

Tritium Exit Sign Disposal Buyers Guide

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Overview

Tritium exit signs have been a popular choice for over 30 years thanks to their zero-power operation and long service life. These self-luminous signs do not require electricity or wiring, making them ideal for hard-to-access areas, off-grid facilities, and energy-conscious buildings. However, they also carry regulatory responsibilities-because tritium is a radioactive material, disposal must follow strict NRC and EPA guidelines.

In this guide, we'll walk you through everything you need to know: from how tritium exit signs function to how to properly dispose of expired units-and what to replace them with. If you're managing safety compliance for a facility or planning an upgrade, this guide will help you make informed, code-compliant, and cost-effective decisions.

How Tritium Exit Signs Work

Tritium (H-3) is a radioactive isotope of hydrogen. Inside a tritium exit sign, tritium gas is sealed within tiny glass tubes lined with a phosphorescent coating. As the tritium undergoes radioactive decay, it emits low-energy beta particles that excite the coating and cause it to glow-completely

independent of electricity or sunlight.

This makes tritium signs a form of [wireless exit signs](#)-no wiring, batteries, or power supply is required. They're maintenance-free and visible in complete darkness, which is ideal for stairwells, storage areas, and places where backup power may not reach.

Highlight: Tritium signs are visible 24/7 without needing to "charge up" from ambient light like photoluminescent signs do-making them a reliable emergency option even in fully enclosed spaces.

When and Why They Expire

The glowing effect in a tritium sign fades gradually as the radioactive material decays. Most models are rated for 10, 15, or 20 years depending on the amount of tritium gas inside. Once that time is up, the sign no longer provides enough light to meet UL 924 emergency egress standards.

Each unit includes an expiration date printed directly on the label. When that date approaches, building owners and safety officers must act. An expired sign is not only a safety risk-it can also lead to failed inspections, fines, and even legal penalties if not properly disposed of.

You can view top-rated replacements like: [Green Self Luminous Exit Signs](#), [Red Self Luminous Exit Signs](#), and [Black Self Luminous Exit Signs](#)- all designed for long-term performance and full regulatory compliance.

Disposal Process and Safety

Because tritium is a radioactive substance, expired signs must never be thrown in the trash or recycled with standard waste. The U.S. Nuclear Regulatory Commission (NRC) and Environmental Protection Agency (EPA) classify tritium as low-level radioactive material, and disposal is regulated under federal law.

The good news? You don't need to figure this out on your own. EmergencyLights.net offers a complete [Tritium Exit Sign Disposal](#) service to handle everything from packaging and transport to regulatory documentation. It's fast, safe, and ensures you're 100% compliant with federal regulations.

If you're replacing old signs at the same time, you can also take advantage of our [Tritium Exit Sign Recycle 1 for 1 Discount](#)-a special program that offers 20% off recycling fees when you buy a new tritium sign with each disposal.

Pro Tip: Disposal is required whether the sign is glowing or not. If the expiration date has passed, treat the unit as regulated waste regardless of its appearance.

Replacement Options

Once your tritium signs expire, you'll need to replace them with something equally code-compliant. You have a few options depending on your environment and energy goals:

1. New Tritium Exit Signs

If your original setup worked well and you still want a maintenance-free, power-free solution, simply swap in new tritium units. You can [Shop Tritium Exit Signs](#) to find models with 10- or 20-year ratings. They're ideal for remote, high-security, or off-grid locations.

2. Photoluminescent Exit Signs

If your location gets enough ambient light to charge signage, [explore photoluminescent exit signs](#) for an eco-friendly, non-radioactive option. These signs absorb light during the day and glow for hours in darkness. They're also UL 924 listed and accepted in many commercial settings-but they won't work in completely dark rooms or during extended outages without ambient charging.

3. Fire Exit Signs

For conventional applications where electrical access is available, [fire exit signs](#) provide a reliable and code-compliant solution. These LED-based units are energy-efficient, highly visible, and available in a wide range of styles-including combination models with integrated emergency lights. While they do require electricity and battery backup, they're ideal for facilities seeking long-lasting, low-maintenance signage with bright, constant illumination.



Decision Tip: Tritium signs are best for locations where no power is available or where reliability must be guaranteed regardless of outages. Photoluminescent models are best for bright stairwells and hallways. Choose LED if you already have electrical access and want a low-maintenance wired system.

Compliance and Regulations

Tritium exit signs are subject to strict federal regulation because of the radioactive material they contain. All buyers and owners must:

- Ensure signs are marked with a valid expiration date and NRC-required labeling
- Keep inventory records of active and expired signs
- Use a licensed facility or certified recycling provider for disposal

- Report lost, broken, or stolen signs to the NRC immediately

Failing to dispose of expired signs properly can result in steep fines and long-term liability for hazardous waste mishandling. Using a certified disposal service helps eliminate that risk.

If you're unsure about your building's signage status or number of expired units, you can always reach out to us for help. Our Tritium Exit Sign Disposal team will walk you through an audit, issue a quote, and provide all necessary return instructions.

Conclusion and Pro Tips

Tritium exit signs are a smart solution for many facility types-but they come with end-of-life responsibilities. The key to staying safe and compliant is knowing when your signs expire, planning early for replacement, and using a trusted provider for recycling.

Whether you're managing a school, industrial plant, federal building, or private business, here are a few final tips:

- **Check expiration dates annually** and log them into your facility's safety calendar.
- **Group disposal and replacement together** to save time and take advantage of discounts.
- **Keep documentation** of every disposed unit for at least 3 years.
- **Use signs with matching color and visibility needs:** choose green, red, or black faceplate models to meet visibility and interior design requirements.

Final Tip: Don't wait until inspection week. Expired tritium signs often get overlooked because they still glow-but they're still considered expired. Stay ahead with scheduled replacements and certified recycling support.