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Bird Free Installation Manual [For Structure Facilities]

General Product Information – Advantages of “Bird Free”

- “Bird Free” is a proprietary, patented, non-toxic, and eco-friendly innovation that effectively drives unwanted birds away without harming them. It’s technology is light years ahead of its competitors. Ultrasonic repellents, visual scare tactics, spike needles and bird nets are some examples of current and conventional bird repellents. Conventional bird repellents stimulate only one sense of the birds and hence have limited efficacy as it decreases considerably through time due to birds’ acquired learning abilities. Has a clear advantage over these conventional methods.
- Harmless to Birds.
Through the years, many chemical bird repellents have come and gone partly due to their lack of effectiveness as well as their adverse health side-effects to the birds themselves. The main ingredients in “Bird Free” are listed in the FDA’s (US) GRAS (Generally Recognized As safe) list, a designation that a chemical or substance added to food is considered safe by experts. Using Oriental Herbal ingredients, “Bird Free” stimulates Visual and Odor to the birds and produces an irritating touch/feel sensation. This distinct mode of action instantly generates a rejection response in the birds themselves through simultaneous smell and sight senses being affected.
- Economical way of repelling birds.
“Bird Free” has a long lasting efficacy and causes no damage to **Buildings and Facilities**. Oriental Herbs contained in the gel forms a film texture that prevents water from penetrating or evaporating from the ingredients. “Bird Free” can last up to 3 months if left undisturbed after its installation. It does not need to be re-applied every 2~4 weeks, which is typical of gel alternatives that rely on their sticky gels to trap birds which is an inhumane method of bird control. Our product does not kill or trap birds. Rather, it instantaneously changes bird behaviors so that they fly somewhere else.
- Use “Bird Free” under various climate conditions.
“Bird Free” is stable, even when there are wide variations of temperatures, wind, rain and snow. It’s non drying formula will last for a long time. (12-24 months)
- Use “Bird Free” anywhere (follow the instructions carefully)
“Bird Free” can be used anywhere- urban and rural areas, indoors, and outdoors. This include ports, airports, electrical and **telecom poles**, upper part of water tanks, wood, signboards, railroads, warehouses, parking lots, public buildings, stadiums, and many other locations where birds roost.
- Install “Bird Free” easily
Installation of “Bird Free” is easy. Our instruction manual **will guide** you as to how to apply the product.
- Effortless cleaning after application of “Bird Free”
Please do not apply the product directly to any surfaces. Remove the used dishes, hangers as one would with any pesticide disposal. Wear appropriate skin and respiratory protection when performing these tasks. Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

PRECAUTIONARY STATEMENTS

REPELS MOST TYPES OF UNWANTED BIRDS FROM BUILDINGS, FACILITIES AND ADJACENT STRUCTURES WHEN APPLIED ACCORDING TO THESE INSTRUCTIONS.

(Telecom Poles, Electrical Power Structures, Bridge Beams, Marine Structures, Ornamental Copings, Sign Boards, Residence Balconies, Roof Lines, Windowsills, Cornices & Ledges, Gutter Edges, etc.)

- “Keep Out of Reach of Children” at all times
- Harmful if absorbed through skin for prolonged period. Causes substantial but temporary eye injury. Do not get in eyes or on clothing. Avoid contact with skin. Wear goggles or face shield and gloves. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash clothing before reuse.
- Eco friendly does not mean that Small birds may not become fatally entrapped by this tacky repellent, To reduce hazards for legally protected species, and to avoid noncompliance with the Federal Migratory Bird Treaty Act, follow all instructions carefully. For Use- Keep out of lakes, ponds, and streams. Do not contaminate water sources by cleaning equipment or disposing of wastes that do not comply with pesticide disposal rules and regulations.
- To reduce potential exposure to bird-related diseases, wear waterproof gloves and a respirator approved by the U.S. Bureau of mines for dust protection when cleaning areas to be treated. Prepare surfaces to be treated by removing bird nests, dirt, droppings and other debris. Using water mixed with a wetting agent or detergent, wet surfaces where droppings are present to limit generation of airborne dust during cleaning. Allow cleaned surfaces to dry fully prior to treatment as adhesive silicon or the repellent may be poor on wet surfaces.

