

For a more pleasant and beautiful street environment...



Illegal post prevention venture company

ANTI-STICK SOLUTION
AD & POST PREVENTION TOOL
Developed by SINDO DNT, KOREA

“to keep streets and real estates
clean and beautiful”



SINDO **dnt**
www.sddnt.com



Developer SINDO DNT Co., Ltd.



Designated as Excellent Product by
the Public Procurement Service (KOREA)



Standard goods for
Korea Electric Power Corporation

COMPANY

- CEO : Oh Dong Hwan
- Headquarters : 2F Sindo Bldg., 149-4 Nonhyeon-dong, Gangnam-gu, Seoul. KOREA
- Factory : 2F, 637-12, Seonggok-dong, Danwon-gu, Ansan-si, Gyeonggi-do
- Tel : +82-2-548-1877 Website: www.sddnt.com

CERTIFICATION

- Excellent Performance Certification : Anti-stick Design Sheet (by SMBA)
- Excellent Performance Certification : Anti-stick Color Paint (by SMBA)
- ISO 9001:2000 Certification : Sticking prevention product of Illegal advertisement sign
- Designated as Excellent Product : Sheet for preventing form the illegal advertisement adhesion (by PPS)

PATENT

- [10-0856868] A MEMBER FOR PREVENTING TO ADHERE ADVERTISEMENT PARERS
- [10-0771856] Manufacturing method and color paint for preventing an adhering material
- [10-0721511] Sheet Member for Preventing Adhesion of Unlawful Advertisements and Manufacturing Method there for
- [10-0629154] HANDBILLS ANTI-STICKING DEVICE

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I. “Broken Window Theory”



Social psychologist **James Harold Wilson**, specifically through his **“Broken Window Theory”** in 1982, suggested that *“a disordered city environment causes moral insensibility as well as encourages potential misdemeanor, such as waste dumping or vandalism, which would lead to major crimes or absence of public security.”*

Rudy Giuliani, who had been inaugurated as the mayor of New York City in 1994, took stern legal action against misdemeanors based on the *“Broken Window Theory”* and strictly executed the maintenance of the city’s basic beauty, through such measures as prevention and removal of graffiti on walls, thereby decreasing the crime rate of New York city.



II. ANTI STICK SHEETS

i. Certified Excellent Product

By Public Procurement Services



Excellent Product approval by the PPS :

