

# FAQ

## Frequently Asked Questions About Soft Bait



**LIPHA TECH**  
The Soft Bait Innovators™

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### OVERVIEW

Liphatech, The Soft Bait Innovators™, is a leader in the manufacture and marketing of the newest rodenticide formulation — soft bait. It is the most significant improvement in rodent control technology in several decades and we see soft bait as the future of rodenticides. It can be used anywhere mini block rodenticides are used and often with better results. Liphatech offers two soft baits: FirstStrike and Resolv, which both consistently outperform traditional wax-based blocks and other soft baits in testing.

We've created this guide to answer your soft bait questions and ensure you are well-informed when it comes to this important tool for your rodent control efforts. To best address the needs of PMPs, we've formatted each section with frequently asked questions and their answers. Read the guide in its entirety or use the table of contents to locate a specific area of interest you may have.

As with traditional rodenticides, not all soft baits are equal. We hope this guide gives you the information necessary to make sound decisions as you incorporate the next level of rodenticide technology into your pest control strategy.



## USAGE

### Can I use soft baits for both rats and mice?

Yes! Testing shows that both FirstStrike and Resolv deliver excellent results for Norway rats, roof rats, and house mice. They are labeled for use only on Norway rats, roof rats, and house mice. Some states have a 24(c) label for other uses, such as pack rats. Always read and follow the label that comes on the product you purchase.

### When should I use soft bait?

Due to the versatility of soft bait, it can become your everyday baiting solution. Soft bait, especially FirstStrike, is great for reducing infestations and for accounts that have lingering rodents. With a lower cost per placement compared to traditional wax-based blocks, you can also use it every day. An additional benefit of soft bait is that it does not melt off of bait rods in hot climates, reducing bait waste.

### When should I expect to see results from soft bait?

According to the label, results in reducing the rodent population for anticoagulant rodenticides like FirstStrike and Resolv should start to appear in about 4 to 5 days. However, due to the high levels of palatability, internal tests have shown excellent results compared to competing products. Actual results may vary based on consumption and size of rodent population.

### How much do I use?

Refer to the pail label directions for proper application directions, use and product restrictions. As of the printing of this document, these are the number of pouches to be used:

| Product                           | House Mice  | Rats  |
|-----------------------------------|---|---|
| <b>FIRST STRIKE</b>               | 1-4 pouches per placement<br>Usually spaced 8-12 feet apart | 9-43 pouches per placement<br>Usually spaced 15-30 feet apart |
| <b>RESOLV</b><br>NO WAX SOFT BAIT | 1-4 pouches per placement<br>Usually spaced 8-12 feet apart | 7-36 pouches per placement<br>Usually spaced 15-30 feet apart |



### Why is there such a large range listed for the number of pouches to use in a particular bait station?

The EPA stipulates what amounts to use based on the target animal as well as the active ingredient. The rodenticide manufacturer doesn't determine these amounts. If you compare Resolv, which has bromadiolone, to a traditional wax-based bromadiolone mini block, the total weight range would be very similar.

### What Personal Protective Equipment (PPE) is required for application?

As mandated by the EPA, the label specifies the use of waterproof gloves, a long-sleeved shirt, long pants, shoes and socks when handling rodenticides and dead animals such as rodents.

### Does it work for burrow baiting?

As of 2012, the EPA prohibited soft bait use in burrows, so seek an alternative rodenticide form for those applications. We highly recommend Maki Bulk Pellets or Generation Bulk Pellets for Norway rat burrow baiting because they are paraffinized to tolerate the moist environment of a burrow and they are seldom kicked out of burrows by rats. We know of no other manufacturer that produces paraffinized pellets.

### Where is it available?



FirstStrike and Resolv are registered and available in the United States. FirstStrike is registered and available in Canada. At the time of this printing, we have applied for registration of Resolv in Canada with the PMRA and expect to receive approval soon.