CLEAN-UP : Remove the used dishes, hangers and treat it as you would for pesticide disposal. Wear appropriate skin and respiratory protection gear when performing these tasks. Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

STORAGE AND DISPOSAL : Do not contaminate water, food or feed by storing or disposing in places that prohibit such uses.

STORAGE : Store in an area inaccessible to children and pets. Do not store near food or feed. Do not store in an environment which will corrode the plastic cartridge. Any leaking cartridge should be disposed of (as directed below).

PESTICIDE DISPOSAL : Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

CONTAINER DISPOSAL : If empty, do not reuse this container. Place in the trash or offer for recycling if available.

IF PARTLY FILLED : Call your local solid waste agency for disposal instructions. Never place unused product down any indoor or outdoor drain.

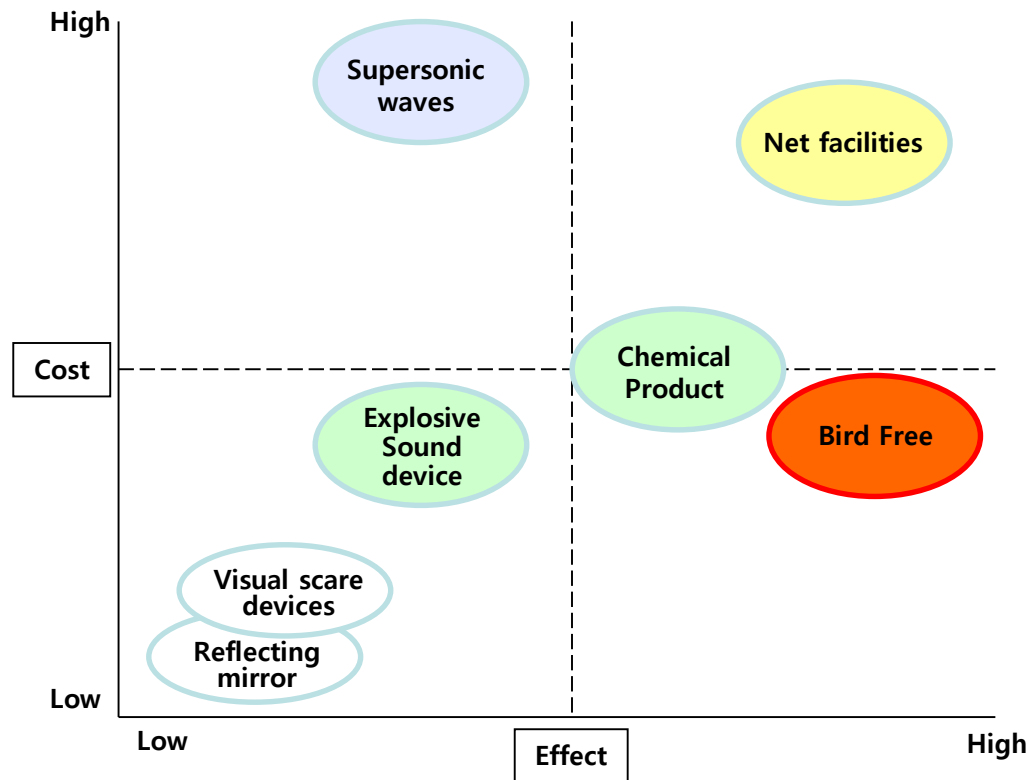
Economical Efficiency of Bird Free in the Korean Market



[Bird Control Methods in Korea]

Method	Impacting Organ	Effect	Cost
Electronic Sound Devices	Auditory	Only effective at the initial stage Causing noise irritation to birds	Middle
Supersonic waves	Auditory	Only effective at the initial stage Causing noise irritation to birds	High
Reflecting Mirror (Tape)	Visual	Effects are minimum	Low
Visual Scare Devices	Visual	Effects are minimum	Low
Chemical Products	Olfactory	Effective but can be corrosive and unstable causing serious environmental problems	Low
Net Facilities	Physical	Very effective but can incur high costs	High
Bird Free	Visual/Taste Olfactory/Tactile	Very effective and inexpensive No environmental problems	Middle

Economical Efficiency of Bird Free in the Korean Market

[Bird Repellent Market Positioning]



-  : causing serious environmental problems or pollution
-  : Not a usual method and very expensive

Precautionary stage : Please Read the Labels Thoroughly on the Cartridge.

