

TEST REPORT

APPLICANT : HANWHA L&C CORP. BUKANG PLANT1

REPORT NO. : D217-09-00042

SAMPLE RECEIVED DATE : 2009-12-21

TEST STARTED DATE : 2009-12-21

REPORT ISSUED DATE : 2010-01-25

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SAMPLE DESCRIPTION : ONE(1) PIECE OF SUBMITTED CUTTING SAID TO BE TILE.

ITEM : N-white hanex

TEST CONDUCTED : AS REQUESTED BY THE APPLICANT, FOR DETAILS PLEASE SEE ATTACHED PAGES.

PREPARED AND CHECKED BY
FOR FITI

Jeongpil Tak

JEONG PIL, TAK
QUALITY MANAGER

AUTHORIZED BY
FOR FITI

Moon Ok Noh

MOON-OK NOH
EXECUTIVE DIRECTOR

TEST CONDUCTED

TEST RESULT

(01) ANTIMICROBIAL ACTIVITY AND EFFICACY (FILM-CONTACT METHOD, JIS Z 2801:2006) : CELLS/ml,

VALUE OF ANTIMICROBIAL ACTIVITY: log

	BLANK	#1
BACTERIA-1 AT BEGINNING	2.9 X 10 ⁵	2.9 X 10 ⁵
AFTER 24HRS.	3.8 X 10 ⁵	< 10
VALUE OF ANTI-MICROBIAL ACTIVITY	-	4.6
BACTERIA-2 AT BEGINNING	1.8 X 10 ⁵	1.8 X 10 ⁵
AFTER 24HRS.	2.7 X 10 ⁷	< 10
VALUE OF ANTI-MICROBIAL ACTIVITY	-	6.4

NOTE) STANDARD FILM : STOMACHER 400 POLY-BAG

TEST CONDITION : THE SOLUTION ARE FIXED AT (35±1)°C, RH 90% FOR 24h, AND DETERMINE BACTERIA CELL GROWTH INHIBITION RATE BY POUR AGAR PLATE METHOD.

TEST BACTERIA : BACTERIA-1 - Staphylococcus aureus ATCC 6538P.

BACTERIA-2 - Escherichia coli ATCC 8739.

ANTIMICROBIAL EFFICACY : THE VALUE OF ANTIMICROBIAL ACTIVITY SHALL NOT BE LESS THAN 2.0 log.

< = LESS THAN.

SEE ATTACHED PHOTOS.

(01) DETERMINATION RESISTANCE OF SYNTHETIC POLYMERIC MATERIAL TO FUNGI (ASTM G 21-96:2002) : RATE

#1

0

NOTE) RATE : 0 = NONE.
 1 = TRACE OF GROWTH (LESS THAN 10%).
 2 = LIGHT GROWTH (10 TO 30%).
 3 = MEDIUM GROWTH (30 TO 60%).
 4 = HEAVY GROWTH (60% TO COMPLETE COVERAGE).

TEST ORGANISM : Aspergillus niger ATCC 9642.
 Chaetomium globosum ATCC 6205.
 Penicillium pinophilum ATCC 11797.
 Gliocladium virens ATCC 9645.
 Aureobasidium pullulans ATCC 15233.

SEE ATTACHED PHOTOS.

TEST CONDUCTED

TEST RESULT

- ANTIMICROBIAL ACTIVITY AND EFFICACY PHOTO : BACTERIA-1 : BLANK -



- ANTIMICROBIAL ACTIVITY AND EFFICACY PHOTO : BACTERIA-1 : #1 -



TEST CONDUCTED

TEST RESULT

- ANTIMICROBIAL ACTIVITY AND EFFICACY PHOTO : BACTERIA-2 : BLANK -



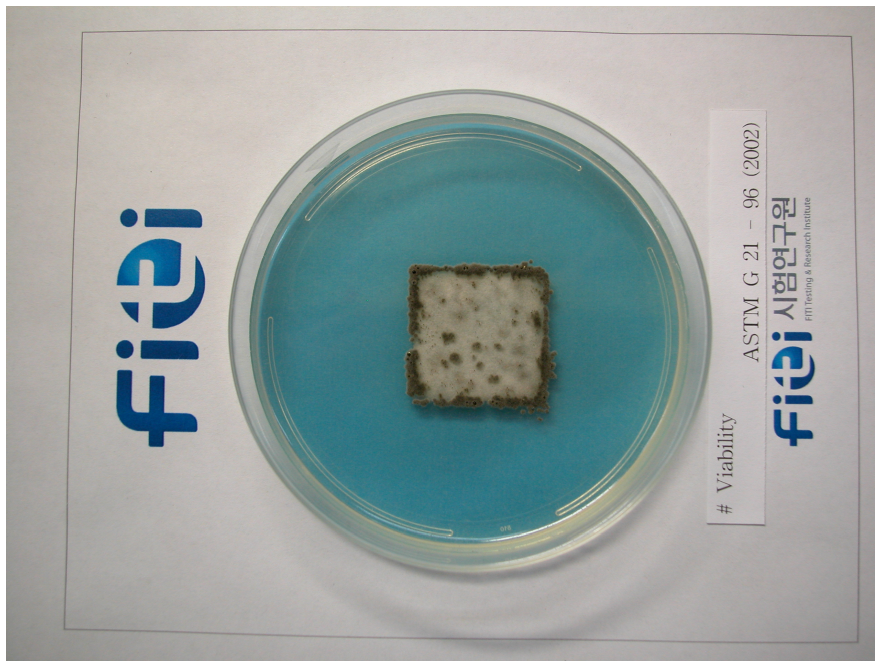
- ANTIMICROBIAL ACTIVITY AND EFFICACY PHOTO : BACTERIA-2 : #1 -



TEST CONDUCTED

TEST RESULT

- DETERMINATION RESISTANCE OF SYNTHETIC POLYMERIC MATERIAL TO FUNGI : VIABILITY -



- DETERMINATION RESISTANCE OF SYNTHETIC POLYMERIC MATERIAL TO FUNGI : #1 -