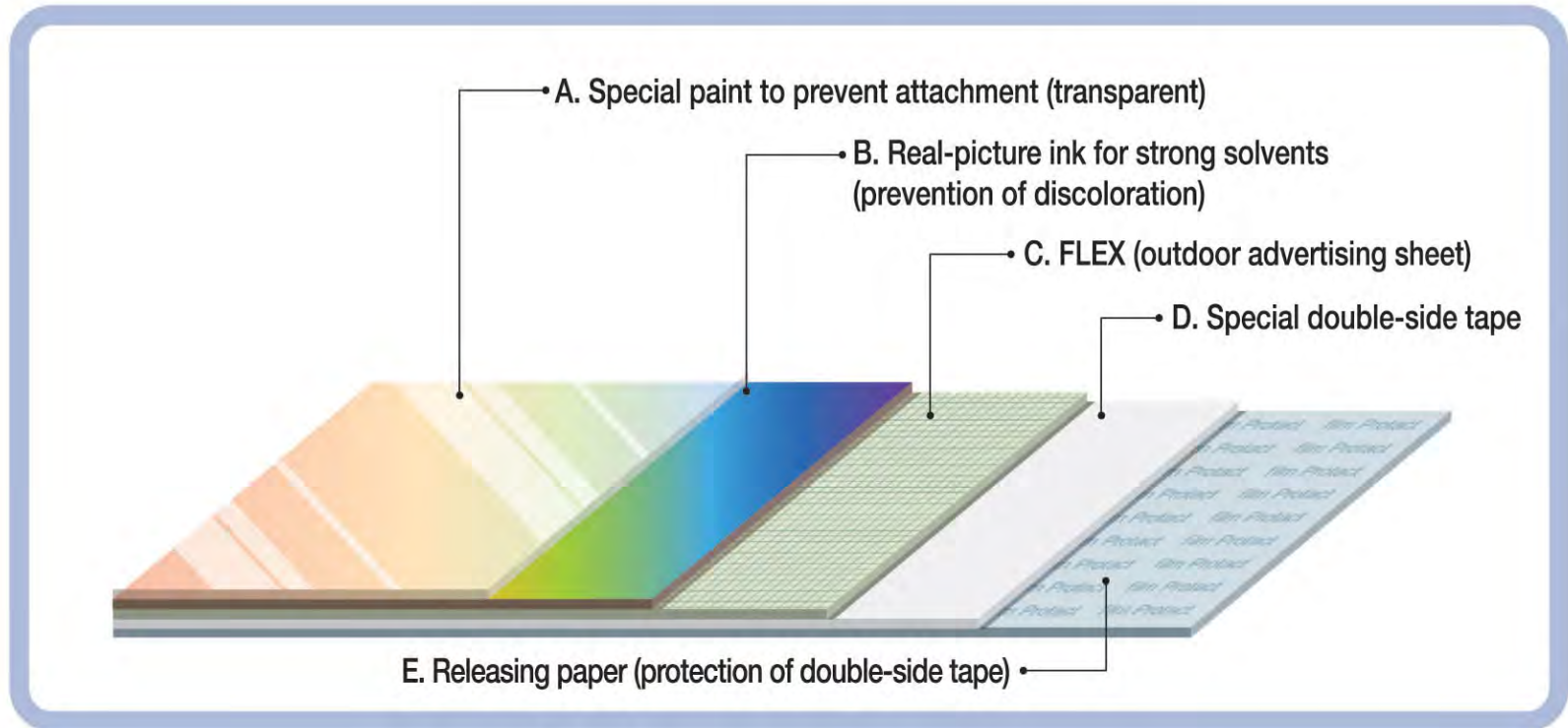
The policy through which the Public Procurement Services performs stringent testing to select Excellent Products that embody high technology and high quality from among the products produced by medium and small business corporations.



ii. Anti-Stick Design & Functions

Sheet Structure

PATENT [10-0721511] : Member for Preventing Adhesion of Unlawful Advertisements and Manufacturing Method



iii. Material Test Report

→ product reliability testing



KICM
KOREA INSTITUTE OF CONSTRUCTION MATERIALS
Add. : 137-707 1465-4, Seocho 3-dong, Seocho-gu, Seoul, Korea
Tel. : (031)389-9150 FAX : (031)389-9199 URL : www.kicm.re.kr

Certificate of Testing(Inspection) Result

Sample No. of Issue : R080423-SS010
Name of Applicant : OH DONG-HWAN[SINDO DNT Co. Ltd.]
Address of Applicant : Sindo B/D 149-4, Nonhyun-dong, Kangnam-gu, Seoul, Korea
Date of Receipt : 04. 23. 2008
Name of Test Sample : Sheet for preventing from the illegal advertisement adhesion

Result of Testing(Inspection)

Items	Test Results		Testing Method
	0 h	1 000 h	
Accelerated weathering test (UVB-313, 1 000 h)	Color difference (ΔE^*_{ab})	9.9	KS A 0063 : 2006
	Appearance (Cracking, Peeling, Blistering)	Pass	
	Tensile strength (kgf/mm ²)	3.9	4.9
	Adhesive force (kgf/cm) ¹	0.003	0.012

End.