Products



Bird Free DIY

[Available in Hardware Store]



Adhesive Silicon



Double-sided
Sticky Tape



Caulking Gun

Mounting Method of "Bird Free"

15 Plastic dishes are shipped with each cartridge of "Bird Free". Additional dishes or the special magnets for mounting for metal Surfaces can be purchased separately.

1. PREPARING SURFACES FOR TREATMENT



-Prepare the area for installation by cleaning up bird nests, dirt, droppings, excrement, etc

-If the cleaning process is not done properly, the effectiveness of the product cannot not be ensured

2. Apply the Adhesive silicon on the surface to be applied



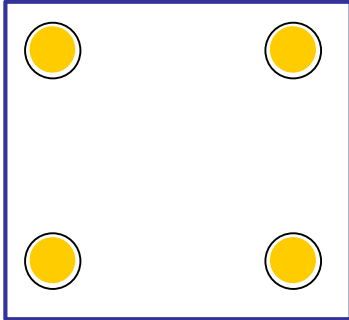
-Apply the silicon on the surface to be applied.

*Other products such as double-sided sticky tape or special magnets can be attached to mount the dishes onto the surfaces.

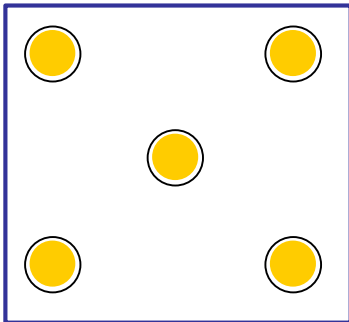
3. Attach the Dish onto Position

-Attach the dish on the Area damaged by the birds

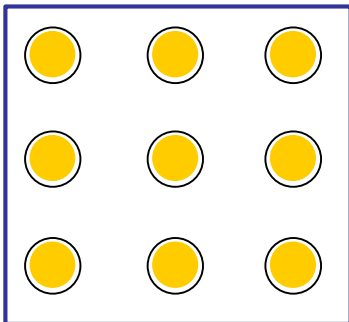
-Attach 6 ~ 10 in. spacing (10 cm ~ 30 cm) depending on the following conditions:



- Low pressure (day roosts) :
10 in. maximum spacing



- Medium pressure (night roosts) :
8 in. maximum spacing



- High pressure (nesting sites) :
6 in. maximum spacing

USE : Ledges, Signs, Balconies, Soffits, Beams, Skylights, Signs, Roofs, HVAC system, Enclosed spaces, etc.

Target birds : Harmful birds (Pigeons, Magpies, Starlings, Indian Mynas, etc) that damage buildings, crops, structures, etc.

Safe for the environment :
made of all-green ingredients

- **Preparation Stage: Items of Consideration**

: Boom lift (Crane) High Pressure Water Spray, Secateurs, Silicon Gun, Silicon (Clear Color), Dust Mask, Cable Ties, Thin Rope(3mm), Long Tape Ruler, Plastic Broom, Mop, Garbage Bag, Bucket (with Water), Cleaning Brush, Scraper, Safety Bar, Safety Belt, Gloves, Safety Hat, Safety Boots, Safety Signs, Ladder Etc



Water spray



Caulking Gun



Safety Equipment

1. Clean the site using pressure spray and broom



Cleaning is the MOST IMPORTANT STEP, make sure all bird droppings and nests are removed.

2. Gun silicon glue where dishes to be attached



3. Attach dishes



Make sure dishes to be firmly attached.

4. Apply directly to the surface



On areas where it is difficult to attach the dishes you can apply the gel directly onto the surface.

