

**SGS Korea Co., Ltd.**

Construction Materials Testing Center

Issue No. : CMT2020-1144R1

Address : 20,Dongtansandan 10-gil,Dongtan-myeon, Hwaseong-si, Gyeonggi-do, Korea, 18487

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<https://www.sgsgroup.kr>

## 1. Applicant

- Company : HANIL CEMENT Co., Ltd.
- Address : 330, Gangnam-daero, Gangnam-gu, Seoul, Korea
- Receipt Date: December 09, 2019

## 2. Test Purpose : Maintenance of quality

## 3. Sample Description : Environment-friendly Marine Cement

## 4. Date of Test : December 16, 2019 ~ February 10, 2020

## 5. Location of Test : ☒ Permanent Testing Lab ☐ On Site Testing

(address : Concrete / Mortar Laboratory, SGS Korea Co., Ltd, 20 ,Dongtansandan 10-gil, Dongtan-myeon, Hwaseong-si, Gyeonggi-do)

## 6. Test Results :

| No. | Test Items           | Units              | Test Methods     | Results |
|-----|----------------------|--------------------|------------------|---------|
| 1   | Density              | g/cm <sup>3</sup>  | KS L 5201 : 2016 | 3.13    |
| 2   | Fineness by Blaine   | cm <sup>2</sup> /g |                  | 3 742   |
| 3   | Setting time         | Initial            |                  | 240     |
|     |                      | Final              |                  | 5 : 00  |
| 4   | Compressive strength | 3 days             |                  | 27.4    |
|     |                      | 7 days             |                  | 40.9    |
|     |                      | 28days             |                  | 51.2    |
| 5   | Loss on ignition     | %                  |                  | 1.6     |
| 6   | MgO                  | %                  |                  | 3.00    |
| 7   | SO <sub>3</sub>      | %                  |                  | 3.34    |

※ This test report supersedes the Report No. CMT2020-1144

**Duplicate** -End-

Tester : Moon, SeungKwon

Tel : 031-646-0811

Technical Manager : Kim, DongHoon

Tel : 031-646-0812

- Remarks :
1. The results shown in this report refer only to the sample(s) submitted by applicant. This test report can not be reproduced or used other than the test purpose stated in above.
  2. The authenticity of the test report can be confirmed on the SGS website. (<http://e-checking.kr.sgs.com/construction/>)

May 20, 2020

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