KSA 9001:2001/ISO 9001:2000

5 years guarantee

Waterproof Patent No. : 10-1134486

Energy-saving Waterproofing Construction Method

ROOFguard®

Patented Constructor **paint Technology.Co.,Ltd.**

3rd Floor, 248 -3, Bugae-dong, Bupyeong-gu, Incheon, Korea
Tel : 032-572-7804 Fax : 032-572-7809
http : //www.pentech.kr

Energy-saving Waterproofing Construction Method

1. What is ROOFguard?

An excellent waterproofing construction method using good waterproofing materials of eco-friendly water-based waterproofing material and polyester (stiffener) and finishing topcoat with thermal paint (energy-saving)

2. Feature of Construction Method

01. Function of Energy-saving
Reducing Air-conditioning energy of building through effective reflection and emission of thermal energy from sunlight by finishing the topcoat with thermal paint, having excellent weather resistance, fouling resistance, discoloration resistance, and durability by protection of waterproofing material (roof material)

02. Close Contact with Floor
The eco-friendly water-based waterproofing material with excellent adhesive property, used in this construction method, is completely permeated into the polyester of stiffener to be integrated with the floor after adhesion

03. Eco-friendly Paint
All of waterproofing material (primer, mid-coat, and topcoat) is 1 liquid type of water-based paint (diluted by water from water supply system

04. Excellent Watertightness of Junction Area
Fundamental prevention of flaw in the junction area across overlapped 10cm between the polyester

05. Secure Constant Film of Paint
Fundamental prevention of flaw in the junction area through overlapped area of 10cm between the polyesters

06. Excellent Quality Guaranteed
Quality guaranteed by visual inspection with convenient characteristics of the construction materials

07. Easy Constructability
Complete waterproofing construction method for everyone with 100% water-based product

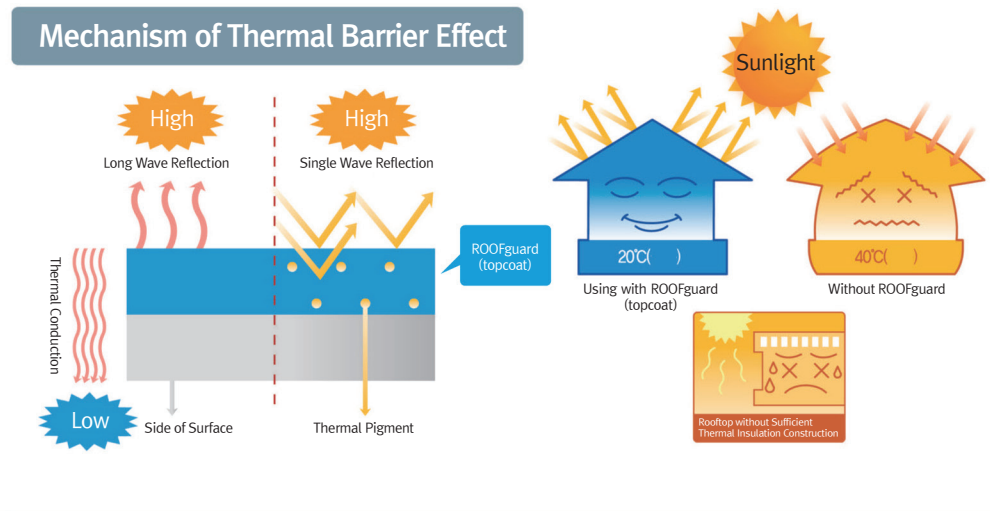
08. Applicable for All Area
An excellent construction method applicable for all area such as existing slab, slate, panel (steel sheet), repair of over existing urethane, worn shingle, and etc.

09. Easy Partial Maintenance
Easy partial maintenance in using of polyester

10. 5 Years of Construction
Maintenance Warranty Insurance

3. Comparison of Existing Waterproofing Construction Method and ROOFguard

4. Feature of Construction Method



5. Characteristics of ROOFguard (Thermal Compound Waterproofing Construction Method) Material

ROOFguard (primer)

ROOFguard is watery solution with excellent water resistance, adhesive property, and penetrability and basic waterproofing coating material, suitable for basic waterproofing, permeable waterproofing, and cement liquid waterproofing.

