

# Indiana Labor Insider

January - June 2014

Advancing the safety, health and prosperity of Hoosiers in the workplace

**Michael R. Pence, Governor**  
*Rick J. Ruble, Commissioner of Labor*

## Message from the Commissioner

Team work is crucial to accomplish any great task. At the Indiana Department of Labor, I'm fortunate to work with a dedicated staff of professionals who pull together to help advance the health, safety and prosperity of all Hoosiers in the workplace every day.

The Indiana Department of Labor's Bureau of Child Labor looks after our youngest workers to ensure employer compliance with child labor laws. Our INSafe division provides free workplace safety and health consultations to businesses to help employers identify hazards before an employee gets hurt. Our IOSHA compliance division conducts inspections to ensure compliance with workplace safety and health regulations. The Indiana Department of Labor's wage and hour team works to provide information to employers and employees about Indiana wage and hour laws and requirements. Staff of the Bureau of Mines and Mine Safety inspects our underground coal mines. The Quality, Metrics and Statistics division provides information on workplace injuries, illnesses and fatalities and maintains the Indiana Department of Labor's performance measures.

Together, we make a pretty good team. But, we need your help to keep Hoosiers safe. We can only be effective if you notify us when you see something dangerous or call us when you have questions about workplace health and safety.

We're here to help you make your workplace safer and healthier. We're here to answer your questions, and we're here to provide you with the kind of information you need to keep making Indiana a State that Works. We're here to make sure you have the safest and most profitable working experience possible. If you have any work-related questions or if you worry that something isn't safe at your job, I want you to contact us so we can help you make it right.

I invite you to use the Indiana Department of Labor as a resource so that you can accomplish even greater things.

To your health and wealth,

Rick J. Ruble

## Fall Prevention: a Life or Death Decision

More construction workers lose their lives from falls than from any other single cause. Roofers, in particular, run a very high risk of serious injury or death. According to the latest non-fatal worker injury and illness report (2012), nearly 10 of every 100 roofers suffered a work-related injury or illness that was serious enough to be OSHA recordable.

While roofers work high off the ground, sometimes on steeply slanted surfaces, they aren't the only workers at risk of falling. Every year, the Indiana Department of Labor fields calls about serious injuries and even deaths caused by falls of less than 10 feet.

### How can you help prevent these falls?

Take a short break at the beginning of the work day to talk to your employees about fall prevention. These brief safety talks only stop work for a few minutes, but provide a focused toolbox talk on a safety topic such as ladder safety,

fall protection equipment or scaffolds safety. The meeting provides information to workers about hazards, protective methods and the company's safety policies, goals and expectations.

These short talks remind employees that their company takes safety seriously and expects them to do the same.

Remember, taking a few minutes away from work to focus on safety is going to save time and money in the long run

The Indiana Department of Labor and the Indiana Builders Association teamed together to present safety stand-downs across

Indiana during the first week of June. Together, we were able to teach some fall protection basics and remind Hoosier construction that taking fall prevention and protection seriously is a critical workplace safety issue.

If you would like to put on a fall prevention safety stand-down or just want some good information about roofing, ladder and scaffold safety, visit our new fall prevention website at [www.in.gov/dol/2876.htm](http://www.in.gov/dol/2876.htm).





# Combustible Dust

## An Explosion Hazard

Combustible dusts are fine particles that present an explosion hazard when suspended in air during certain conditions. A dust explosion can be catastrophic and cause worker fatalities and serious injuries and destroy entire buildings. Three workers were killed in a 2010 titanium dust explosion in West Virginia, and 14 workers were killed in a 2008 sugar dust explosion in Georgia.

Any combustible material will burn rapidly when in a finely powdered form. If such a dust is suspended in air in the right concentration, under certain conditions, it can explode violently. Even materials that do not burn when in larger pieces (such as aluminum or iron), can explode when they are in a dust form.

In many combustible dust incidents, employers and employees didn't even know that a hazard existed in their industry. It is extremely critical to determine if this hazard exists in your workplace. If your workplace is at risk for a combustible dust explosion or fire, you must take immediate action to prevent catastrophic consequences.

