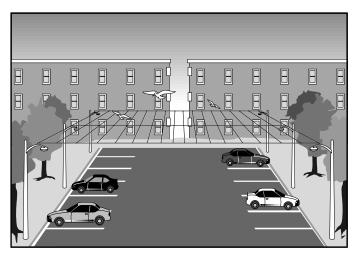
# **GridWire Systems**

Bird Barrier America, Inc. 20925 Chico Street Carson, CA 90746 Phone (310) 527-8000, (800) 503-5444 East Coast: (800) NO BIRDS Fax (310) 527-8005 E-mail: bbsales@birdbarrier.com Web: www.birdbarrier.com

CSI Division: 10290 Bird Barrier stainless steel GridWire, Fluorescent GridTwine and Installation Hardware Systems

#### **MR-Manufacturer**

Bird Barrier America, Inc. manufactures Fluorescent GridTwine from ultra-violet stabilized strands of polyethylene plastic. Gridwire consists of .96mm stainless steel braided wire. The use of either wire or twine is a distinction made by personal preferences and job applications. Installation hardware is available in both galvanized and stainless steel options.



# **PR-Product Presentation**

Bird Barrier's Fluorescent GridTwine and GridWire systems utilize innovative wire patterns designed to disrupt the soaring flight patterns of gulls, geese and other large aquatic birds. These systems are site and species specific and are designed to capitalize on the non-agile, gliding flight patterns of these birds.

# Strong, Versatile Systems

The Fluorescent GridTwine is a strong, cabled twine made from high density, ultra-violet stabilized polyeth-

ylene. GridTwine is comprised of 3 braided sets of 7 wrapped strands each, for a total circumference of 2mm.

Gridwire consists of high-density 302/304-grade 7/7 stainless steel braided wire measuring .96 mm in thickness. This composition allows for overall strength combined with flexibility.

# Visible Deterrence

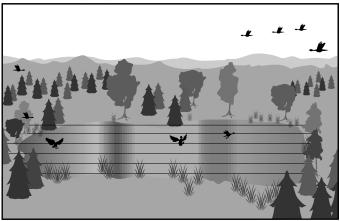
Fluorescent GridTwine is bright fluorescent orange in color, designed to attract the attention of the birds and serve as a visual deterrent as well as a flight interruptor. When using Gridwire, mylar flash tape should be attached to hang from the wires to catch the sunlight and visibly deter the birds.

# Sizes Available

Fluorescent GridTwine is available in 2500' rolls. GridWire is available in 500' rolls.

# Many Uses

Fluorescent GridTwine/GridWire can be configured to exclude birds from open areas including: ponds, rooftops, courtyards, reserviors, outdoor dining areas, water treatment facilities, fish hatcheries, parking lots, and other large open areas.



# Installation Hardware

The Fluorescent GridTwine and GridWire systems both offer comprehensive hardware options for any mounting surface including: stone, concrete, steel, wood, and brick. A cable support is installed securely to the building or perimeter. Specialized tools for attaching the hardware are also available from Bird Barrier.

#### Fluorescent GridTwine

Material: Ultra-violet stabilized polyethylene plastic Construction: 3 x 7 ply. Three groups of seven strands are wrapped into a tight, rope-like group of 21. Size: 2 mm thickness Quantity: 2500 feet per roll Colors: Fluorescent Orange

#### GridWire

Material: High-density 302/304-grade stainless steel 7/7 braided wire. Size: .96 mm Quantity: 500 feet per roll

# Installation Hardware for Fluorescent GridTwine and GridWire

Corner Bolts: For wood, stone, steel etc. available in galvanized and stainless steel

Perimeter Cable: 1 5/8mm stainless steel perimeter cable comes with custom-placed wire cable stops as wire grid spacers. Spacing of wire cable stops can be customized to accommodate larger or shorter wing spans for a variety of bird species.