5. Finished area



6. Finished area

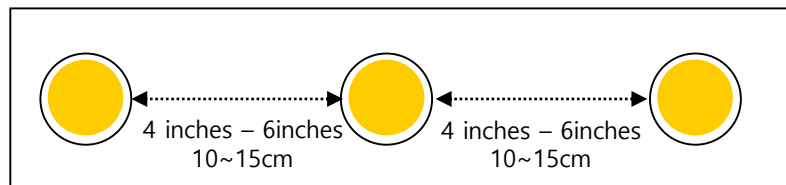


7. Cleanse the floor with water

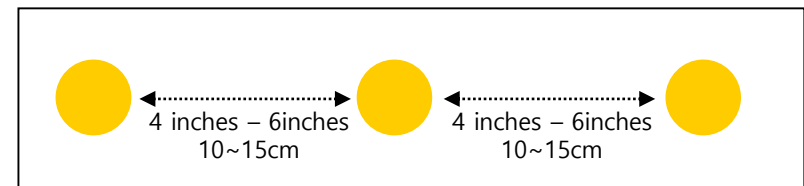
Installation guide of “Bird Free” based on the living environments of birds

▪ Habitats (Nesting and Hatching sites)

- On average, the size of the habitat length is about 20 in. (50cm) horizontally and in height.
- These roosting areas are more stimulating to birds that have a keen sense of contact rather than sight or smell (due to their strong homing instincts). Therefore, the spacing of these repellents should be about 4 ~ 6 in. (10 ~ 15cm) apart.
- A recommendation: if it's difficult to set the dishes, “Gel of Bird Free” can be installed directly onto the surface in a circular formation as illustrated below.
- If the gel is applied directly onto the surface, check the condition of the surface where the gel to be applied. Treat porous surfaces such as wood, stone, or concrete with an undercoating such as paint or sealer before applying the “Bird Free” Repellent. On asphalt or wood shingles, or on any other surface from which relatively easy removal of the product is desired, apply waterproof tape or similar materials first and then apply the gel.



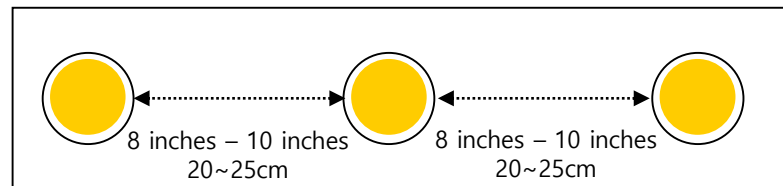
[Installation spacing in habitats]
Recommended



[Installation spacing without dishes]
Not Recommended- Apply only when absolutely needed.

- **Semi-Habitats (Sleeping areas, Places Birds go to avoid the cold weather, direct sunlight or rain)**

- Usually it is a small space that only birds can access, such as terraces, outdoor units, window frames the size of 3.3m².
- This is a pre-stage habitat which might become the bird's habitat later.
- The recommended installation spacing of dishes are about 8 ~ 10 in. (20 ~ 25cm) apart.
- It is important to block these areas in advance using other methods, since they're optimum site for birds to live in and can eventually become a habitat.

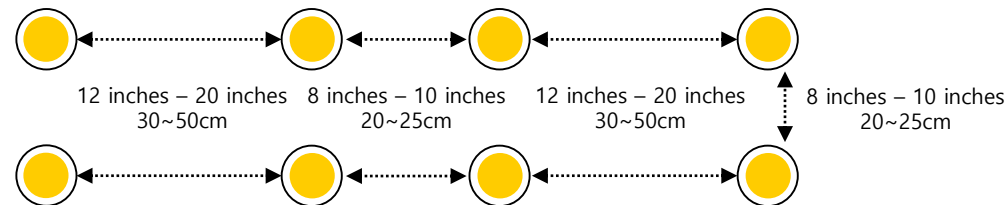


[Installation Spacing in Semi-Habitats]

- **Sites for rest and activity (Easy and spacious to find things to eat and predatory enemies)**

- These sites are very diverse in form: roof tops, the roof itself, the upper regions of buildings, window sills, roof lines, gutter edges, signs, ornamental copings, cornices, ledges, and similar surfaces.
- These sites usually with wide space can be a group habitats of many different birds species.
- Birds roost at the top or edge of roofs.
- In order to prevent the birds from gathering, a recommended installation 8 ~ 10 in. (20 ~ 25cm) maximum spacing for these sites or 12 ~ 20 in. (30 ~ 50cm) spacing for bigger sizes of birds.