A wide variety of materials that can explode when in dust form exist in many industries. How many of these things did you know were explosive when in dust form? Food (candy, sugar, spice, starch, flour and feed), grain, tobacco, plastics, wood, paper, pulp, rubber, textiles, pesticides, pharmaceuticals, dyes, coal and metals (aluminum, chromium, iron, magnesium, and zinc) can explode when in a dust form.

Also, some dusts are more dangerous than others, and it's not always what you might expect. We burn coal for energy, so coal dust must be one of the worst risks, right? Not necessarily. Grain dust is significantly more likely to explode when exposed to an ignition source than coal dust, and grain dust explodes even more violently than coal dust.

### What makes it happen?

There are five parts to an explosion. You need oxygen, heat (the ignition source), fuel (the dust), dispersion (dust far enough apart to have lots of oxygen, but close enough together to cause a chain reaction) and finally containment (something to hold things together while the pressure builds). If any one piece is missing, you can't have an explosion.

### Bad to worse

Usually when there is a large explosion, there were really two explosions: A much smaller primary explosion and the

more destructive secondary explosion. The series of events generally occurs like this: The five parts of an explosion are present and a small explosion occurs - possibly inside a machine that was processing the material which is creating the dust. That small explosion pushes a wave of pressure out of the machine and into the room. The room has not been cleaned well or has not been cleaned recently (OSHA requires anything more than 1/8th of an inch of dust to be removed). The pressure wave from the first explosion kicks up a huge cloud of dust into the air and the new, much larger dust cloud is ignited by the heat from the original explosion or from the original ignition source. This secondary explosion is generally the one that can destroy a building.

### What are the ignition sources?

In some cases, the sources of ignition are exactly what you might expect: welding equipment, cigarettes, open flames, etc. However, many explosions are caused by less obvious issues. Friction caused by a misaligned drive belt or a pulley that hasn't been lubricated can create enough heat to cause ignition. Or the heat from using cleaning equipment (like a Shop-Vac) that hasn't been rated for use in a dusty environment can easily cause ignition as well.

### What can be done to prevent explosions?

#### *Dust Control*

- Minimize the escape of dust from process equipment or ventilation systems;
- Use dust collection systems and filters;
- Utilize surfaces that minimize dust accumulation and facilitate cleaning;
- Provide access to all hidden areas to permit inspection;
- Inspect for dust residues in open and hidden areas, at regular intervals;
- Clean dust residues at regular intervals;
- Use cleaning methods that do not generate dust clouds;
- Only use vacuum cleaners approved for dust collection;
- Locate relief valves away from dust hazard areas;
- Develop and implement a hazardous dust inspection, testing, housekeeping, and control program (preferably in writing with established frequency and methods).

### Ignition Control

- Use appropriate electrical equipment and wiring methods;
- Control static electricity, including bonding of equipment to ground;
- Control smoking, open flames, and sparks;
- Control mechanical sparks and friction;
- Use separator devices to remove foreign materials from process materials;
- Separate heated surfaces from dusts;
- Separate heating systems from dusts;
- Proper use and type of industrial trucks;
- Proper use of cartridge activated tools; and
- Adequately maintain all the above equipment.

### Damage Control

- Separate of the hazard (isolate with distance);
- Segregate of the hazard (isolate with a barrier);
- Deflagrate venting of a building, room, or area;
- Employ pressure relief venting for equipment;
- Provide of spark/ember detection and

extinguishing systems;

- Employ explosion protection systems
- Use sprinkler systems; and
- Use of other specialized suppression systems.

### Training

- Ensure all employees are aware of any possible explosion hazards, take appropriate action to correct the hazards and report any new hazards they might come across.

To learn more, visit [www.osha.gov/dsg/combustible dust/](http://www.osha.gov/dsg/combustible dust/)



## It Happened Here: LaPorte County

**Background:** Any time loose particles are present in large quantities, whether those particles are sawdust, sugar, flour, grain dust, lint or other fine particles, there is a potential for an explosion. The ignition source for the explosion does not need to be an open flame. Even friction from a poorly lubricated gear can cause enough heat to begin the chain reaction leading to a tragedy.

**Event:** On June 25, 2013, in LaPorte County, a worker was monitoring the filling of a corn bin from an upper walkway over the bin's south leg. While inspecting the filling, a misaligned drive belt became heated enough to set off an explosion. The explosion threw the worker out of the top of the bin. The worker fell from 13 stories. The coroner determined cause of death to be blunt-force trauma consistent with an explosion. The oil spray system normally used to minimize dust was not operational at the time due to a faulty valve. No records were kept of bin cleaning or machine maintenance.

