



How do they work?

Self-Luminous Exit Signs are illuminated with a light source that consists of glass tubes, internally coated with phosphor and filled with tritium gas. Tritium gas (H-3) is an isotope of hydrogen that emits low energy radiation in the form of beta rays, or electrons. These electrons stimulate the phosphor coating causing the tubes to continuously emit light. The mechanism is exactly the same as an electrical fluorescent lamp with the only exception being that the electrons are provided by the tritium rather than by an electric current. They require no external energy source and as such are the most energy efficient lighting product available today. They are also referred to as radio-luminescent light sources.

How long will they last?

Our self-luminous signs are available with a ten-year, twelve-year, fifteen-year or twenty year effective life. Replacement dates are clearly marked on each unit. The effective life of the sign is dependent upon the sign's ability to meet the National Fire Protection Associations minimum luminance requirement of 0.06 footlamberts (0.21 cd/sq m) as measured by a color-corrected photometer. Because tritium decays at a known rate, we are able to calculate the initial brightness required in order to meet the minimum luminance requirement at different points in time. Therefore, the effective life of a self-luminous sign is dependent upon the amount of tritium (measured in curies) that we put into the sealed sources that light our signs. As you would expect, a twenty-year sign requires more tritium gas than a ten-year sign.

Are they approved?

Our signs are manufactured by Safety Light Corporation in Bloomsburg, Pennsylvania under license of the Nuclear Regulatory Commission (NRC). They have successfully passed the most rigorous ANSI N-540 tests for structural integrity. In addition, they are approved for use in ALL code occupancies that require illuminated emergency exit signs. They are UL and/or ETL listed, per UL standard 924 for emergency lighting products, and meet the requirements of the NFPA Life Safety Code 101, the City of Los Angeles, BOCA and the ICBO.

Are Self-Luminous Signs radioactive?

Although tritium is a radioactive isotope, our products emit no radiation. The gas is hermetically sealed into glass tubes. The beta emissions from the tritium gas are completely contained within the tubes. There is absolutely no risk of radiation exposure from normal use of our product. Great care is taken in the construction of our signs to ensure that they will stand up to extremely tough handling.

Keep in mind, for the release of tritium gas to occur, the outer frame and inner protective housing would also have to be destroyed. In this scenario, the released tritium gas would rise and dilute rapidly in the air. If, however, somehow a person were trapped in a 10 ft x 10 ft room with a sign in which all of the tubes had broken, their radiation exposure would be similar to that received from a dental x-ray. These signs would not be Generally Licensed by the Nuclear Regulatory Commission if there were any chance that they posed a health risk to the public in a normal accident event. In fact, self-luminous signs have been used extensively throughout the United States for more than 25 years without incident.

How are they disposed of?

It is unlawful to abandon or dispose of Self-luminous signs except by transfer to persons specifically licensed by the Nuclear Regulatory Agency or by an Agreement State. They cannot be thrown in the trash. We will accept the return of any Self-Luminous signs as outlined in our policy stated below. Otherwise, they must be sent to a facility that is licensed to handle low level radioactive waste. This is stated on the Radioactive Label affixed to the back of each sign. For Disposal, please call 1-800-888-LITE (5483) or e-mail us at disposal@isolite.com.

What is our return policy?

If a replacement sign is purchased, we agree to take back the expired sign at no charge. This applies on a one for one basis i.e. purchase six new signs, return six signs at no charge. This policy applies for any self-luminous sign, regardless of manufacturer. If a replacement sign is not purchased, we will charge a fee to take back the expired sign.