ROOFguard (mid-coat)

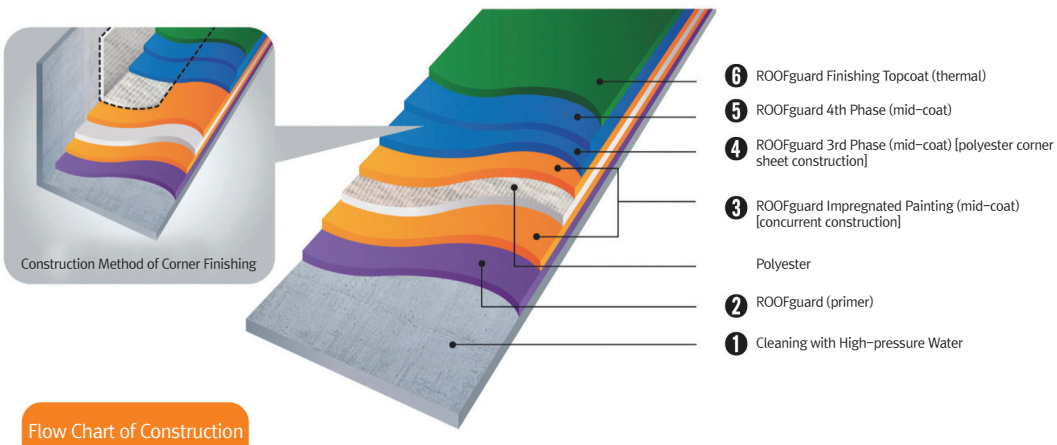
ROOFguard is strongly adhesive waterproofing material for concrete asphalt shingle, natural stone, tile, other thermal insulation material, slate, Styrofoam, PVC product, and nonferrous metal. It enhances construction by strengthening with polyester as an excellent material with soft and strong and adhesive property and water resistance, and it can be used for both of coating and adhesion.

Polyester

ROOFguard can be used as waterproofing stiffener as synthetic fiber product with durability, thermal insulation, impact resistance, and high tearing strength (not to be torn).

ROOFguard (thermal topcoat)

ROOFguard (thermal topcoat) uses eco-friendly thermal paint with special pigment as base, reflecting or insulating acrylic emulsion and light energy

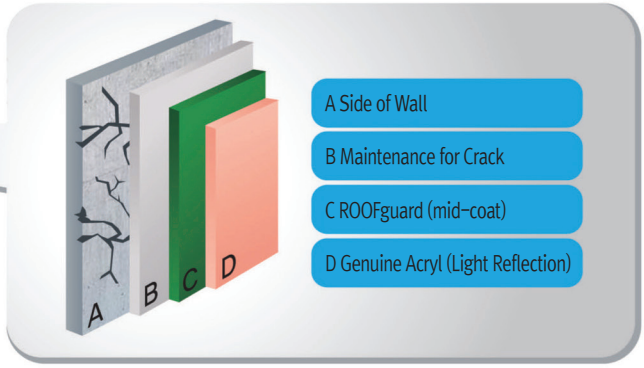


Flow Chart of Construction

6. Application of ROOFguard

High Durability Maintenance Construction Method with Waterproofing Exterior Wall

Main Building of School (Concrete, Drivit)

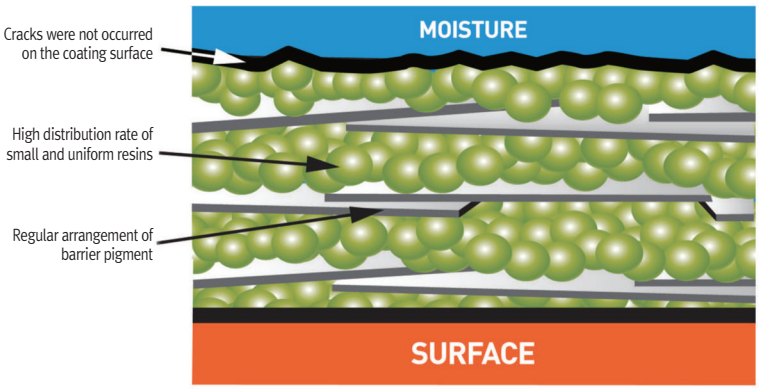


Item	Previous	Application of Construction Method
crack	General Exterior Putty	Primer of Elastic Tile (crack prevention)
Construction 1	eneral Exterior Water-based Paint (danger for crack)	Roof guard
Construction 2	General Exterior Water-based Paint (contamination)	High Weather Resistance Genuine Acryl (light reflection)