## PRODUCT PACKAGING

### How many pouches are in a pail?

See the below table for specifics. Pails are filled and sold by weight and not by the number of pouches. FirstStrike 8 lb. pails are available but cannot be sold individually; they are only available in a case quantity (2 – 8 lb. pails per case).

| Product   | 8 lb. Pail     | 16 lb. Pail |
|---|----------------|-------------|
|  | 363 pouches    | 726 pouches |
|  | Not Applicable | 604 pouches |

For comparison: the leading wax-based block has 288 placements per 18 lb. pail.

### How much bait is in a pouch?

FirstStrike soft bait comes in 10 g (0.353 oz.) pouches. Resolv soft bait comes in 12 g (0.423 oz.) pouches.

### Is this a place pack?

No — it is soft bait. Soft bait is the next evolution in rodenticide formulations. We recommend using soft bait like a mini block. It is easy to secure on horizontal or vertical rods in a tamper resistant bait station. It is also easy to secure on a length of wire so it can be placed in an inaccessible void and recovered later. It is labeled to be used in either manner.



**Liquid Bait**

**Tracking Powder**

**Bulk Meal**

**Bulk Pellets**

**Pellet Place Packs**

**Molded Blocks**

**Extruded Blocks**

**Soft Bait**

### Can I remove the bait from the pouch?

Labeling of the product does not allow you to alter FirstStrike or Resolv rodenticides in this way.

### Can I add 'enhancers' to rodenticides?

You cannot add 'enhancers' like peanut butter, vanilla, etc. directly to any rodenticides. The EPA considers this formulating the product which only a manufacturer can do. But with the outstanding palatability of FirstStrike and Resolv, there is no reason to do so!

### How many LD<sub>50</sub> doses are in one pouch?

There is sufficient material in each pouch to provide the LD<sub>50</sub> dose for 2 rats or about 2 dozen mice. LD<sub>50</sub> is the amount of toxin needed to kill half of the tested animals.

### If it is so palatable, will rodents eat more than a lethal dose?

Rodents do not stop feeding after consuming exactly one lethal dose of any anticoagulant rodenticide; especially bait like FirstStrike or Resolv that is very palatable.



## UNIQUE SOFT BAIT CHARACTERISTICS

### Why is there an oily residue?

Our soft bait products contain a number of inert ingredients, in addition to the active ingredients. One of these inert ingredients is vegetable oil, which is used to blend all the ingredients together. The oil produces a bit of oily residue that seeps through the porous paper. Our tests show that rodents are attracted to the aroma generated; thus, enhancing the palatability of our soft bait products.

### Does the oil on the outside of the pouches contain active ingredient?

The oil does contain the active ingredient. As with ALL rodenticides, you should follow label instructions and use gloves for handling. If reducing the amount of active ingredient you come in contact with is important to you, we'd recommend using FirstStrike. The active ingredient in FirstStrike — difethialone — is formulated at .0025% which is half the concentration found in most other single feed anticoagulant rodenticides.

### Does it have an odor?

The soft bait products have an aroma which appears to be attractive to both rats and mice.

### What happens to the packaging material?

In our experience rodents feed on FirstStrike as they do with pellet and meal place packs. Mice tend to chew a hole in the pouch and feed while rats prefer to shred the paper. We have observed rodents using the soft paper for nesting material, after the bait is gone.

### What is the active ingredient?

FirstStrike uses the latest active ingredient available in second generation anticoagulant rodenticides: difethialone. This is a Liphatech exclusive. Generation and BlueMax rodenticides also use difethialone. Resolv uses the most common second generation anticoagulant: bromadiolone. Both active ingredients were invented by Liphatech.

### Does it contain any allergens?

Of the eight most common ingredients that trigger food allergies as defined by the FDA, Liphatech soft bait contains two: soy and wheat. Our soft bait has no milk, eggs, peanuts, tree nuts, fish or shellfish as ingredients. Liphatech soft bait uses vegetable oil and does not contain any type of nut ingredients. The product is manufactured in machinery that does not process products containing nut ingredients.



## ENVIRONMENTAL FACTORS

### Will the oil go rancid?

Raw materials including the oil were chosen in order to avoid rancidness. In addition, specific additives are used to slow the process of the oil becoming rancid.

