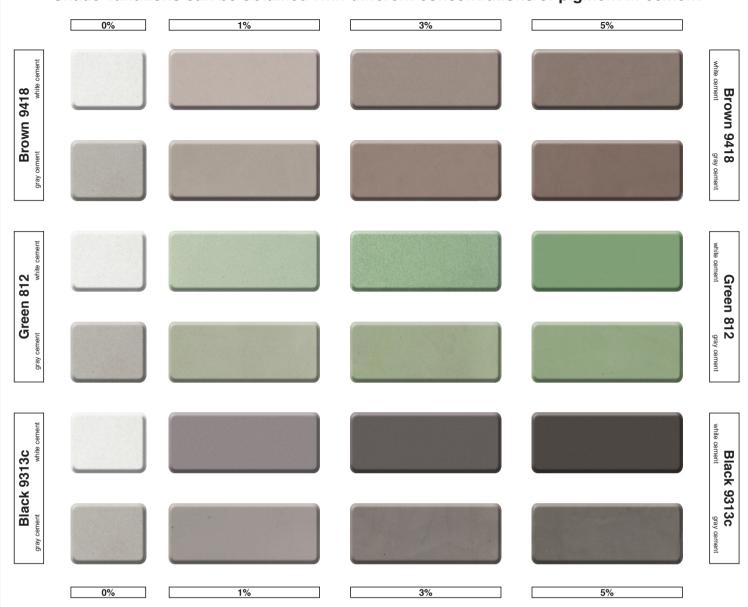
## **SIOF** S.p.A. - Concrete Colour Chart

Shade variations can be obtained with different concentrations of pigment in cement



### **Concrete pigmentation**

Iron oxides are water-insoluble pigments with a good alkali fastness and excellent light fastness. Considering these characteristics and their low price, they are considered the best pigments for concrete pigmentation. The quantity of pigment used varies usually from 3% to 5% of the weight of the cement since inerts do not take part in the pigmentation. A maximum limit of 7% can be reached if a more intense colour is required without affecting the mechanical resistance of the finished product. In order to obtain the best final colouring it is preferable to mix the components in the following sequence: first of all inerts, then pigments and finally cement and water.

#### **VARIATION OF COLOUR SHADE IN TIME**

When preparing coloured concrete it is extremely important to pay attention to the water/cement ratio of the mixture, ratio that affects the shade of colour. A brighter coloured finished product is obtained increasing the quantity of water but at the same time the mechanical resistaince and weather fastness is reduced. However in time the superficial layer of the finished products is subject to wear down which enhances the colour of the inert, consequently there is a change in the shade of colour independently from the pigments used.

#### EFFLORESCENCE

It is a physical-chemical phenomenon produced by the calcium hydrate which is in the cement and is water-soluble. It can occur during the drying process but also later when humidity occurs. In fact the calcium hydrate tends to migrate towards the surface of the finished product and, reacting with the carbon dioxide in the air, forms white patches of calcium carbonate which are more visible in darker colours. Iron oxides are insoluble in water and do not affect the above mentioned phenomenon, which can be reduced with the use of specific additives. The quality of the pigment, the right dosage of the components, the valid production technology and the use of additives are the basis of the best result in time of a coloured concrete finished product.











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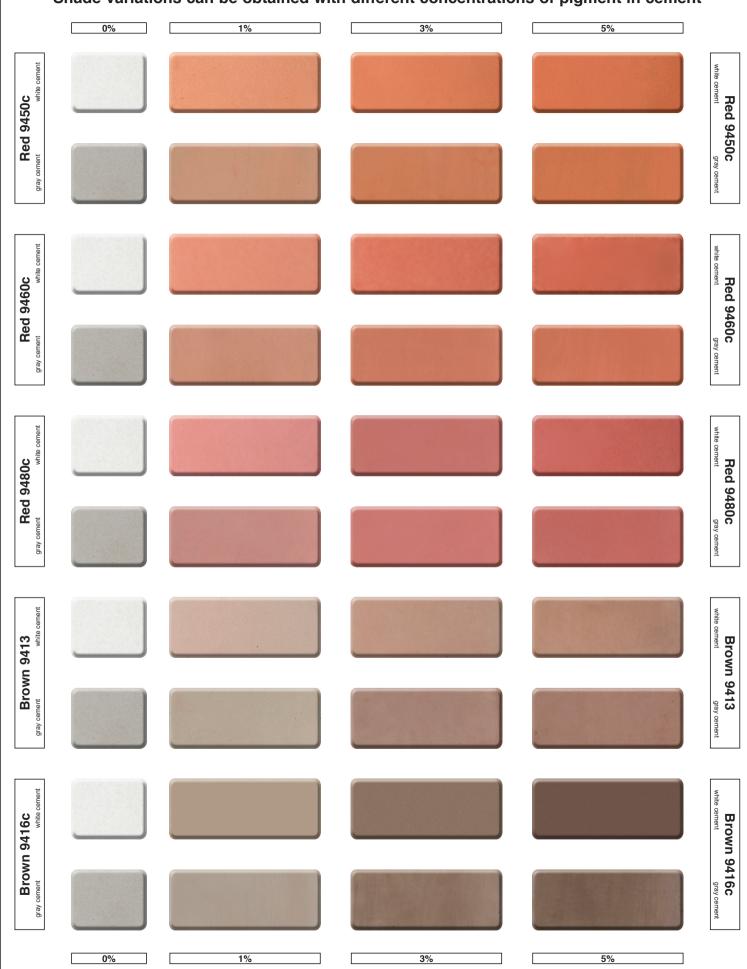


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# **SIOF**<sub>S,p,A.</sub> - Concrete Colour Chart Shade variations can be obtained with different concentrations of pigment in cement Yellow 9469c Yellow 9469c Yellow 1040 Orange Orange 9445c 9445c Red 1017 1017 Red 1021

## **SIOF**<sub>S.p.A.</sub> - Concrete Colour Chart

Shade variations can be obtained with different concentrations of pigment in cement



The technical data and the reproduced shades are the results of our experience, but cannot be guaranteed and are not binding. In fact, the use of the pigments by the user and the final result depend on various factors which are beyond our control and therefore are under the exclusive responsability of the user who will have to check the suitability to the prefixed purpose.

