and consistent quarries. All dashing aggregates supplied by Derbyshire Aggregates are washed and screened at least twice prior to being packaged. It is normal for many products to be washed and screened again as part of the blending process used to create the large range of colours and textures demanded by our customers. It is important that the products produced are carefully handled during the washing, blending and bagging process to minimise the attrition created when aggregates rub together which can cause a higher percentage of fines in the finished product. The bagging and shrink-wrapping which effectively seals the product until it reaches its site is done using robotic packing lines that prevent manual handling of the product. Colours of aggregates occur naturally and some variation can be present within the quarry. At Derbyshire Aggregates we deal with this by holding large stocks which are constantly rotated and blended to control colour consistency to keep any variation to a minimum. This is an important key factor in our quality control and at any time we stock in the region of 20,000 tonnes of materials to ensure consistency of grade and colour. The manufacture of standard products is usually carried out in production runs of 100 tonnes or more to ensure a high quality and consistent result with all batches.

Handling

All aggregates used for dry-dashing should be supplied in sealed polythene bags that comply with the manual handling regulations. Loose or bulk bagged material should not be used for Dry-dashing. Applicators that use this method do so at their own risk. This is due to the possible contamination of the product prior or during application. The segregation of fines to the bottom of bulk bags or loose loads will create an inconsistent finish given that the fines cannot be distributed evenly and this can lead to an inconsistent and patchy finish when applied. In accordance with BS 5262:1991(39.4) aggregates should be stored separately, according to type, on clean hard dry ground that is well drained and protected from contamination by soil, falling leaves or other harmful materials. Special non standard aggregate mixes should be obtained in sufficient quantities at one time to enable material of the approved colour to be used for the whole of the work. On larger schemes that involve multiple deliveries natural breaks should be used (i.e. another house, corners or different elevations on the same property). Should the material used require moving from the pallet it is supplied on then care should be taken to prevent over handling. This will cause higher fines content within the bag caused by the attrition of the aggregates within the bag during the handling process. Special care should be taken when transferring the product from the pallet to the working platform or and site storage facility to ensure that the bags are not walked on or climbed on at any point prior to their application.

Iron Staining

Rust or Iron staining is a natural problem that can occur when specific individual stones within the product that have high iron content are used for dry-dashing are exposed to the environment. This problem is often increased if the site is in an exposed or coastal region. It is not unusual for the problem to take a number of years to be exposed and there is no way of identifying if the aggregate is affected prior to application. It is not possible to screen the iron content out of the product by using magnets as it is part of the chemical makeup of the aggregate. The aggregates affected by this problem are mostly flint or gravel based type products or aggregates that have usually been quarried from glacial or river deposits. Using Calcined flint aggregates will not eliminate this problem if the raw flint used already has high iron content. Given that iron staining is a natural occurrence no guarantee can be given or liability accepted for areas affected by iron staining. Derbyshire aggregates only select aggregates from quarries that have proven records of low iron content. Products that may contain iron traces are marked in our standard products listing. Advice can be given as to the best course of action required to treat any problematic areas. Whilst iron staining can cosmetically spoil the appearance of the affected areas it has no detrimental effect on the render itself. Only aggregates selected from our stain free range can ensure that there is a very low risk of any problems occurring.

Standard Dry-Dashing Products Listing

	May contain iron traces		May contain iron traces
Arcane 3-8mm		Nordic 3-8mm	
Ashton Cream 3-8mm		Polar Black & White Spar 3-8mm	
Barleycorn Quartz 4-8mm		Polar Multi Spar 3-8mm	
Beige Marble 4-6mm		Polar Red & White 3-8mm	
Black & White Flint 3-8mm		Polar White 3-8mm	
Black Spar 6mm		Red & White Flint 3-8mm	
Buff Quartz 3-8mm		Red Granite 6mm	
Cameo 3-8mm		Regent 3-8mm	
Carrera 3-8mm	●	Round Gravel 6mm	●
Champagne 3-8mm	●	Seville 3-8mm	
Classic Spar 3-8mm		Snowdrop 3-8mm	
Derbyshire Spar 3-8mm		Staffordshire Pink 6mm	●
Harvest Spar 3-8mm		Sunflower 3-8mm	●
Honey 3-8mm		Sunset 3-8mm	
Iris 3-8mm		White Calcined Flint 3-8mm	
Monarch 3-8mm		Yellow Spar 6mm	●
Nevada 3-8mm	●	Collux (all colours) 3-8mm	

Stain Free Aggregates

To enable specifiers, contractors and stockists piece of mind in the selection of products Derbyshire Aggregates limited have developed a range of products using aggregates that have no prior history of staining. The aggregates used in this range are selected from natural deposits using aggregates such as marble and granite that because of their natural formulation contain little or no reactive iron content. This range contains no flint or gravel based products. The range for 2008 now includes four new products to compliment the already varied choice of colours available to our customers.