⇒ After "Bird Free" installation, the birds will avoid gathering together in groups.



[Installation Spacing in the Sites For Rest and Activity]

Precautionary Statement : Please Be Careful Not to Fall While installing the Repellent.

Examples of Installation in General Structure Facilities.

▪ **Outdoor Air Conditioning Unit in Apartments (Habitat, Semi-Habitat)**

1. Installation

- : Basic cleaning (dusting and washing)
- : Place dishes 4 ~ 6 in. (10~15cm) apart in the habitat Area
- : Place Dishes 8 ~ 10 in. (20~25cm) apart in the semi-habitat Area



2. Inject the Product Onto the Dishes.

- : Injection of about 0.53oz(15g) per Dish



**Precautionary Statement : Please Be Careful Not to Fall
While installing the Repellent.**

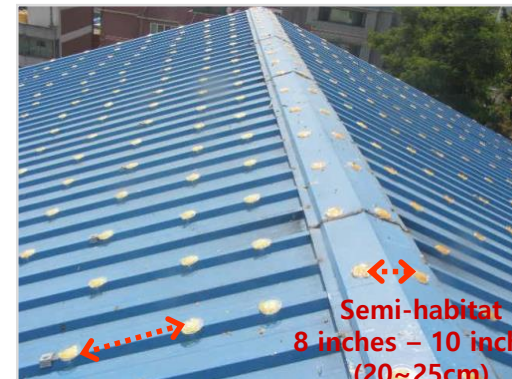
▪ **Roof Floor and Roof Top (Semi-Habitat and Resting Place)**

1. Installation

- : Basic cleaning (dusting and washing)
- : Place dishes 8 ~ 10 in. (20~25cm) apart in semi-habitat area
(At the top and edge of the roof)
- : Place dishes 12 ~ 20 in. (30~50cm) apart in resting areas
(Places besides semi-habitat)

2. Inject the product onto the dishes.

- : Injection of about 0.53oz (15g) per dish



**Resting place
12 inches - 20 inches
(30~50cm)**

**Semi-habitat
8 inches - 10 inches
(20~25cm)**

**Precautionary Statement: Please Be Careful Not to Fall
While installing the Repellent.**

▪ **Window Frames and Ledge (Semi-Habitat)**

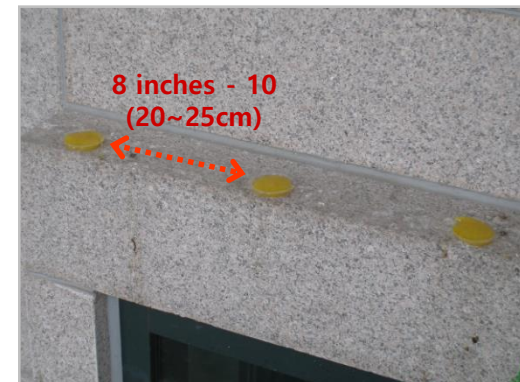
1. Installation

: Basic cleaning (dusting and washing)

: Place dishes 8 ~ 10 in. (20~25cm) apart in the semi-habitat areas (At the top and edge of roof)

2. Inject the product onto the dishes.

: Injection of about 0.53oz(15g) per dish



**Precautionary Statement: Please Be Careful Not to Fall
While installing the Repellent.**

▪ **Handrail (Resting Place)**

1. Installation

: Basic cleaning (dusting and washing)

: Place dishes 12 ~ 20 in. (30~50cm) apart in resting places
with cable ties

(At the top and edge of the handrail)

2. Inject the product onto the dishes.

: Injection of about 0.53oz(15g) per dish



**12 inches - 20 inches
(30~50cm) Apart**

**Precautionary Statement: Please Be Careful Not to Fall
While installing the Repellent.**

■ **Beam Structure (Habitat, Semi-Habitat)**

: Metropolitan Transit Corporation, DTRO

1. Installation

: Basic cleaning (dusting and washing)