**Lessons Learned:** To prevent similar incidents from occurring in the future, employers and employees should:

- Maintain consistent records of maintenance and cleaning to ensure safety protocols are being followed.

- Ensure all equipment and machinery is maintained as per the manufacturer's recommendations. Do not operate faulty equipment.
- Utilize explosion relief venting to keep the force of any possible explosion away from employee-occupied areas.
- Ensure equipment is used in accordance with the manufacturer's recommendations. Never use equipment that isn't designed to isolate the hot motor from the dust.
- Provide the appropriate safety and health training to employees so they can recognize hazards associated with each job and task.
- Provide all employees with the appropriate personal protective equipment (PPE). Instruct employees on the PPE's use and storage. Ensure workers wear all necessary PPE.
- Conduct routine jobsite briefings or "toolbox talks" to remind workers of the hazards associated with the jobsite, equipment, task, etc.
- Encourage employees to speak up about workplace safety and health concerns and report any hazards to management.
- Foster a culture of workplace safety and health. Employers must hold themselves accountable for their employees' understanding and following of all written safety and health policies, rules, procedures and regulations.



# Heat Stress

We're moving into the hottest part of the year. Everyone needs to be acutely aware of the increased dangers that are associated with working in extreme temperatures and high humidity. There are no specific OSHA regulations or standards regarding working in high heat; however, the OSHA general duty clause requires all employers to provide their employees with a working environment that "is free from recognizable hazards that are causing or likely to cause death or serious harm to employees." Make no mistake, working in hot and humid environments can easily lead to serious harm or death.

## Who is at risk?

It's important to remember that both employees who work indoors and those who work outside can be at risk of suffering from a heat-related illness. Traditionally, higher-risk indoor occupations include foundries, brick-firing and ceramic plants, glass products facilities, rubber products factories, electrical utilities (particularly boiler rooms), bakeries, confectioneries, commercial kitchens, laundries, food canneries, chemical plants, mining sites, smelters and steam tunnels.

Outdoor tasks performed in hot weather and direct sun, such as farm work, construction, oil and gas well operations, asbestos removal, landscaping, emergency response operations, and hazardous waste site activities, also increase the risk of heat-related illness in exposed workers. If the job includes any of the following, there is a high risk for heat-induced illness or even death:

- High temperature and humidity
- Radiant heat sources
- Contact with hot objects
- Direct sun exposure (with no shade)
- Limited air movement (no breeze, wind or ventilation)
- Physical exertion
- Use of bulky or non-breathable clothing or personal protective equipment (PPE)

## What happens to a worker with heat stress?

Responses to heat stress vary depending on the severity of the exposure. The most common response to heat stress is a "heat rash." In this case, red bumps can appear in folds of skin, under arms, around socks and in any area of tight-fitting clothing. The rash is caused by having skin which is constantly wet from sweating. Treatment can be as simple as keeping the area dry.

Another possible response to heat stress can be muscle cramps. These cramps are caused when a person has become dehydrated from constant sweating and through sweating has lost too much salt. Cramps are most commonly reported in fatigued muscles and connected to strenuous activity.

An increasingly dangerous illness related to working in high-temperature situations is heat exhaustion. Symptoms can include heavy sweating, nausea or vomiting, dizziness, tiredness, thirst, irritability and a fast heartbeat. Anyone experiencing heat exhaustion needs to lie down, should be provided water (and ice packs if available) and should not continue working the rest of the day. If symptoms last longer than 60 minutes, it is advisable to see a doctor or visit a clinic.

In the most serious cases, a worker showing signs of heat stress is either losing or has lost the ability to regulate his or her core body temperature. This is heat stroke. Symptoms include confusion; fainting; seizures; very high body temperatures and either excessive sweating or red, hot and dry skin. This is an emergency and is a condition that can lead to death. Immediate medical attention is required, and 911 should be called.

Review the chart on the next page for further information regarding symptoms and treatment of heat-induced illness.