* Accelerated weathering test was done by ASTM G 154 : 2004 No.2 cycle.
* ¹ Test was done by the tape defined KS A 1526:2006. The one end of the tape was peeled for the other end and the peeling speed was 30mm/min.
* Object of test : Quality Management

The above is the result of testing(inspection) specimen provided by the applicant, and the name of sample has been submitted by the applicant

Aug 20 2008
 month day year
 Signed : *Song reyoung*
 The general manager of Korea
 Institute of Construction Materials

1-1

➤ ASUVTM G154: 2004

/ Accelerated Weathering test for UV lamp

- The test's purpose is to simulate accelerated weathering using a xenon arc lamp. However, it examines the weathering function under a much more severe experimental condition.
- Xenon Arc Lamp: emits visible rays that are similar to those emitted by the sun, as well as small amounts of ultra-violet and infrared rays.
- UV lamp: causes skin cancer and is used in extreme testing as it has stronger energy than common visible rays, which causes the degradation of plastic products.

➤ Changes in adhesive force

after the accelerated weathering (UV - 1,000 hours)

	Before	After	Effect
Sindo DNT	0.03 N/cm	0.12 N/cm	Verifies the high reliability
Others	No test record severer conditioned test which exposes for UV lamp		

- ❖ Unit for adhesive (force) of surface: 1 kgf/cm = 9.8 N/cm
- ❖ 1,000-hour accelerated weathering test by UV light source is equal to 3 years of outdoor exposure.

Despite the accelerated weathering test by UV, the product proves its excellent anti-stick power, verifying its highly-reliable technology

iii. Material Test Report

→ product reliability testing

► Test record report (a)

TEST	TEST METHOD	RESULT
Adhesive Force of Surface	Tests the anti-stick function by measuring the adhesive force of the surface between the sheet and tape (the lower the adhesive force, the higher the anti-stick function)	0.02 N/cm
Accelerated Weathering Test (Xenon Arc 500hrs)	Among the techniques of “accelerated exposure test methods of synthetic resins for construction,” this provides a “simulation of direct outdoor exposure” by Xenon Arc lamp which is similar to the sun’s rays. This weathering test is performed to determine the effect of long-term exposure.	-
	After the Xenon Arc Lamp 500hr test, the product undergoes the adhesive force of surface test so as to examine the consistency of the anti-stick function	0.01 N/cm
	The measurement of the de coloration and discoloration after the weathering test examines the fading of colors depending on the long-term exposure	5 GRADE (TOP-GRADE)
Severe Condition Test of Accelerated Weathering Test (UV 1000hr)	By performing the more severe condition test, which exposes the product for 1000 hours to the UV lamp which has more energy than the Xenon Arc Lamp, the consistency of the product’s anti-stick function is examined (measuring the most adverse conditions of a 3-year exposure to the sun’s rays)	0.12 N/cm
Tensile Strength	According to KS M 3006 (Measuring test of plastic ten sility), it tests the physical strength of the anti-stick sheet by pulling with 200 mm/min of stretching speed.	3.9 kgf/mm²
Flammability Test	measures the results after the vertical flammability test by rolling the sheet with 13mm of diameter according to “measurement methods for thin materials” among the vertical flammability test in UL94 tests.	VTM-0 (TOP-GRADE)

iii. Material Test Report

→ product reliability testing

► Test record report (b)

TEST	TEST METHOD	RESULT
Impact Resistance	After dropping the 300g weight of materials from the 500mm height, it examines whether there are cracks or transformation, etc	PASS
The rmos tability Test	After heating at $80\pm 2^{\circ}\text{C}$ for 2 hours and abandoning at room temperature for 30 minutes, it examines for any expansion or abnormality at the surface.	PASS
Low Tem perture Resistance	After heating at $-30\pm 2^{\circ}\text{C}$ for 2 hours and abandoning at room temperature for 30 minutes, it examines for any expansion or abnormality at the surface.	PASS
Acid Resistance Test	After dipping in 5% sulfuric acid solution, it examines the expansion, cracks or transformation of the surface.	PASS
Dielectric Strength Test	Adding the AC 1,500 V between the external and internal part, it examines the sheet's durability. (Testing institute: Korea Electric Testing Institute)	ENDURE
Insulation Resistance Test	Measures the insulation resistance value between the external and internal parts (Testing institute: Korea Electric Testing Institute)	500 MΩ
ROHS Regulation Material Detection Test	Detection of the six regulation materials of RoHS (lead, mercury, cadmium, chrome (6+), PBB, PDBE) (Testing institute: Korea Testing Research Institute)	NOT DETECTED