: Place dishes 4 in. ~ 6 inches (10~15cm)
apart in the habitat Areas

: Place Dishes 8 ~ 10 in. (20~25cm)
apart in the semi-habitat Areas

2. Inject the product onto the special magnets.

: Injection of about 0.88oz(25g) per Dish

MAGNETIC DISHES



**Precautionary Statement: Please Be Careful Not to Fall
While installing the Repellent.**

▪ **Air Port Authority (Habitat, Semi-Habitat)**

1. Installation

- : Basic cleaning (dusting and washing)
- : Place dishes 4 inches ~ 6 inches (10~15cm) apart in the habitat Areas
- : Place Dishes 8 inches ~ 10 inches (20~25cm) apart in the semi-habitat Areas

2. Inject the product onto the Dishes.

- : Injection of about 0.53oz(15g) per Dish



**8 inches – 10 inches
(20~25cm) Apart**

Precautionary Statement: Please Be Careful Not to Fall While installing the Repellent.

▪ **Air Customs Container Center (Habitat, Semi-Habitat)**

1. Installation

- : Basic cleaning (dusting and washing)
- : Place dishes 4 inches ~ 6 inches (10~15cm) apart in habitat Areas
- : Place Dishes 8 inches ~ 10 inches (20~25cm) apart in the semi-habitat Areas

2. Inject the product onto the Dishes.

- : Injection of about 0.53oz(15g) per Dish



**8 inches – 10 inches
(20~25cm) Apart**

**Precautionary Statement: Please Be Careful Not to Fall
While installing the Repellent.**

▪ **Beam in the Cargo Quarantine Area (Semi-Gabitat)- Singapore**

1. Installation

- : Basic cleaning (dusting and washing)
- : Place dishes 8 ~10 inches (20~25cm)
apart in the semi-habitat area.

2. Inject the product onto the dishes.

- : Injection of about 0.53oz(15g) per dish

3. Inject directly on the surface in case of limited space

**8 inches – 10 inches
(20~25cm) Apart**

**Inject Directly
Onto Surface**



**Precautionary Statement: Please Be Careful Not to Fall
While installing the Repellent.**

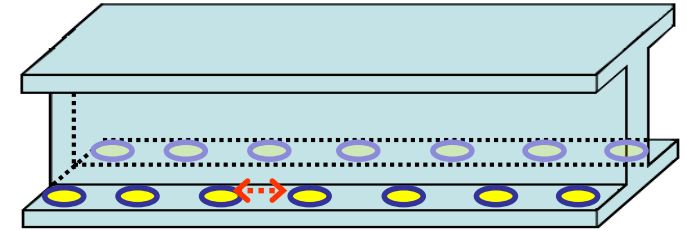
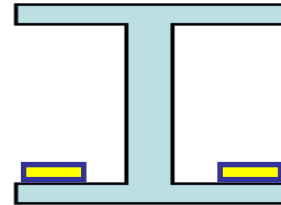
▪ **Beam Habitat, Semi-Habitat)**

1. Installation

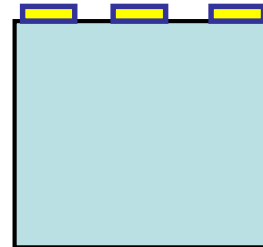
- : Basic cleaning (dusting and washing)
- : Place dishes 4 ~ 6 in. (10~15cm)
apart in the habitat Area
- : Place Dishes 8 ~ 10 in. (20~25cm)
apart in the semi-habitat Area
(At the edge of beam)

2. Inject the product onto the Dishes.

- : Injection of about 0.53oz(15g) per Dish



**4 inches – 6 inches
(10~15cm) Apart**



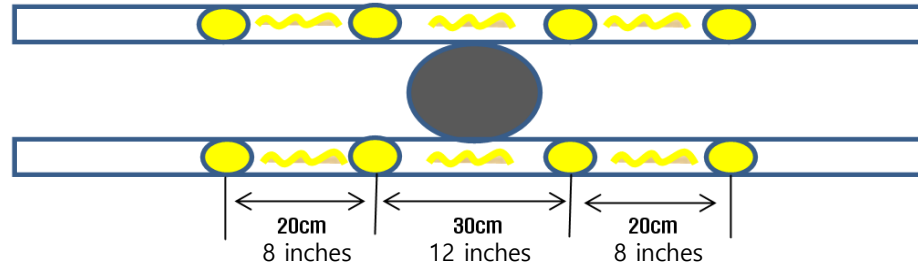
**8 inches – 10 inches
(20~25cm) Apart**

Precautionary Statement : Please Be Careful Not to Fall While Installing the Repellent. Also For Electrical installations Only Authorized Personnel Should Install the Repellent. Electrical Shock and Electrocutation Can Cause Death.