7. Characteristics of ROOFguard Construction Method Application

- Excellent Acrylic Rubber System (Waterproofing Material)
- Eco-friendly paint, originally from resource of waterproofing and special acrylic emulsion, with more excellent waterproofing, adhesive property, fouling resistance, and water resistance than general water-based paint

Test Report of Eco-friendly and Low Contamination Genuine Acrylic Paint



8. Flow Chart of ROOFguard Construction

1 Cleaning

Cleaning work with high-pressure cleaning machine to completely clean the surface ground
(Pressure of the cleaning machine: over 180bar)

2 Surface Clearing and ROOFguard (primer) Painting

Removing projection part from the floor, partial plastering the sunken area with mortar in the primer, and then sufficiently painting with the primer (drying for approximately 2 hours after painting)

3 ROOFguard (mid-coat) 1st and 2nd Phases of Painting and Polyester Adhesion

Diluting the mid-coat with 20% of water, performing 1st phase of painting on the floor, and then flattening the polyester and covering the floor with it.

4 Adhesion of Polyester (corner reinforcing) on the Balustrade Area

Cracks are frequently occurred in the spot where the floor and balustrade meet to cause lot of water leak, so that the junction area should be reinforced by polyester.
The polyester, cut out 15cm of width, should adhere to the balustrade and ground surface by approximately 7 cm respectively to reinforce it.

5 3rd and 4th phases of ROOFguard (mid-coat) Painting

After securing complete adhesion of the polyester to the surface ground (especially the overlapped area) and then painting it (in 3rd and 4th phases of painting, undiluted or 5% of water-diluted paint is used)

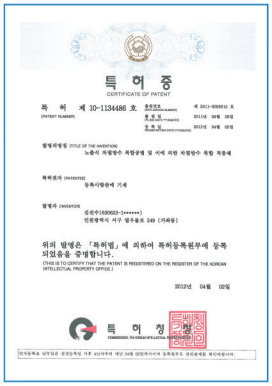
6 OOFguard Topcoat (Energy-saving-Thermal Paint) Finishing

(10~20% 정도 물로 희석하여사용)
Painting with the paint with high function and high weather resistance for the 1st or 2nd phases, reflecting sunlight to prevent the indoor temperature from increasing and reducing the air-conditioning cost
(Diluted by 10~20% of water)