### Does it work in freezing temperatures?

Yes. Both FirstStrike and Resolv will work in freezing temperatures. The products will get noticeably harder, just like a mini block, but they can still be applied to bait station rods in below 0° F temperatures. Most importantly, the product shape doesn't change, ingredients inside the pouch do not become separated, and palatability levels do not decrease. In conditions below 32° F, we recommend applying soft bait by cupping the pouch in one hand. Use your other hand to hold a horizontal rod and then gently pierce the soft bait with the rod, or support the center of the pouch with your thumb while pressing it down onto a vertical rod.



### What happens when it is exposed to water?

The pouch keeps the product intact so it does not separate. As long as the pouch is intact, it can withstand prolonged exposure in water and the active ingredient will still be effective.

### Will it mold?

You may experience mold similar to most block type rodenticides, typically in environments with high humidity. However, you may find that the rodents will eat the bait long before that. Your visits to check on bait vary based on the infestation level, but do check on the product regularly. If you will only be making widely spaced visits, you may want to use BlueMax, a rodenticide that has the same active ingredient as FirstStrike but has three preservatives to give you added mold protection.

### Will soft bait melt?

Tests have shown that it easily survives 200° F for 16 continuous hours. You can even use horizontal bait rods and have no trouble with the bait falling off.



### Will it stain?

We recommend using this product like a mini block. We have not found it to stain bait stations. If you do put it directly on carpeting or similar surfaces, it may stain.

### Will it hold up outdoors for 30 days?

As with block type rodenticides, it depends on factors such as the weather and rodent feeding. In field tests, intact pouches have held up outdoors in tamper resistant bait stations for over 6 months, but we recommend replacing rodenticide more often.

### Does it attract slugs, snails, or insects?

Compared to other rodenticides that are without paper, the paper pouch will offer some protection against attack by insects and mollusks, at least until it is chewed open by a rodent. Some insects may be able to chew through the paper. We have heard comments from PMPs that soft bait pouches that have been in conditions with slugs and snails have mitigated those pests from disturbing the rodenticide. We have also heard comments about soft bait attracting ants, especially fire ants.

### Will the pouches get stuck together?

Even after exposure to heat near 100° F for a month, pouches in a bucket did not stick together. When subjected to sub-zero temperatures we have noticed a slight tendency for the pouches to stick lightly to one another.

### How often should I clean a station?

Regardless of the rodenticide used, you should monitor, and as necessary, clean the station. Take measures to remove small pieces of product, if needed. The very slight oily residue that may be on the bottom of the stations may actually entice rodents to enter the bait station.

### Is no-wax soft bait better than those with wax?

Yes. There is no paraffin in Liphatech soft bait. Paraffin is derived from petroleum and as such is not a renewable resource like vegetable oil. Also, the vegetable oil used in Liphatech soft baits biodegrades more quickly than the paraffin wax used in other soft baits.

## BAIT STATION SECURITY

### Will it work in a mouse station?

Absolutely. It works well and is easy to use in both mouse and rat stations. In fact, Aegis® mouse stations are great for using soft bait because they have SecurePoint™ Technology. SecurePoint keeps the soft bait securely in place inside the mouse station. Place the needed quantity in the station and you are all set. Even just one soft bait pouch fits snugly in a mouse station.



### Will it stay attached to the rod?

Yes. It will stay securely attached when skewered to either horizontal or vertical rods until a rodent eats it.

### Can I now only use the Aegis-RP in the flat position?

No. You can still take advantage of the flexibility of positioning the RP in the vertical or horizontal positions.

### What about rats transferring the bait away from the station?

Translocation by rodents, including rats, is unlikely. This assumes that the soft bait pouch is securely affixed to a rod in the bait station. Some shreds of the packaging material may be taken by rats for nesting purposes but translocation with soft bait is not any more likely than chunks of a block being pulled out of a bait station.

## COMPARING SOFT BAITS

### How is Liphatech soft bait different from other soft baits?

Our unique methods and proprietary formulations really separate our soft baits from the competition. In internal testing, we have scored higher in palatability and firmly believe that our soft baits aren't just better than any other soft baits, but are better than any other rodenticides.