## What can be done to prevent heat stress and illness?

Happily, preventing heat stress is simple and the advice applies to every industry and occupation. When employees must work in elevated temperatures, remember: water, rest and shade. Providing sufficient water, enough breaks from strenuous work and staying out of the sun whenever possible is critical to managing the risks for heat stress and illness.

Illness	Symptoms	First Aid*
Heat stroke	<ul style="list-style-type: none"> <li>• Confusion</li> <li>• Fainting</li> <li>• Seizures</li> <li>• Excessive sweating or red, hot, dry skin</li> <li>• Very high body temperature</li> </ul>	<ul style="list-style-type: none"> <li>• Call 911</li> </ul> <p>While waiting for help:</p> <ul style="list-style-type: none"> <li>• Place worker in shady, cool area</li> <li>• Loosen clothing, remove outer clothing</li> <li>• Fan air on worker; cold packs in armpits</li> <li>• Wet worker with cool water; apply ice packs, cool compresses, or ice if available</li> <li>• Provide fluids (preferably water) as soon as possible</li> <li>• Stay with worker until help arrives</li> </ul>
Heat exhaustion	<ul style="list-style-type: none"> <li>• Cool, moist skin</li> <li>• Heavy sweating</li> <li>• Headache</li> <li>• Nausea or vomiting</li> <li>• Dizziness</li> <li>• Light headedness</li> <li>• Weakness</li> <li>• Thirst</li> <li>• Irritability</li> <li>• Fast heart beat</li> </ul>	<ul style="list-style-type: none"> <li>• Have worker sit or lie down in a cool, shady area</li> <li>• Give worker plenty of water or other cool beverages to drink</li> <li>• Cool worker with cold compresses/ice packs</li> <li>• Take to clinic or emergency room for medical evaluation or treatment if signs or symptoms worsen or do not improve within 60 minutes.</li> <li>• Do not return to work that day</li> </ul>
Heat cramps	<ul style="list-style-type: none"> <li>• Muscle spasms</li> <li>• Pain</li> <li>• Usually in abdomen, arms, or legs</li> </ul>	<ul style="list-style-type: none"> <li>• Have worker rest in shady, cool area</li> <li>• Worker should drink water or other cool beverages</li> <li>• Wait a few hours before allowing worker to return to strenuous work</li> <li>• Have worker seek medical attention if cramps don't go away</li> </ul>
Heat rash	<ul style="list-style-type: none"> <li>• Clusters of red bumps on skin</li> <li>• Often appears on neck, upper chest, folds of skin</li> </ul>	<ul style="list-style-type: none"> <li>• Try to work in a cooler, less humid environment when possible</li> <li>• Keep the affected area dry</li> </ul>

\* Remember, if you are not a medical professional, use this information as a guide only to help workers in need.



## Spotlighting Best Practices:

Gribbins Insulation, based in Evansville, IN, is a mechanical insulation contractor serving industrial, commercial, and power-generating facilities throughout the Midwest. Since 2010, their safety program has been honored with 30 awards, including being named one of America's Safest Companies by *EHS Today*, the CURT Construction Industry Safety Excellence (CISE) Award, and the Indiana Governor's Workplace Safety Award (three times). Gribbins is proud to report zero recordables for 2013, with more than 400,000 hours

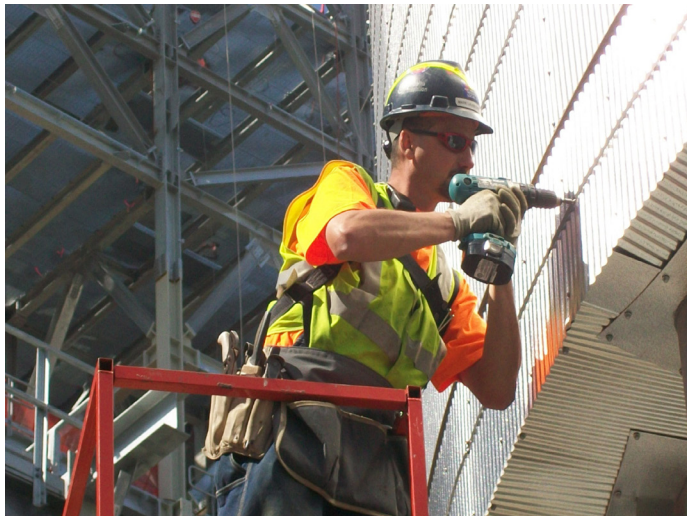
**Contributed by: Trevor Atherton, CSP, CHST - Gribbins Safety Manager**

