



Nitroglycerin Patch Management

FACT SHEET 37-020-1010

1. BACKGROUND.

a. In its pure form, nitroglycerin poses many hazards. Having the synonyms nitroglycerol, glyceryl trinitrate, trinitroglycerin, and explosive oil, this pale yellow, viscous liquid is extremely dangerous because of explosion and fire, and it is highly sensitive to shock and heat. It is soluble in ethanol and ether, and slightly soluble in water.

b. One method of administering nitroglycerine as a medication is by applying a patch containing formulated quantities of the chemical to a patient's skin. The transdermal system is a flat unit designed to provide continuous controlled release of nitroglycerin through intact skin. The rate of release of nitroglycerin is linearly dependent upon the area of the applied system. Not all of the nitroglycerin is used in normal application, as the remainder in each system serves as a reservoir and is not delivered.

2. NITROGLYCERIN PATCH MANAGEMENT.

a. The chemical nitroglycerin appears on the P-list of the Resource Conservation and Recovery Act (RCRA) with the Waste Code P081 [(40 CFR, Section 261.33(e)]. The U.S. Environmental Protection Agency (EPA) did not intend for the phrase commercial chemical product to apply to manufactured articles such as transdermal patches. In an April, 1995, policy clarification the EPA considered discarded, unused nitroglycerin patches as manufactured articles and does not classify this item as an unused, discarded, commercial chemical product having a P-listed hazardous waste classification. The EPA refers to commercial chemical products as commercially pure grades and technical grades of the listed chemicals or chemical formulations in which the listed chemical is the sole active ingredient (54 FR 31335, 31336 July 28, 1989).

b. The April 1995 clarification pertains only to nitroglycerin patches. No special storage criteria exist for unserviceable patches while awaiting disposal action. This guidance does not apply to other patches containing other active ingredients, such as anti-smoking patches.

3. DISPOSAL.

Nitroglycerin patches may be disposed by incineration or placed in a sanitary landfill. The incinerator must be a multi-chambered incinerator with adequate pollution control devices for the removal of nitrogen oxides. The sanitary landfill shall be constructed, and operated in accordance with title 40, Code of Federal Regulations (CFR), latest edition, part 257, Criteria for Classification of Solid Waste Disposal Facilities and Practices.

All applicable state or local regulations must also be recognized and applied.

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