iv. Installation examples

→ Anti-Stick Sheets

Korea Water Services → Incheon, Korea

- ▶ Supply Box
- ▶ Control Box
- ▶ Tool Box



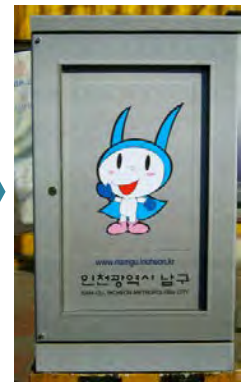
Korea Water Services → Uijeongbu, Korea

- ▶ Control Box



Korea Water Services → South Incheon, Korea

- ▶ Supply Box



iv. Installation examples

→ Anti-Stick Sheets



↑ Korea Water Services

East Seoul, Korea

► Supply Box



← Korea Water Services

Sunyu Island, Korea
South East Incheon

► Control Box



↑ Korea Water Services

Sunyu Island, Korea
South East Incheon



iv. Installation examples

→ Anti-Stick Sheets



← **K-Expressway Corporation**
Incheon, Korea

- ▶ High-level road pillars
- ▶ Pier Columns

Nam-gu District Office →
Incheon, Korea

- ▶ Public area walls



iv. Installation examples

→ Anti-Stick Sheets

▶ Korea Electric Power Corporation: Control Box

Seoul



Jeju Island



Jecheon



Seoul



Seoul (Dongjak)