### Are Liphatech soft baits really better than other rodenticides?

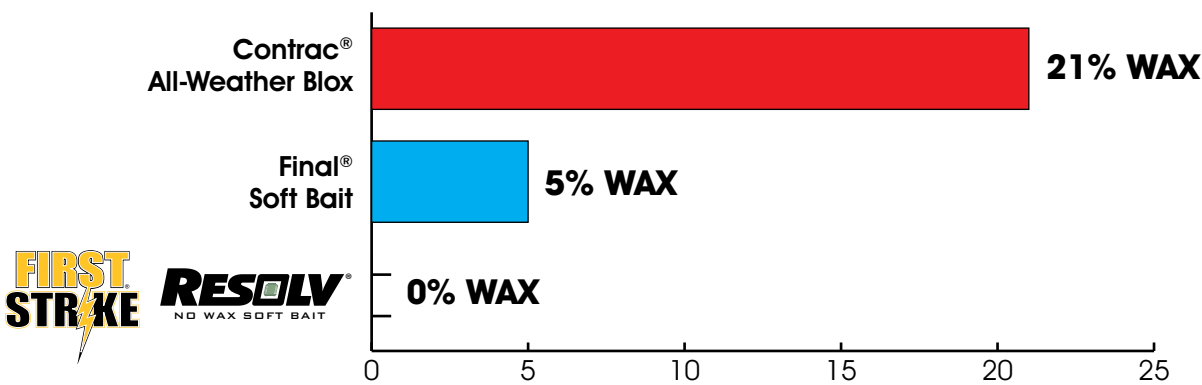
Yes. If you don't take our word for it, read what others have to say about FirstStrike in our Success Story booklet. Or, take the soft bait challenge yourself. On your next new account, test your current wax-based block against FirstStrike or Resolv. We're confident that you'll see that our soft bait has superior feeding. For tips on how to conduct a fair test between rodenticides, please see our technical bulletin, *Using Rodenticide Field Comparison to Advantage*.



### Are all soft baits wax-free?

Both FirstStrike and Resolv do not contain any wax. Wax doesn't add any nutritional value for the rodent and is typically used as a filler in blocks to help them stay on the bait station rod. However, we have tested some competing soft bait that does contain approximately 5% wax. Why waste money on wax when you can use Liphatech soft bait?

### Amount of Wax in Certain Rodenticides





Wax analysis on competing products was conducted by a third party testing lab.

## Frequently Asked Questions About Liphatech Soft Bait

### Do all soft baits have a paper pouch?





Soft baits generally do come contained in a paper similar to what is used for tea bags. However, the amount of paper used per placement varies considerably. For example, FirstStrike and Resolv have significantly less paper than Final soft bait.

| Product   | Soft Bait Pouch Size<br>(sq. inches) | Pouches per 16 lb. Pail<br>(sq. inches) |
|---|--------------------------------------|---|
|  | 10.230                               | 726 pouches                             |
|  | 10.394                               | 604 pouches                             |
| Final   | 16.718*                              | 604 pouches                             |

\*Final has 63.4% more paper than FirstStrike and 60.8% more paper than Resolv.

### What active ingredients are in soft bait?

Different brands have different active ingredients and different formulations. Here is a list of several different soft baits.

| Product   | Active Ingredient<br>(AI) | % AI   | Manufacturer   | Country<br>of Origin |
|---|---------------------------|--------|--|----------------------|
|  | difethialone              | .0025% |  | USA                  |
|  | bromadiolone              | .005%  |  | USA                  |
| Final   | brodifacoum*              | .0025% | Bell Laboratories  | USA                  |
| Brigand   | bromadiolone              | .005%  | PelGar International Ltd.  | UK                   |
| Ratimor   | bromadiolone              | .005%  | Unichem d.o.o.   | Slovenia             |
| Rodenthor   | bromadiolone              | .005%  | Ensystem, Inc.   | USA                  |

\*Brodifacoum soft bait is the most lethal of the active ingredients shown here. Just 100 g results in LD<sub>50</sub> for a 22 lb. dog. The other active ingredients shown take 1600 g or more to reach LD<sub>50</sub> for a 22 lb. dog.