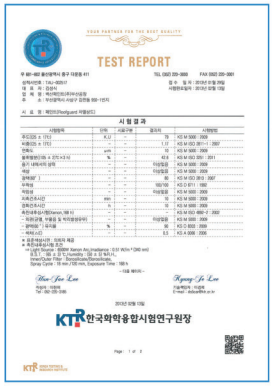
9. ROOFguard Performance

Construction Year	Contractor	Name of Site	Remarks
August 2013	Apartment Community Council	Juan Sindonga 8 Cha Apt. (5 buildings) Rooftop Waterproofing Construction.	
August 2013	Yeonheui Sungwon Apt.	Seoul Yeonheui-dong Apt. Rooftop Waterproofing Construction	Shingle Waterproofing.
June 2013	Dongwon 6 Cha Apt.	Dongwon 6 Cha Apt. (Sangok-dong, Bupyeong-gu) Rooftop Waterproofing	
June 2013	Korea Hydro & Nuclear Power Co., Ltd.	Korea Hydro & Nuclear Power Co., Ltd. (Gori) Rooftop Waterproofing	
April 2013	Bupyeong Xi Apt.	Incheon Bupyeong Xi Apt. Rooftop Waterproofing	Shingle Waterproofing.
April 2013	Taean Jugong 1 Danji Apt.	Hwaseong Taean Jugong 1 Danji Apt. Rooftop Waterproofing	
April 2013	Namhae Chemical Co., Ltd.	Yeosu Namhae Chemical [Fertilizer Factory] 2nd Rooftop Waterproofing	
March 2013	Changwon Community Service Center	Changwon Community Service Center Rooftop Waterproofing	Shingle Waterproofing.
March 2013	Namdong Pungrim 3 Cha Apt.	Incheon Namdong Pungrim 3 Cha Apt. 3rd Rooftop Waterproofing	Shingle Waterproofing.
March 2013	Daeju ParkVill	Incheon Majeon Daeju ParkVill Rooftop Waterproofing	Shingle Waterproofing.
March 2013	Juan Ssangyong Apt.	Incheon Juan Ssangyong Apt. (9 Buildings) Rooftop Waterproofing	
March 2013	Pungrim Apt.	Seoul Seongsa Pungrim 1Cha Apt. Rooftop Waterproofing	Shingle Waterproofing.
March 2013	Sinil Dreamvill Apt.	Gwangju Sinil Apt. Rooftop Waterproofing Construction	
November 2012	Geumjeon Maeul Apt.	Yongin Geumjeon Maeul Apt. Rooftop Waterproofing	
October 2012	Sinil Dreamvill Apt.	Rooftop Waterproofing	
August 2012	Darion Co., Ltd.	Munseon Seonyu Factory Waterproofing Construction	
July 2012	Daerim-dong Hanshin 1 Cha Apt.	Daerim-dong Hanshin 1 Cha Apt. Rooftop Waterproofing	Shingle Waterproofing.
July 2012	Singok Dongsin Apt.	Uijeongbu Singok Dongsin Apt. Rooftop Waterproofing	
April 2012	Apartment Community Council	Seoul Singil-dong Nam Seoul Apt. Rooftop Waterproofing	
March 2012	Namhae Chemical Co., Ltd.	Yeosu Namhae Chemical [Fertilizer Factory] 1st Rooftop Waterproofing	
November 2011	Hospital	Seoul Children's Hospital Rooftop Waterproofing	
November 2011	Johan Apt.	Seoul Hongje-dong Apt. Rooftop Waterproofing	
October 2011	Seongwon Villa	Incheon Seongwon Villa Rooftop Waterproofing	
September 2011	Hwapyeong-dong Community Service Center	Incheon Seo-gu Hwapyeong-dong Rooftop Waterproofing	
September 2011	Villa Community Council	Incheon Gajwa-dong OO Villa Rooftop Waterproofing	
September 2011	Yanggu Church	Gangwon Yanggu Church Rooftop Waterproofing	
November 2010	Hanshin Apt.	Rooftop Maintenance Construction	
September 2010	Hyundai Seongu Apt.	Shopping Center Rooftop and Roof Drainage Waterproofing Construction	
September 2010	Intech Construction Co., Ltd.	Incheon Gyesan Elementary School Rooftop Waterproofing	
October 2009	Byucksan Engineering & Construction Co., Ltd.	Daejeon Hanbat Sports Complex Remodeling	Shingle Waterproofing.
September 2009	Residents Council	Incheon Gajeong-dong OO Jutaek Rooftop Waterproofing	
May 2008	Taeyang Painting Construction Co., Ltd.	Seongnam-si Shopping Center Building	
May 2008	Hawllim Construction Co., Ltd.	Mallipo Terminal Disposal Plant of Sewage Rooftop Waterproofing	
July 2007	Taeyang Painting Construction Co., Ltd.	Seoul Seocho-dong Shopping Center Rooftop Waterproofing	
July 2007	Owner of Shopping Center	Bucheon Wonmi-gu Sang-dong Shopping Center Rooftop Waterproofing	
November 2006	Apartment Community Council	Seoul Junggye Jugong 7 Danji Apt.	
April 2006	Apartment Community Council	Seoul Junggye Yeomgwang Apt. Rooftop Waterproofing	

10. ROOFguard Certificates

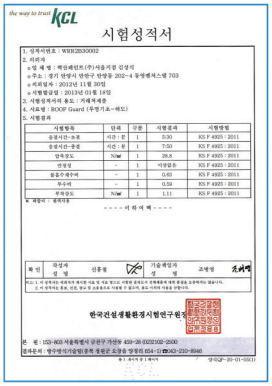


Construction Patent License



Test Report 1

Test Report 2



Test Report 3

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