



Insulation for Roof

Insulation for Attics

Insulation for ceiling

Insulation for Soundproof

Insulation for Walls

Insulation for Door Frame

Insulation for Floor

Insulation for Basement





# ■ ABOUT US



iRichGreen co., Ltd. is launching a new business of eco-friendly materials including the SPF(Spray Polyurethane Form), based on remarkable fire retardant solution. Our company has been recommended as a major supplier of SPF and it's applications by the KITA (Korea International Trade Association) and KOTRA(Korea Trade-Investment Promotion Agency) in Korea.

We are the one of the competitive Fire Retardant manufacturing companies in Korea and exporting the water based Fire Retardant and the low pressure SPF(Spray Polyurethane Form) for many countries. We have been proud of good reputation from our many customers due to the high quality and reliable quality control.

The creator of new green concept, iRichGreen co., Ltd. ushers in the age of new SPU materials. We are confident that we can supply quality product with competitive price.

2013 Actual Results of Export:

- China : \$5M (Major Construction company)
- Japan : \$3.5M (Major Construction company)

# WHY SPF?

The Spray Polyurethane Form (SPF) insulation helps keep homes warm in the winter and cool in the summer. Because it is sprayed directly into the gaps, cracks and other surfaces that contribute to heat loss, it both insulates and air seals, offering one of the easiest and most effective ways of weatherizing existing homes and new construction. With sealing and insulating, the homes can save up to 20% of heating and cooling costs (or up to 10% total energy costs).

(Source: Energy Star)

**Spray Polyurethane Form (SPF) Insulation**  
High performance insulation for energy efficient buildings



**SPF Insulation can help :**

- Reduce heating and cooling costs by up to **50%**
- Increase wind uplift resistance by more than **300%**
- Create an air barrier for the building system

There is no better home insulating material that can seal your home from air and moisture intrusion, save on costly utility bills, strengthen your home, and protect your family's health from dangerous mold, airborne pollutants, and allergens than SPF insulation.

## Benefits of SPF Insulation

- Stops air and moisture infiltration
- Makes your home more comfortable
- Saves on energy costs
- Adds strength to the building structure
- It is permanent and will not sag
- Keeps dust and pollen out
- Reduces capacity requirements, maintenance and wear of HVAC equipment



# PRODUCT - LockFire-Form®



Our LockFire Two-Component Fire Retardant Spray Polyurethane Form (LockFire-Form®) is environmentally friendly, contains no formaldehyde or ozone depleting chemicals, saves energy and reduces the use of fossil fuels, thereby reducing global warming gases. It also assists in providing good indoor air quality, requires less energy to produce than the leading insulation, and reduces the amount of energy required to transport and install it. Our LockFire-Form® is an ideal Fire Retardant Polyurethane Form that is especially excellent in fire safety.



## ■ SPEC

- **Material Tank Size** : 180mm(Diameter) x 280mm(Height)
- **Box Size** : 390mm(W) x 185mm(L) x 420mm(H)
- **Package unit** : 2 containers/ 1 Spray Gun/ 2.4m Hose/ 3 Nozzles/ Operation manual/ Assembly diagram
- **Weight** : 13Kg/NET
- **Spraying method** : Air Compressor (air pressure 0.5 kgf/cm<sup>2</sup>pa)

## ■ TECHNICAL CHARACTERISTICS

- **Capacity** : material-14Kg, Total weight-16Kg
- **Optimal application Temperature** : 35 - 38 Degrees Celsius
- **Spray amount** : Capable of appx. 0.5 - 1m<sup>3</sup>
- **time for surface hardening** : 1-3 min.
- **Complete hardening time** : 24 hrs.
- **Spray distance** : 0.3-1 m
- **Density** : Adjustable the density with the adjustment knob
- **Spray Distance**: Spray amount control function adjusts short distance/ long distance/ spray amount density

# APPLICATION - Overview

LockFire-Form® is a versatile product that can be used for many things. Rigid polyurethane foams can be used as insulation for buildings, water heaters, refrigerated transport, and other types of commercial and residential buildings. It has also been used for many years as a high performance roofing system.

Other types of polyurethane foams are used for flotation, packaging, furniture, adhesives, and cavity fillings.



## Application of LockFire-Form®

- Roofing & Insulation
- Roofing Adhesive
- Construction Adhesive
- Aerospace
- Insulation for Pool & SPA
- Foam Packaging
- Foam Flotation
- Cavity Filling
- Mine Shaft Plugging
- Marine / Transportation
- Refrigeration
- Taxidermy
- Movie/Theatre sets





# APPLICATION - Residential Construction

**LockFire-Form®** is an expandable foam that will completely seal any gaps and crevices preventing air infiltration, moisture infiltration as well as intrusion of dirt and pollutants from outdoors. It will absorb and reduce the transmission of sound. By upgrading your home's insulation in the walls, crawl space and attic, the result will be a stronger, more energy efficient, healthier home. By Spray foam insulation, heating and cooling costs can be reduced by as much as 50%.

