

## 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

PAGE : 1 OF 5

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



JEONG PIL, TAK  
QUALITY MANAGER

AUTHORIZED BY  
FOR FITI



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 <sup>5</sup>	2.9 X 10 <sup>5</sup>
AFTER 24HRS.	3.8 X 10 <sup>5</sup>	< 10
VALUE OF ANTI-MICROBIAL ACTIVITY	-	4.6
BACTERIA-2 AT BEGINNING	1.8 X 10 <sup>5</sup>	1.8 X 10 <sup>5</sup>
AFTER 24HRS.	2.7 X 10 <sup>7</sup>	< 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 -