Daegu



iv. Installation examples

→ Anti-Stick Sheets



← Local government(s)
Korea

- ▶ Streetlight poles
- ▶ Signal lights



← Local government(s)
Korea

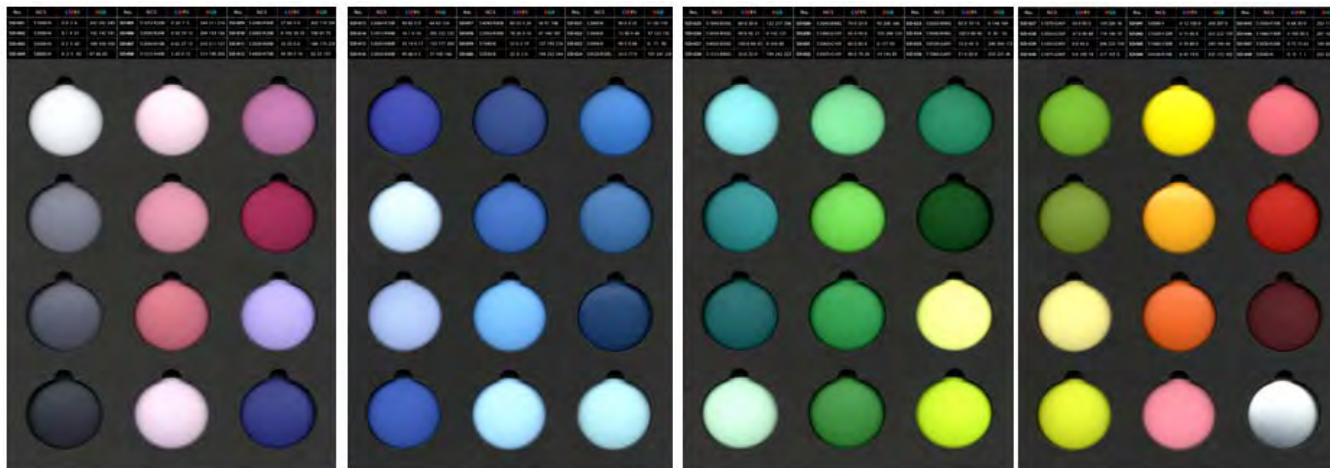
- ▶ Streetlight poles
- ▶ Signal lights

III. COLOR PAINT FOR ANTI-ADHESION

i. Color-mix Development

- For the effective application to prevent illegal advertising and adhesions, we ran an analysis and sampling of most frequently used colors in the city (such as streets, buildings, walls, and other public spaces)
- The optimal sampling of 48 colors can be applied for various public facilities' and This can increase the applicability of the options (Cooperation: Prof. Ju Dae Hyun ,The department of Industrial Design Engineering In Korea Polytechnic University)
- Design Material & Surface Treatment Technology Development:
Ministry of Commerce / Industry and Energy / Korea Institute Of Design Promotion
[The Paint for the prevention of illegal advertising adhesions and the development of emotional color]
Government Research Project
[Project Cost : 180 million won], [Period: January ~October .2007]

▼ Patent No: [10-0771856]: Color Paint For Anti-Adhesion And Manufacturing Process