## Residential Construction Application of LockFire-Form®

Areas where **LockFire-Form®** spray foam insulation can be applied include:

- Spray Foam Insulation in Walls
- Spray Foam Insulation in Attics
- Spray Foam Insulation in Basement/Crawl Spaces
- Spray Foam Insulation in Window/Door Frames
- Spray Foam Insulation in Floors
- Spray Foam Insulation in Pipes
- Spray Foam Insulation for Soundproof



# APPLICATION - Commercial Construction

In new and existing building, **LockFire-Form®** is an ideal choice when insulating roofs, walls, attics, basement and crawl spaces. SPF roofs can even be used to replace or repair traditional roofing assemblies. SPF can reduce energy consumption and help save up to 30-50% in heating and cooling costs. Seals the building to prevent energy loss due to outside air infiltration. It restricts moisture, outdoor allergens, pollutants and sound, and prevents condensation and mold.



## Commercial Construction Application of LockFire-Form®

Areas where **LockFire-Form®** spray foam insulation can be applied include:

- Spray Foam Insulation in Walls
- Spray Foam Insulation in Roofs
- Spray Foam Insulation in Basement/Crawl Spaces
- Spray Foam Insulation in Window/Door Frames
- Spray Foam Insulation in Floors
- Spray Foam Insulation in Pipes
- Spray Foam Insulation for Soundproof



# APPLICATION - Pool / Spa

Most pool and spa owners use a cover to help maintain water temperature. However, they often dismiss the importance of insulating the sides and bottoms of pools and tubs to help prevent heat loss. **LockFire-Form®** can reduce your monthly operating costs by half with the use of a sufficiently insulated shell and a cover.



## Pool / SPA of LockFire-Form®

Areas where **LockFire-Form®** spray foam insulation can be applied include:

- Spray Foam Insulation in Sides & Bottoms of Pools
- Spray Foam Insulation in Sides & Bottoms of Tubs
- Spray Foam Insulation in Pipes





# ■ APPLICATION - Cold Storage

Most cold storage facilities are constructed using pre-insulated panels (metal panels with foam sandwich cores). Because thermal leaks are the major concern in these structures, sprayed-in-place two component polyurethane foams have become an important part of the construction process. **LockFire-Form®** provides a convenient, portable means to apply foam to the various junctions in the cold storage structure.



## Cold Storage of **LockFire-Form®**

Areas where **LockFire-Form®** spray foam insulation can be applied include:

- Spray Foam Insulation in Wall of Cold Storage
- Spray Foam Insulation in Wall and Ceiling junctures on the interior, Floor to wall junctions, and in corners.
- Spray Foam Insulation in Juncture where the roof meets the wall

# APPLICATION - Transportation

Most refrigerated trucks, trailers, sea containers or vans have polyurethane foam in the walls, ceiling and floors to provide insulation for temperature control. Repairs are simplified using **LockFire-Form®** disposable foam kits. Their portability allows for ease of use without consideration for power source or pressure. Side walls, roofs and floors are easily covered using the multi-purpose mixing nozzles included with every system, with an optional fan spray nozzle available for wider coverage.



## Transportation of LockFire-Form®

Areas where **LockFire-Form®** spray foam insulation can be applied include:

- Spray Foam Insulation in refrigerated trucks
- Spray Foam Insulation for temperature control
- Spray Foam Insulation for helping reduce noise from outside



# APPLICATION - Marine Floating

LockFire-Form® is used in numerous marine applications. The adhesiveness of this product is superb, one cubic foot of a nominal two pound density Polyurethane Foam will support approximately sixty ( 60 ) pounds of dead weight in water. Polyurethane Foam can be sprayed or poured and systems can be tailored to meet most application requirements. Our years of experience, certifications and along with the variety of projects successfully completed will be the perfect choice for your marine application.



## Marine Application of LockFire-Form®

The high strength to weight ratio plus its excellent buoyancy properties makes it an excellent choice as an integral part of the manufacture of :

- Boats Buoys
- Vessel Docks Flotation Devices
- All Marine Flotation
- All Buoyancy Devices



# ■ FEATURES



LockFire-Form® has many features rather than other SPF products. No prohibited articles were used including phenol resin, arsenic, boron, organic solvent and toluene which are detrimental to humans. Neither VOC (volatile organic compound) nor formaldehyde is detected, and gas hazard tested. Especially, It can be used low-cost thermal barrier solution because of it's outstanding Fire Retardant properties. The NFPA-286 Room Corner Burn Test is as bellow. It is the Standard Methods of Fire Tests for Evaluating Contribution of Wall and Ceiling Interior Finish to Room Fire Growth. (EN ISO 13823 SBI Test & EN ISO 11925-2 Test is progressing)

TESTING: Thermal Barrier

RESULTS

TESTING: Ignition Barrier

RESULTS







An, Jin-Hoon CEO

164-3, Samseong-dong, Gangnam-gu, Seoul, Korea

Tel +82-2-977-7549 Fax +82-2-6280-7559

Mobile +82-10-5446-7455 E-Mail [jhan@irichgreen.com](mailto:jhan@irichgreen.com)

[www.irichgreen.com](http://www.irichgreen.com)

The Next Generation Eco-Friendly Spray Polyurethane Form

If you need more information, Please refer to our homepage.

<http://www.iRichGreen.com>