At Gribbins Insulation, we believe the extensive involvement of our employees in our safety program has strengthened the culture of safety in our offices and in the field. One of the best examples of this involvement is through our behavior-based safety program or, as we call it, Surveying At-Risk For Elimination (SAFE) Program. Our SAFE Program trains employees to conduct peer-to-peer observations to determine at-risk behaviors and the barriers to those behaviors. Because the system depends on peer-to-peer observations, the training process teaches the employees how to discuss with the person being observed the at-risk behaviors they see, what can be changed to make their task safer, and how to determine the barriers to safe behaviors. The program relies strictly on a "no name, no blame" philosophy. This means that the observed employee is not named on the observation form, which eliminates the possibility of reprimand for a negative observation. To ensure the observation form is highly relevant, we update the form annually based on our analyses of incident statistics, audit findings, and violations from the previous year to determine specific focus areas. From the 2013 analysis, we are currently focused on six areas for 2014: eye protection, hand protection, body mechanics, working from ladders, working from scissor lifts, and the use of fall protection. This update process fosters more participation in the SAFE Program, which leads to greater communication between employees, a decrease in at-risk behaviors, and an increase in the overall number of productive observations. The annual analysis also serves as a valuable tool for management when reviewing our safety program to find areas that need improvement.

We were introduced to the potential of the behavior-based safety process in 2006 when several of our clients implemented programs. After seeing the valuable outcomes of the process, we decided to develop a custom program for Gribbins Insulation to roll out to our other jobsites. During

the process of making the SAFE Program, field employees contributed greatly to many aspects of the program, including the development of the mission, the creation of the form, the training process, and the analysis of the results.

The SAFE Program has resulted in direct reductions in violations and recordables as well as a stronger overall safety culture. Since implementing the SAFE Program in 2010, our recordable and first aid injuries have decreased close to 30%. We have also seen a 35% reduction in the number of violations occurring during our jobsite audits. Another positive impact is the noticeable increase in hazard condition notifications by



employees to the safety department. Such hazards can be listed on the SAFE Program observation form and turned in anonymously. We continue to be impressed with our employees' dedication to these observations. Examples of hazards that have been reported and corrected through this process include: hazardous holes in parking lots, lockout-tagout issues while removing insulation with heat tracing and the observation of a contract employee installing an air conditioning unit in an unsafe manner. In the last instance, when the Gribbins employee noticed the installer was above 6 feet without being tied off, our employee stopped

the installer, asked him to come down and discussed the situation with him to inform him he needed fall protection. Employees are also more comfortable talking to each other while performing their tasks and correcting each other on a peer-to-peer level. The whole idea of peer-to-peer observations and corrections has become commonplace, which is an outcome we did not expect to see so quickly. As a bonus, employees earn safety points in the Gribbins Insulation safety incentive program for their participation.

In 2012, we received Accreditation from the Cambridge Center of Behavioral Studies for World-Class Behavior-Based Safety, which is a testament to the dedication of our management team and our employees to the SAFE Program. More information about our company and safety program is available at [www.gribbins.com](http://www.gribbins.com).



## You Asked, We Answered - Temporary Employees

**If I only work somewhere only for a summer, isn't all that safety training a waste of time?**

Definitely not! In fact, as a temporary employee you may be more at risk for suffering a workplace injury. The Occupational Safety and Health Administration (OSHA) requires that you receive the same workplace safety and health training as a permanent employee. Everyone's safety matters!

**My job told me they don't have PPE in my size. Is it okay to not use it?**  
NO! Just because you're temporary, doesn't mean your safety is less important. Your employer isn't allowed to skip your PPE just because you're new or because you might not be there as long as some other employees.

**Who gets in trouble if my job doesn't train me?**  
Both the agency that hired you and the company you're working at (the "host") can be cited by OSHA if you have not received the appropriate safety and health training. The staffing service and the host employer should work hand-in-hand for employee safety.

**Since I won't be at the company very long, can I take a short version of the safety training?**  
You need to have the same training everyone else did to make sure you're on the same page.