ii. Installation examples

→ Anti-Adhesion Color Paint

Songtan district → Pyeongtaek, Korea

- ▶ Streetlight poles
- ▶ Signal lights
- ▶ Electricity control box



Streets in Bucheon → Bucheon, Korea

- ▶ Electricity poles
- ▶ Control box



ii. Installation examples

→ Anti-Adhesion Color Paint



← **Residential towns**
Pangyo, Korea

► Residential districts

ii. Installation examples

→ Anti-Adhesion Color Paint

Seongbook district →

Bundang, Korea

- ▶ Streetlight poles
- ▶ Signal lights
- ▶ Electricity control box



Kiheung district →

Bundang, Korea

- ▶ Streetlight poles
- ▶ Signal lights
- ▶ Electricity control box

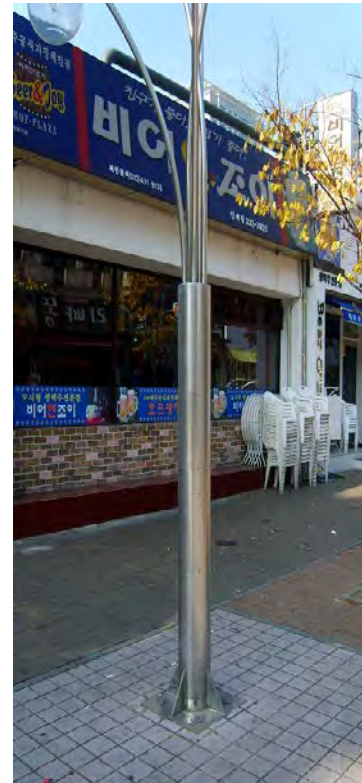


ii. Installation examples

→ Anti-Adhesion Color Paint



↑ Other areas



↑ Other areas

i. Installation examples

→ Anti-Adhesion Color Paint

Bus Stops ↓
Siheung, Korea

► Box stop frame

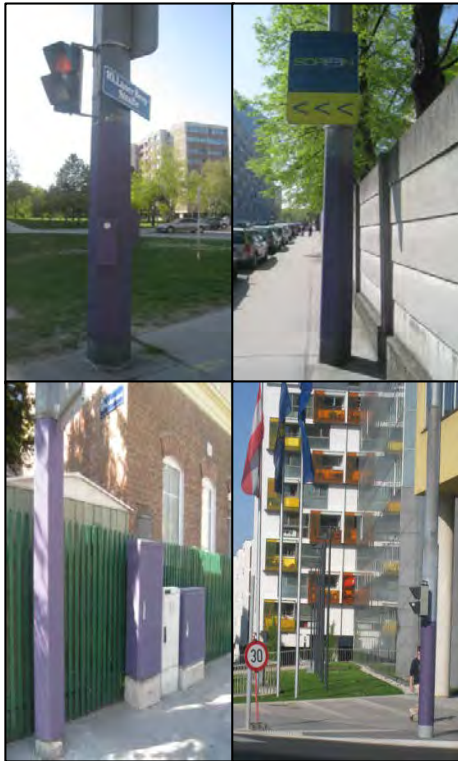


IV. INTERNATIONAL INITIATIVES

i. Installation examples

→ Overseas Installations

► Taipei, Taiwan / Toronto, Canada / Vienna, Austria



↑ Vienna City, Austria
Telegraph pole
Control box
Traffic lights



↑ Greece BIA ,Toronto
Streetlight



↑ Korea-town ,Toronto
Streetlight



↑ Taipei City , Taiwan
Telegraph pole

i. Installation examples

→ Overseas Installations

► Singapore / Malaysia



i. Installation examples

→ Overseas Installations

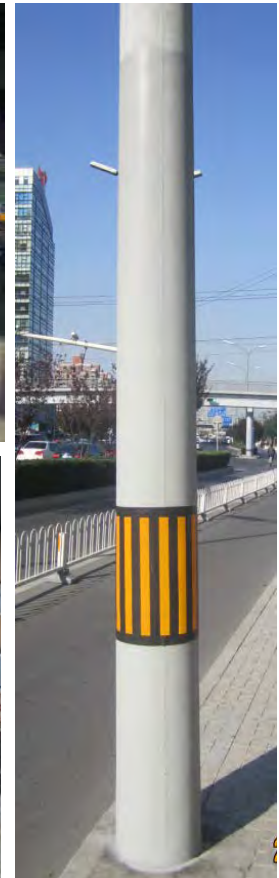
► China



i. Installation examples

→ Overseas Installations

► Beijing, China



i. Installation examples

→ Overseas Installations

► **Israel**



↑ **Tel Aviv, Israel**

Bejet Mobile Carrier's Assorted Boxes

i. Installation examples

→ Overseas Installations

► Istanbul, Turkey



V. WALL GREEN GRAFITI REMOVER

i. Product description

"Wall Green", a new graffiti-removal product invented by the R&D Research Institute, is a product that can easily remove permanent graffiti and markers. "Wall Green" is worked very effectively, especially on our product, anti-stick sheet and paint. Our core technology of this product is that this product can remove "just the graffiti/markers" without effecting the existing paint on the surface.

