



STRONG WATER TECHNOLOGY

## Frequently Asked Questions

ATIRA® FBG-I FIRE-BLOCK GEL

**Q.** How does FBG-I differ from first-generation gels?

- A.**
1. FBG-I can be applied via typical hose and nozzle configurations, while old-fashioned gels require “garden type” hose-end applicators that are undependable and limited in spray performance.
  2. First-generation gels were very slippery, like ice on the floor in an incident scene. FBG-I is not slippery and is similar to a puddle of water.
  3. First-generation gels were too hard to remove, especially when baked on. FBG-I is not.
  4. First-generation gels do not biodegrade and will reappear when water is added. FBG-I disappears rapidly and does not come back.

**Q.** What is the shelf life of FBG-I?

**A.** Six+ years.

**Q.** Will FBG-I settle?

**A.** There will be slight separation of the gel over time, but it is easy to shake back into suspension.

**Q.** Is FBG-I corrosive?

**A.** No, FBG-I does not cause rusting or corrosion.

**Q.** Will FBG-I work on class B (fuels) fires?

**A.** While gel still contains water and can therefore splatter, it would certainly be valuable on exposures or in cooling tanks.

**Q.** What does FBG-I cost?

**A.** One 5-gallon jug costs \$300, but when compared to class A foam, and the work differential, gel actually costs about 2 cents less per sprayable gallon.

**Q.** Can FBG-I reduce operational costs?

**A.** Yes. FBG-I can reduce suppression time, run time and exposure time, as it works faster than plain water or foam. It can reduce firefighter exposure and injuries and their associated costs. It can also reduce water hauled or purchased, as well as toxic run-off and its cleanup expenses.

**Q.** Can any fire engine apply FBG-I? How long does it take?

**A.** Yes. When equipped with a FoamPro or powered proportioner, properly optimized, cleaned and calibrated, most engines can be configured in 4-6 hours.