The 2mm Fluorescent GridTwine is attached to the cable stop spacer by wrapping the twine/wire around the spacer and crimping with two 2.5 mm copper ferrules. On longer runs of twine, three cable clamps are recommended at each termination point. The .92mm GridWire is attached to the cable stop spacer by wrapping the wire around the spacer and crimping with two 1mm copper ferrules.

Turnbuckles: Small, medium and large available in galvanized and stainless steel to tension the perimeter cable once installed. Attach turnbuckle by looping cable or twine through closed end, then securing with two 2.5mm copper ferrules (for GridTwine) or two 1mm copper ferrules (for GridWire). Miscellaneous fasteners, brackets and clips are available in galvanized and stainless steel to accommodate most substrates.

# **UA-Uses**, Applications

Bird Barrier's Fluorescent GridTwine and GridWire can be installed horizontally or vertically to deny access to unwanted gulls, geese and other aquatic birds.

# Al-Assembly, Installation

Spacing of the overhead wires or twine is variant depending on species and application. For example, if there is a food source to be protected such as a fish hatchery, the birds will be more determined to try and defeat the sytem. Therefore, the wires should be spaced closer to prevent the birds from altering their flight patterns to accommodate the wires. The manufacturer recommends for heavy bird pressure sites, that overhead wires or twine lengths are run in various criss-cross patterns to form non-penetrable elevated grids at various elevations. In nesting areas, wires may need to be as close as two feet apart or wider spacing at less desirable locations like parking lots. Horizontal wires, twine. netting or other deterrent systems should also be installed to prevent birds from entering underneath the overhead system. Comprehensive hardware systems are available as required for the specific installation.

# **MF-Materials**, Finishes

Fluorescent GridTwine is made from ultra-violet stabilized polyethylene. GridWire is 302/304-grade 7/7 braided stainless steel wire, while hardware is made from both galvanized and stainless steel.

# **TS-Technical Support**

Bird Barrier's knowledgeable field representatives are available to assist in any aspect of evaluation, product recommendation and even local certified installation. Call 800-503-5444, or fax drawings and other pertinent information to 310-527-8005. Due to the complexity of the average Fluorescent GridTwine or GridWire installation, it is highly recommended that the manufacturer is contacted directly, and that knowledgeable, certified installers be used to ensure the best, long-lasting results.

# Fluorescent GridTwine's Thermal Properties

Softening Point: In the region of 250 degrees Fahrenheit.

Melting Point: In excess of 270 degrees. Burns with difficulty, flame will not spread. May be heated for short periods up to 600 degrees.

Low Temperature: Retains its flexibility at very low temperatures and does not become rigid under freezing conditions.

#### Fluorescent GridTwine's Chemical Properties

Polyethylene, being a paraffin hydrocarbon, is inherently chemically inert and is highly resistant to a wide range of chemicals at ordinary temperatures. It does not generally rot or absorb water. Polyethylene fibers have a high resistance to acids and alkalids of all concentrations. They are insoluble in most common organic solvents at room temperature.

#### Fluorescent GridTwine's Electrical Properties

Polyethylene is an outstanding electrical insulator, especially to high frequency currents.

#### **Effects of Insects and Micro-organisms**

The fibers are not digested by insects and are completely resistant to bacteria, mildew and other microorganisms. This makes Fluorescent GridTwine virtually rot-proof.

# **SPECIFICATION GUIDELINES**

# General

#### **1.1 Description**

1.1.1 Install Bird Barrier GridWire systems utilize innovative wire patterns designed to disrupt the soaring flight patterns of gulls, geese and other large aquatic birds. These systems are designed to capitalize on the non-agile, gliding flight patterns. These systems are site specific and must be designed accordingly.

#### **1.2 Quality Assurance**

1.2.1 Obtain technical literature from manufacturer or distributor, telephone consultation and plan/photo-graph evaluation.

