The Report on Quality Test of the Component and Modification Effect of Silicate-based Surface Penetrant

Name	: CS-21 Builder
Main Component	: Sodium silicate (Main agent) : Calcium hydrate (Auxiliary agent)
Manufacture of the Material	: Aston Inc.
Test Date	: February, 2016 – March, 2018
Testing Laboratory	: Okayama University
Lot Number Used in the Test	: 1) 01280101 (Main agent), 01281201 (Aux. agent) : 2) 10290101 (Main agent), 09291201 (Aux. agent)
Mixing Ratio	: Main agent : Auxiliary agent = 5 : 1 (by weight)

1. Quality Items of the Ingredients

Item	Test Standard	Target Value Set by Manufacturer	Test Value
Dry solid content	JSCE-K572 6.2	25.0 - 29.0 %	26.7 %
Type	JSCE-K572 6.3	Reactive	Reactive
Specific gravity (Density)	JIS K2249	1.18 - 1.22 (g/cm^3)	1.20 (g/cm^3)
pH value	JIS K0102-12.1	11.0 - 13.0	11.8
Appearance (color)	Company Standard (Visual test)	White or pale pink liquid No foreign bodies	White No foreign bodies

2. Application Specifications in Quality Assessment Test on Modification Effect

Water content of the mortar board before application	1) 5.3 % 2) 5.2 % (Moisture Meter HI-520 [made by Kett Electric Laboratory])
Application method	Brushing
Number of application	2 times
Recoating interval	1 hour
Application quantity	300g/m^2 (1st time: 200g/m^2, 2nd time: 100g/m^2)
Dry solid content in the application quantity (Application quantity x dry solid content)	80.1 g/m^2
Curing method after application and the term	Onforming to JSCE-K572

3. Quality Item on the Appearance Change after Application (Lot #: 1), Moisture Content of the substrate: 1))

Item	Test Standard	Test Results
Appearance change after application	JSCE-K572 6.4	No change in the appearance through penetration.

4. Quality Item on Penetrating Ability (Lot #: 1), Moisture Content of the substrate: 1))

Item	Test Standard	Test Value
Penetration depth of surface penetrant	JSCE-K572 6.5	4.4 mm

5. Quality Item on Renovation Effect (Lot #: 2), Moisture Content of the substrate: 2))

Item	Test Standard	Tes Value
Water absorption ratio	JSCE-K572 6.7	69%
Neutralization depth ratio	JSCE-K572 6.8	77 %
Chloride ions penetration depth ratio	JSCE-K572 6.9	78 %
Mass loss rate	JSCE-K572 6.10	49.98 %
Ratio of water permeability into cracks	JSCE-K572 6.11	7.12 %

We hereby certify that the quality test results concerning the component and the modifying effect are as described above.

Date:

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