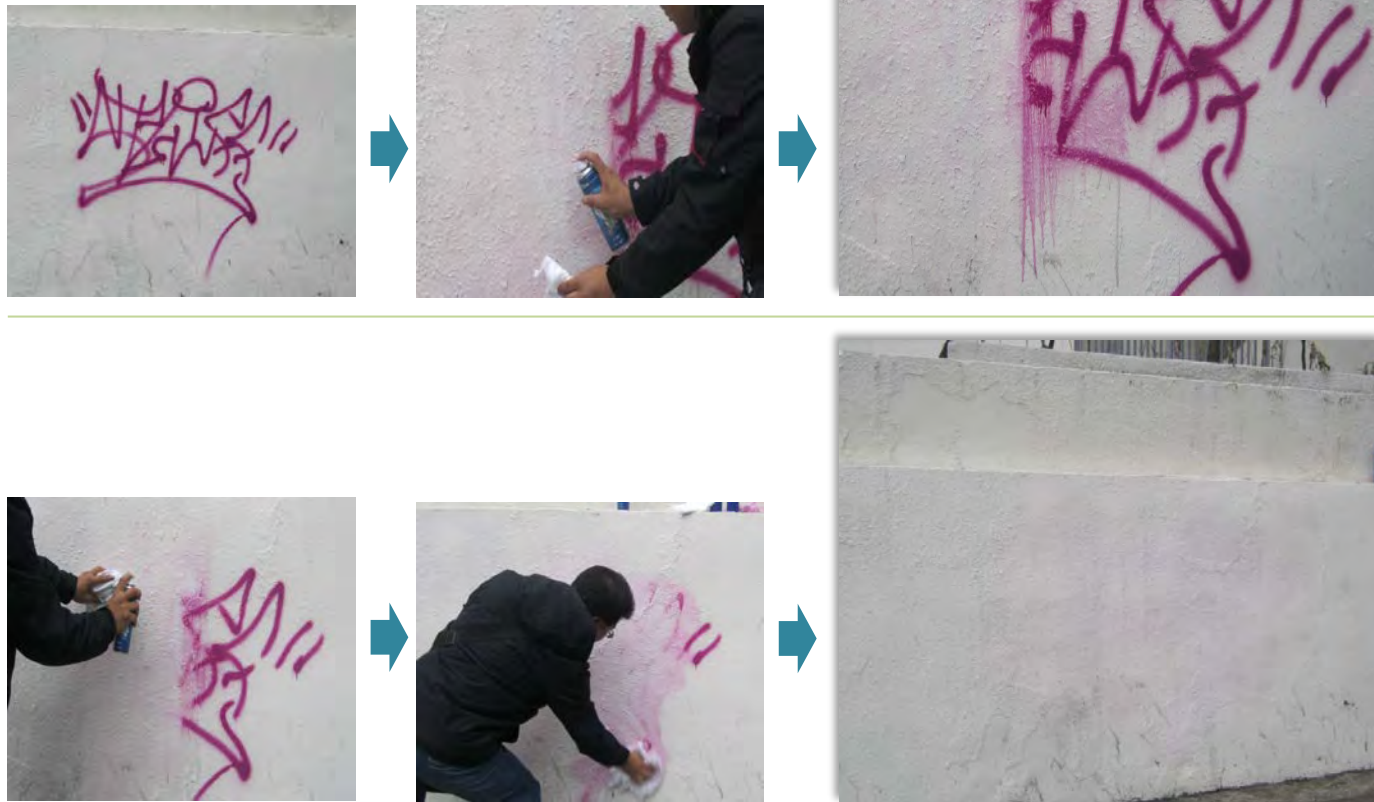


- Before and After picture of using the graffiti-remover in Toronto, Canada.

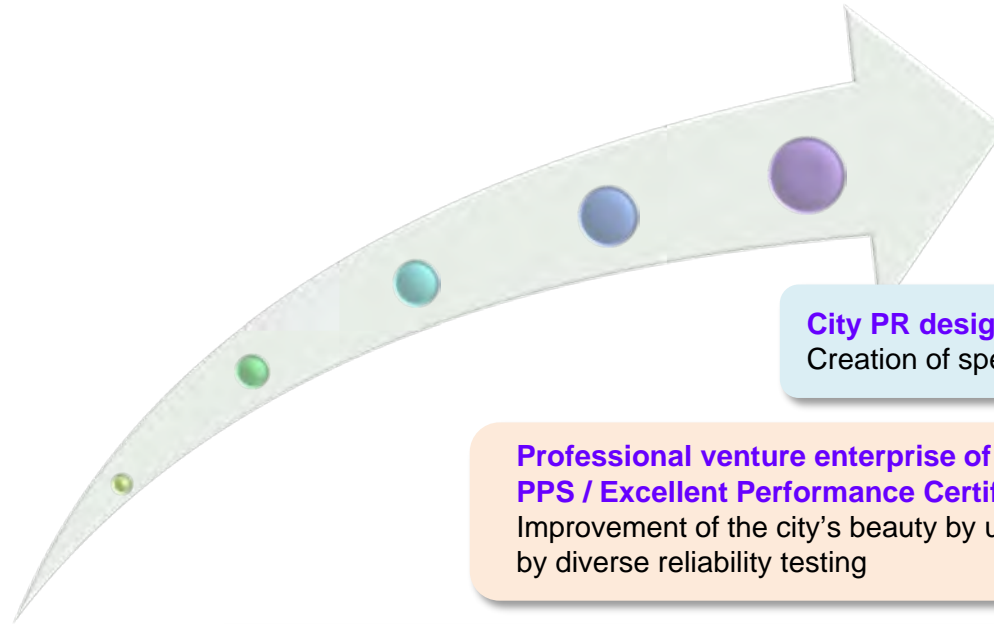


- Graffiti removed from the Anti-Stick Sheet, attached to a Cabinet, in Taren, China.

ii. Installation examples



VI. Project Framework & Public Facilities



Embossing as the local government's best improvement measure with the best city beauty → pleasant and beautiful street environment

City PR design for local government and public organizations:
Creation of specified pleasant and beautiful street

Professional venture enterprise of anti-stick products (Excellent Product by the PPS / Excellent Performance Certification by SMBA):

Improvement of the city's beauty by using excellent anti-stick sheet or color paint certified by diverse reliability testing

Public design services by professional industrial design team and industry–academy research efforts:
Manual design or color settlement of assorted public facilities

The only product with globally approved technology to have been designated as “Excellent” by Korea’s PPS
The new technology that leads in overseas exports to such countries as Canada / Europe (Czech Republic, Austria) / Brazil, Tel Aviv(Israel), etc.