- Q.** What benefits does FBG-I have over plain water and foam?
- A.** FBG-I causes plain water to “stick & stay,” where it is most effective. This is huge, given that traditionally, 90% of water and foam just run to the ground, where they do no work. Being able to extend the value of water is big, but being able to choose “on-the-fly” between suppression (thin–low viscosity) and protection (thick–toothpaste) is unheard of. Gel can eliminate flashover, rekindle and water loads via simple efficiency.
- Q.** Can FBG-I save homes that would otherwise be written off, due to surrounding fuel loads?
- A.** Yes. Coating a home or exposure, and even the nearby fuel loads, can provide enough protection to save an asset from a severe burn-over.
- Q.** Is there added maintenance involved in using FBG-I?
- A.** No more than class A foam, and usually less. We flush the apparatus manifold after use, but do not flush the proportioner. If unused, flow 1/4 cup of gel concentrate through the proportioner, via the “calibrate” valve.
- Q.** Can you change back and forth, between FBG-I & foam?
- A.** No, you cannot, at least not without a thorough cleaning and recalibration.
- Q.** Can FBG-I be used in sensitive watersheds?
- A.** In practicality, yes, FBG-I is safe for aquatic life and humans.
- Q.** What is the availability of FBG-I, especially for a large incident?
- A.** We are working to set up strategic caches with agencies and departments at the local levels. We have regional representatives that can shuttle gel to an incident, and large trucks to move gel (re-supply) at a moment’s notice.
- Q.** Is FBG-I available in bulk?
- A.** We are in the process of adding gel concentrate tenders, to support large incident needs.
- Q.** How does a “Gel Strike Team” function?
- A.** Normally, a team of five type 6 engines, one water tender, a task force leader and a supply vehicle (flatbed with pallets of jugs or a 500 gal gel supply tender), will operate as a unit to “gel” homes 1-2 hours before an expected fire front.
- Q.** Can type 1 engines and tenders use FBG-I?
- A.** Gel was meant for type 1 structural use, and there are tactical tenders capable of coating large exposures – structural or wildland.
- Q.** How hard is FBG-I to clean off of a building, after a fire?
- A.** FBG-I can be cleaned off using plain water and a brush or broom.
- Q.** Can FBG-I be re-hydrated, like first-generation super-absorbent gels?
- A.** No. However, the trade-off is the ability to pump and adjust FBG-I on-demand, rather than being stuck with one viscosity.
- Q.** Application of first-generation gels is very temperamental. Is FBG-I?
- A.** No. We rely on a positive displacement pump to “inject” FBG-I into the water stream, while first-generation gels utilized a spring-loaded check valve, which is prone to clogging.
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- Q.** Does ATIRA Systems® provide technical support?
- A.** Yes. Our Strong Water assistance Team (SWaT) includes qualified/carded firefighters who are available to provide frontline support of systems, supply and tactics. We provide training and we “loiter around” our customers to provide ultimate satisfaction.
- Q.** What other help can ATIRA Systems® provide?
- A.** We have three FBG-I equipped type 3 contract (VIPR) engines, which can be available, with or without crews, to supplement agency strike teams. And our sister company, ATIRA GST, manufactures type 3 & 6 engines, tenders and slip-ins.
- Q.** Can ATIRA Systems® repair and configure FoamPro systems and/ or apparatus?
- A.** Yes. We have mobile Field Tech Support units equipped with tools and parts, and we will soon be adding a heavy truck maintenance unit.
- Q.** Does ATIRA Systems® sell FoamPro systems?
- A.** Yes, and we are a factory authorized repair center.
- Q.** Who is using FBG-I?
- A.** CalFire/ San Diego County and San Bernardino County Fire pioneered the use of FBG-I, and are authorities on gel strike team formations. Our VIPR engines have been using FBG-I for four years on contract in USFS Region 6.
- Q.** Does ATIRA® conduct demonstrations?
- A.** We prefer to conduct demonstrations because “seeing is believing.” Call us to schedule a live-fire demonstration.
- Q.** Is FBG-I available from distributors?
- A.** Not yet. We insist on managing the conversion, training, and supply process to ensure ultimate customer satisfaction.
- Q.** Can FBG-I be used in aerial applications?
- A.** Yes, with approvals. It could be used in bucket drops without much fuss, but tanker and internal tank operations are subject to USFS QPL approval, which is in-process – but not yet complete.
- Q.** How would FBG-I work in aerial applications?
- A.** At a 1- 1.5% constancy, FBG-I would wrap the upper layers of vegetation, knocking fire out of the canopy. FBG-I is designed for suppression and it has no long-term (PhosChek) properties. FBG-I will last for several hours on a hot/ windy fire day.
- Q.** How long will FBG-I protect a structure?
- A.** FBG-I will protect for 2-8 hours, depending on the circumstances. Ember and fire-brand showers can be rejected for hours, while a full-on burn-over should have gel applied 1-2 hours before the advancing fire front. Temperature, humidity and wind, as well as coating thickness (1/8” – 1/2”) all contribute to the resultant protection.
- Q.** Are there established tactics for structure protection?
- A.** Apply FBG-I 1-2 hours prior to approaching fire front, retreat to safety, then re-engage to handle any residual hot-spots.
- Q.** How much surface area will a 5-gallon jug of FBG-I cover in protection mode?
- A.** Five gal of FBG-I, at 2% mix of concentrate, with 250 gal of water = 58,000 cu in divided by 3/8” thick = 154,666 sq in or 1074 sq ft of surface area. That will cover the frontal exposure area of most average WUI homes.
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- Q. What model FoamPro should be used to apply FBG-I?  
A. Only FoamPro models 1600 & 2001/2 will provide enough flow for typical discharge rates. Model 1601 units are too small (1/2 the displacement of a 1600 model). Other brands of powered proportioners can also be configured to apply FBG-I.
- Q. Will “around-the-pump” proportioners work for FBG-I?  
A. No. Around-the-pump and syphon eductors rely on a spring-loaded check valve that becomes clogged as gel meets water.
- Q. Are there any special FoamPro installation instructions?  
A. Yes. The suction circuit must be at least 3/4” diameter, short (less than 24”), AND the injection port must be beyond (discharge port side) the flowmeter.
- Q. Are there any other special installation issues?  
A. We relocate the Inject/Calibrate valve to the engineer’s panel, so that purging/ priming can be conducted as needed, without accessing a (typically) buried FoamPro system.
- Q. I am sold – where do I sign?  
A. Call 503-769-8188.