Installation Guide in Electricity Facilities

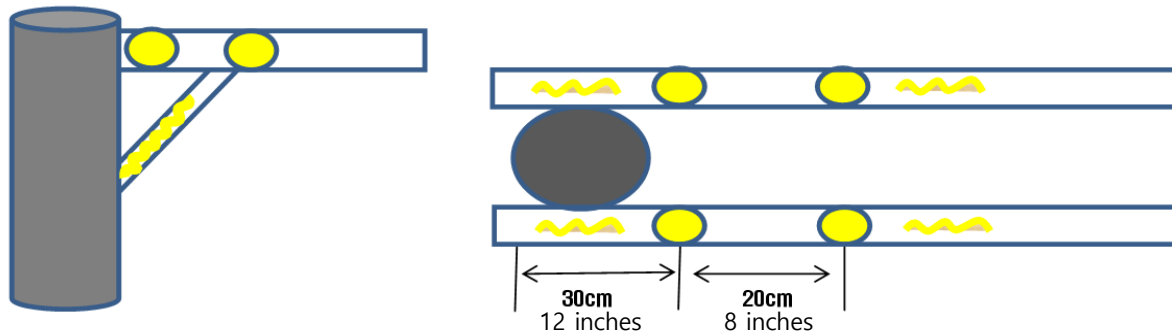
Installation of Dual Iron Structures on Top of an Electrical Pole.

1. Fill the dish attached with the magnet with the product of 0.88oz ~ 1.41oz (25g~40g) and attach it to the iron structure. Note: Magnets sold separately.
2. Inject the product in length of 6 inches(15cm) with a width of 0.39 inches(1cm) onto the surface directly as shown in the illustration.



Installation of Single Iron Structure on an Electrical Telecom Pole

1. Fill the dish with the product of 0.88oz ~ 1.41oz (25g~40g) and attach it to the iron structure.
2. Inject the product in length of 6 inches(15cm) and a width of 0.39 inches(1cm).
3. Inject the product onto the supporting beam as well as in length of 12 inches(30cm) and a width of 0.39 inches(1cm) to the surface directly as shown in the illustration below.



Precautionary Statement : Please Be Careful Not to Fall While Installing the Repellent. Also For Electrical installations Only Authorized Personnel Should Install the Repellent. Electrical Shock and Electrocutation Can Cause Death.

Installation on Top of Transformers

1. Fill the dish attached to the magnet with the product of 0.88oz ~ 1.41oz (25g~40g) and attach it to a hanger band (top, bottom) magnets sold separately.
2. If the magnets attach to the top cover of the transformer, attach two of them inside the telecom pole in 8 inch (20cm) intervals. If not, inject the product in length of 12 inches (30cm) and width of 0.39 inches (1cm) on to the surface directly as shown in the illustration.



Installation of Transformers and Other Equipment (Gas Insulated Switchgear Load, Auto Circuit Breakers, etc.)

1. Fill the dish attached to the magnet with the product of 0.88oz ~ 1.41oz (25g~40g) and attach it to bottom of the hanger band.
2. If the magnet does not attach to the top cover of the equipment, inject the product in length of 12 inches (30cm) and a width of 0.39 inches (1cm) onto the surface directly (As shown in illustration).



Installation of “ㄣ” Shape of Single Iron Structure

1. Fill the dish attached to the magnet with the product of 0.88 oz ~ 1.41 oz (25g~40g) and attach it to the metal beam structure.
2. If the magnet does not attach to the structure, inject the product in length of 20 inches (50cm) and a width of 0.39 inches (1cm) onto the surface directly (as shown in illustration).