1.2.2 Utilize installation companies in your area who are fully skilled and certified to use Bird Barrier products.

#### **1.3 Submittals**

1.3.1 Submit manufacturer's samples, catalog cuts, shop sketches and other descriptive material.

#### **1.4 Product Handling**

1.4.1 Protect Bird Barrier GridWire and hardware systems from damage before, during and after installation.

1.4.2 If damage occurs to Bird Barrier GridWire, make all replacements immediately.

#### **Products**

#### 2.1 Acceptable Manufacturer

2.1.1 Bird Barrier America, Inc., 20925 Chico Street, Carson, CA 90746. Phone 800-503-5444, 310-527-8000, Fax 310-527-8005, Web: www.birdbarrier.com

# Material Fluorescent GridTwine

Material: Ultra-violet stabilized polyethylene plastic Construction: 3 x 7 ply. Three groups of seven strands are wrapped into a tight, rope-like group of 21. Breaking Strength: 48 pounds per strand Size: 2 mm Quantity: 2,500 feet per roll Color: fluorescent orange

#### GridWire

Material: High-density 302/304-grade stainless steel 7/7 braided wire. Size: .96 mm Quantity: 500 feet per roll

#### 2.3 Mounting Systems

2.3.1 Solid steel: for anchor point attachments use Bird Barrier eye-bolts with lock nuts.

2.3.2 Steel I-beams: for anchor point attachments use Bird Barrier eye-bolts with lock nuts or heavy duty girder clamps.

2.3.3 Sheet metal: use Bird Barrier eye bolt with lock nuts for anchor point attachments.

2.3.4 Brick, concrete and stone: for anchor point attachments use Bird Barrier expanding corner net bolts.2.3.5 Wood: for anchor point attachments use Bird Barrier screw eyes.

2.3.6 Perimeter support system shall be sufficient to withstand the tension of the proposed grid system.
2.3.7 Upon completion of installing anchor point attachments, the 2mm Fluorescent GridTwine is attached to the cable stop spacer by wrapping the twine/wire around the spacer and crimping with two
2.5mm copper ferrules. On longer runs of twine, three
2.5mm copper ferrules are recommended at each termination point.

The .96mm GridWire is attached to the cable stop spacer by wrapping the wire around the spacer and crimping with two 1mm copper ferrules. On longer runs of wire, three 1mm copper ferrules are recommended at each termination point. 2.3.8 Special systems available where holes are not desired.

2.3.9 Special tools such as Bird Barrier Crimping tool and Hog Ring tool are necessary to insure the proper installation of GridWire and Fluorescent GridTwine.

# Execution

#### 3.1 Examination

3.1.1 Examine installation area. Notify architect of detrimental work conditions.

3.1.2 Do not proceed until conditions are corrected.

# 3.2 Surface Preparation

3.2.1 Bird droppings shall be removed in a safe manner; large quantities shall be removed and disposed of by reputable waste removal companies. Work areas shall be cleaned, and repair work shall be done in areas which will be excluded by Fl uorescent GridTwine or GridWire.

3.2.2 Remove or repair articles that may damage the Fluorescent GridTwine/GridWire after installation, such as tree limbs, brush, and loose parts of the building.

#### 3.3 Installation

3.3.1 Install Fluorescent GridTwine/GridWire as recommended by the manufacturer. Fluorescent GridTwine/GridWire shall fit the area to be protected perfectly so pest birds cannot enter the protected area, and so the netting blends perfectly with the architecture.

3.3.2 Fluorescent GridTwine/GridWire's correct grid spacing shall be specified to insure exclusion of the correct pest bird.

# 3.4 Inspection

3.4.1 Visually inspect Fluorescent GridTwine/GridWire for poor adherence to mounting surfaces, or other problems related to poor installation or surface preparation.

3.4.2 Repair as necessary immediately.

# **OM-Operation**, Maintenance

Five year manufacturer's warranty on materials only against ultra-violet breakdown and defective work-manship.