**Does my staffing company need to know all the ins and outs of the hazards at my host company?**

OSHA doesn't require your staffing company to be an expert on everything. But, your staffing company is required to have a basic idea of the type of work and tasks you will be performing. The staffing service should also have an understanding of the types of workplace safety and health hazards that exist and to verify that the host company is taking the appropriate precautions.

**If I do get injured on the job, who records the injury?**

Because temporary employees have two employers (the staffing agency and the host employer), sometimes there is confusion about who needs to record an injury. It's important to note that only one employer or the other should be recording the injury - NEVER both. The answer to your inquiry depends on who controls or directs and supervises your day-to-day work activities.

**What do I do if I'm worried about my safety?**  
If you're every worried, don't hesitate to ask someone at your host employer about the proper way to be safe. If you're not sure what to do, always check and make sure you're doing it right.

*Are you in on it?*

# Join the conversation!

Your questions answered  
Latest safety and health news  
Updates from wage and hour

 Find us on [Facebook/IndianaDepartmentofLabor](https://www.facebook.com/IndianaDepartmentofLabor)

 Follow us on Twitter [@INDeptofLabor](https://twitter.com/INDeptofLabor)



# *Governor's Workplace Safety Award Winners!*

A Governor's Workplace Safety Award signifies that a company gone above and beyond in the quest for safety and civic cooperation. All winners must have better safety records than their industry's average and have achieved excellence and innovation in workplace health and safety. Applicants are vetted by members of the Indiana Department of Labor's INSafe team and representatives from the Central Indiana chapter of the American Society of Safety Engineers. We congratulate these companies on their stellar records and accomplishments!



Taghleef Industries, Inc.



BMW Constructors



Hagerman, Inc.



Closure Systems International, Inc.



MacLellan Integrated Services



Gribbins Insulation Company, Inc.



Aisin Chemical Indiana, LLC



Westtech Building Products



# Upcoming Training Opportunities

*Mid-America OSHA Education Center sponsored training:* For more information about Mid-America OSHA Education Center, please visit [www.midamericaosha.org/](http://www.midamericaosha.org/). Course fees are established by Mid-America OSHA Education Center and are available on their website. Course listings can be found at: <https://midamericaosha.org/class-schedule/courses>

Date	Sponsor	Class	Location	Time
July 21-23	Mid-America OSHA Education Center	OSHA 503 Update Gen Industry Outreach Trainers	IGC-S	8 a.m. - 5 p.m.
Sept. 29-Oct. 2	Mid-America OSHA Education Center	OSHA 511 OSHA Standards for General Industry	IGC-S	8 a.m. - 5 p.m.
Oct. 3	Mid-America OSHA Education Center	Hazcom & GHS ( <a href="http://www.elhart.org">www.elhart.org</a> to register)	IGC-S	8 a.m. - 5 p.m.

## Recognizing Excellence

*Recognizing Excellence* spotlights Hoosier employers and their employees for their efforts in achieving status in either the Indiana Voluntary Protection Program (VPP) or Indiana Safety and Health Achievement Recognition Program (INSHARP). The Indiana Department of Labor congratulates the following employers and employees for their efforts to ensure Hoosier occupational safety and health. Additional information on INSHARP and VPP may be found online at [www.in.gov/dol](http://www.in.gov/dol).

### INSHARP

#### New:

City of Jasper  
 BioConvergence, LLC  
 ProBuild/Carter-Lee  
 Marmon Retail Home Improvement  
 First Chance Centers

#### Recertified:

Harding Poorman Group  
 Stanley Black & Decker  
 Formwood Industries  
 First Chance Center  
 First Chance Center Industries  
 First Chance Center Tot to Tot/Food Program  
 Arc Opportunities  
 Atlas Die, LLC  
 Summit Brands



### VPP

#### New:

Cintas - Location K40  
 Cintas - Location 336  
 Gribbins Insulation Company  
 Raytheon  
 RR Donnelley North Plant

#### Recertified:

BMW Constructors



## Indiana Labor Insider

Email us at [insafe@dol.in.gov](mailto:insafe@dol.in.gov) to subscribe!

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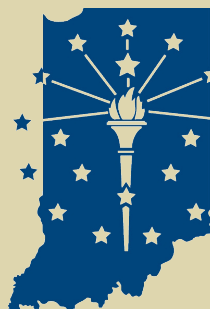
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