## MISCELLANEOUS

### Where is Liphatech soft bait made?

Both FirstStrike and Resolv are made at our Liphatech, Inc. headquarters in Milwaukee, WI. Due to the highly complicated and unique process, the methods behind making Liphatech soft bait are a trade secret. There are several soft baits available now, but FirstStrike is the leading soft bait and is from The Soft Bait Innovators.™

### Is soft bait a “magic” bait?

FirstStrike and Resolv are excellent and highly palatable rodenticides. However, it is no substitute for effective and proper rodent control practices. If you don't use good rodent control practices, your results will be stunted, regardless of the rodenticide you use.

### Do rats and mice need gnawing surfaces?

Rats and mice seem to prefer food sources on which they can get a tooth hold. They have no trouble getting started on soft bait.

### Is Canadian soft bait and U.S. soft bait the same?

Although the formulations are the same, there are different packaging and different labeling requirements for the U.S. and Canada. For example, the Canadian Pest Management Regulatory Agency (PMRA) has revised the FirstStrike label to “indoor only” for products made after 2012. We expect that Resolv will be approved soon in Canada for both inside and outside use. We filed for Resolv Canadian registration with the PMRA in early 2012.

### What is one of the common problems with soft bait?

One of the problems we find is that PMPs don't put out enough bait. In fact, we've received phone calls from people saying they're mad that the rodent has eaten so much bait. Our thought is that if you're going to go to the trouble of putting out bait for a customer, it should work and it should work well. When you switch from traditional wax blocks to Liphatech soft bait, you may find that you will get more feeding than before. In fact, we've heard from people that when they switched bait at an account they thought had no activity, they found out they had a rodent problem after all. Be sure to put out enough bait, especially when servicing a new account or during a cleanout. You can't kill rodents if there isn't any bait left. We also recommend more periodic visits in the beginning of a new account and/or when there is an infestation.

### Where can I get more information on soft bait?

[www.liphatech.com](http://www.liphatech.com) has more information on Liphatech soft baits, including information sheets, soft bait success stories, MSDS sheets and labels.





# NOTES

**Common examples of trade names are mentioned in this publication.**

FirstStrike®, Generation®, Maki® and Resolv® are registered trademarks of Liphatech, Inc. (Milwaukee, WI).

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Rodenthor® is a registered trademark of Ensystem, Inc. (Fayetteville, NC).

Bitrex® is a registered trademark of McFarlan Smith (Scotland).

**NOTE: At the time of this printing all information was deemed accurate and reliable.**

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# LIPHATECH PROFESSIONAL SOFT BAIT PRODUCTS

## FirstStrike®

A revolutionary concept in rodenticides providing outstanding palatability. Excellent for high infestation areas, or whenever you need your bait to work. Available in a soft bait formulation.

- Contains difethialone (25 ppm), a single-feed, second-generation anticoagulant.
- High rodent acceptance, even when competing food is available.
- Contains no wax, enhancing its palatability to rats and mice.



## Resolv®

The everyday baiting solution.

A soft bait formulation that provides superior palatability and a low cost per placement when compared to traditional blocks.

- Contains bromadiolone, a single-feed, second-generation anticoagulant.
- Contains no wax, enhancing its palatability to rats and mice.
- Doesn't melt in hot temperatures.



## Our Pest Management Mission

Liphatech, Inc. creates successful partnerships with Pest Management Professionals by offering superior and innovative rodent-control products.

We strive to consistently provide outstanding and fast customer service to assist PMPs in improving the quality of human life.

## Industry-leading Rodent-control Solutions

Finding the most effective and efficient solutions for the world's rodent control problems — and helping its customers succeed — has made Liphatech the industry leader.

No matter how complex or challenging a rodent control problem may be, pest management professionals have come to rely on the quality, innovation and expertise of Liphatech.

Throughout its history, Liphatech has focused exclusively on the development and production of rodenticides and related rodent control products. The result? The industry's most advanced technology, along with a powerful commitment to deliver the highest levels of customer service and technical support. Bolstered by ongoing research, our innovations have consistently set the standard for the rodent control industry.