Honey



Iris



Seville



Sunset



Classic Spar



Snowdrop



Calcined Flint



Harvest



Beige Marble



Derbyshire Spar



Buff Quartz



Red & White Spar



Polar White Spar



Black & White Spar



Barleycorn



Ashton Cream



Nordic



Black & White Flint



Red & White Flint



Arcane



Regent



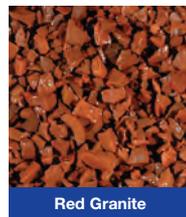
Cameo



Monarch



Multi Spar



Red Granite



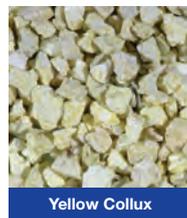
Black Basalt



Blue Glass & White



Green Glass & White



Yellow Collux



Grey Collux



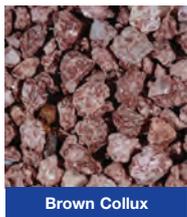
Orange Collux



Pink Collux



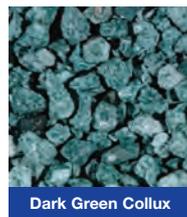
Black Collux



Brown Collux



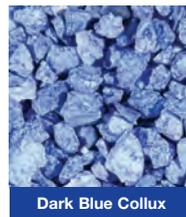
Light Green Collux



Dark Green Collux



Light Blue Collux



Dark Blue Collux



Shell



Green Glass



Blue Glass



Turquoise Glass

All samples shown are photographed when wet.

The colours illustrated are subject to the limitations of printing. Representative samples can be ordered from our head office if required.

Application

The aggregates used for Dry-dashing are predominantly naturally occurring minerals that will have colour variations that allows little control over colour consistency. At Derbyshire Aggregates care is taken to reduce any colour inconsistencies although no company can guarantee this. It is important to ensure that aggregates used are from the same manufactured batch to reduce any potential colour matching issues. No aggregate should be applied directly from the bag that it was supplied in. Any fines contained in the bag will usually fall towards the bottom of the bag and this can cause patching when applied where an area with a higher percentage of fines will differ in texture, colour and finish to an area dashed with aggregates containing little or no fines. All dashing aggregates should be decanted from the bags into a clean drainable container (i.e. a plasterer's bath) and blended with 3 to 4 other bags ensuring that the colour and any fines are mixed evenly within the container prior to application. Dashing aggregates supplied by Derbyshire Aggregates Limited do not require any further washing at this stage and care should be taken to ensure that the moisture content within the aggregates will not affect the performance of the render to which it is being applied. This blending process should be repeated throughout the application with more aggregate being added as the material is being applied. The aggregate should be applied in a damp but not soaked state as this helps with the adhesion to the render. Care should be taken to ensure that the moisture content of both the aggregate and the render is consistent as differentials caused by atmospheric conditions can create problems. Dashing the same elevation in changeable weather on the same day can cause similar problems. Derbyshire Aggregates Limited does not recommend the re-use of aggregate that has been collected up following the first application. Any aggregate that has been walked on or exposed to any substance that could contaminate it should be disposed off in the responsible way and not re-used as a dashing aggregate

Uneven appearance due to lime bloom

"Lime bloom is the most common form of efflorescence on cement based renders. It is caused when lime moisture migrates to the surface of damp render. The moisture evaporates, leaving the lime on the surface. Here, it reacts with carbon dioxide from the atmosphere to produce a thin surface layer of calcium carbonate crystals. When this surface coating dries out, the crystals appear white, giving the appearance of colour fading or being washed out. Lime bloom forms most readily when the render remains damp for several days shortly after application. The steps that can be taken to reduce the risk of lime bloom range from including a water-reducing or waterproofing admixture which will reduce the permeability of the mix, to controlling the curing conditions of the render by covering with polythene sheeting, firmly fixed so that it is not in direct contact with the surface of the render, for a few days to enable the mix to develop strength." (Extract of information from Castle Cement).

Uneven appearance and irregularity of surface texture

Uneven trowelling and application of chippings can cause patchy appearance on walls. The absence of a suitable waterproofing agent can lead to marked differences in suction resulting in difficulties in embedding the chippings evenly to the mortar. This results in the chippings being more pronounced in some areas than others resulting in irregular overall appearance. Unless both the mortar and the chippings are applied evenly to the wall and with the same intensity, the wall appearance will be irregular. Care should be taken to obtain a wide and even spread in order to distribute the aggregate and give a uniform appearance.

Temporary Protection of Dashed Elevations

When scaffold is used to apply dashing aggregates in poor or exposed weather conditions temporary protection of the elevation should be used. Driven rainwater can bounce or be deflected onto the dashed area creating scaffold lift lines on the wall that are often not seen until the scaffold is removed. Sheeting off the elevation can prevent this as it is not possible to rectify this problem without replacing the entire affected area. Consideration should be given to scaffold protection prior to any work commencing on site and ideally at the tender stage of any scheme.

Should you require any further information please contact us at:

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