VII. Press releases - 1

Into the world... Shindo DNT Co., Ltd. Project

President Donghwan Oh, praised for improving the environment by the minister of Environment that is written

Shindo DNT Co., Ltd. has received for prohibiting flyer product for improving the environment streets for supplying the service until awarded by the year 2011 of December 30th of the minister of environment YooH Young Suk.

Recognized in the global market by focusing on technological innovation

Shindo DNT Co., Ltd. (President Donghwan Oh), a company producing illegal advertisement attachment prevention products, has been conspicuous in its related fields.



The company's developments 'illegal advertisement attachment prevention sheet' and 'attachment prevention color paint' have a flat surface and possess fundamental prevention abilities that completely block attachment advertisement flyers from sticking.

In 2008, 2009, and 2010, the company was ranked first, second, and first, respectively, among the 13 competing companies evaluated by PPS (Public procurement Service); the company was also the first and only company to receive PPS's quality certification. In 2010, the company's prevention paint and in 2013, prevention sheet using UV paint also have received the certification from PPS. The company has received certification through the technological products' performance, company's reliability, and evaluation from credible institutions. Shindo DNT Co., Ltd. stated,

"Our products have endured the most severe environmental condition tests such as UV light source 1000 hour test, and the product has placed as one of green street's new trend."

They added, "This results from continuous technological development of the firm's R&D lab from the company's foundation of 2005." As a result of creative motto that focuses on technological developments, the company has proven its quality growth with results such as Q Marks and SMBA's quality certification.



VII. Press releases - 2



Developing new products through continuous reinvestments to R&D

Shindo DNT Co., Ltd. technological power has already been recognized globally. The company already has made active city street environment businesses in Canada, Turkey, Russia, China, Singapore, and Taiwan; in Malaysia's Kuala-Lumpur, Shindo DNT Co., Ltd. has exclusively contracted with OASIS SHINE SDN BHD on installation of prevention sheets. Countries such as Czech, India, and Saudi Arabia have also recognized the products' technological advancement.

City road environment is a common societal issue that all countries are having trouble. The environment has been seriously hampered because of excessive flyers, and Shindo DNT Co., Ltd. has contributed greatly by providing 'illegal advertisement attachment prevention sheets' and 'attachment prevention paint.'

Shindo DNT Co., Ltd. competency contributes to the world's green city street environment.

To realize the green environment, president Donghwan Oh has spurred R&D based on open management. He as a result heightened the company's brand value.

Mr. Oh stated, "Our company has been pursuing a green company that makes a pleasant metropolitan environment with the advent of 21st century and a global world. We will be fully responsible as SMBA's export promising company and Seoul's next-generation export small business, and continue our expedition to better our brand value."



The company's has been registered as 'KIPA preferred purchase company-KIPO,' 'PPS third-party price company,' 'KEPCO purchase standard company', and has received various awards such as 'KSA new technology award,' '2006 KIPO award,' '2006 100 best patent award-patent information award,' '2010 green management award.' In 2010's G20 Summit and 2012's Nuclear Security Summit, the company's products were used to clean the streets in Gangnam's major hotels and COEX. Technological

competitiveness, the company that produces the local Gangnam ward office and illegal advertisements attached to prevent the product the most pristine in the world, contributing to Gangnam area, green street environment composition. Conservation Association Award was recognition for December 30, 2011) was awarded the Commendation of the Minister of the Environment.



THANK YOU



www.sddnt.com