

Fact Sheet
January 2002

Electroplating Solution Waste Produced in Jewelry Manufacturing



JEWELRY MANUFACTURING WASTE STREAM

DTSC is one of six Boards and Departments within the California Environmental Protection Agency. DTSC's mission is to restore, protect and enhance the environment, to ensure public health, environmental quality and economic vitality, by regulating hazardous waste, conducting and overseeing cleanups, and developing and promoting pollution prevention.

State of California



California
Environmental
Protection Agency



What is this waste?

Electroplating is used to apply a decorative metal coating to a base metal. Electroplating solutions sometimes become dirty and need to be replaced. These electroplating solutions that can no longer be used are referred to as "spent" electroplating solutions.

Why is this waste considered hazardous?

Spent electroplating solutions are usually corrosive* and contain dissolved metals such as gold, silver, platinum, rhodium, copper, nickel, zinc, chrome, or other metals. Spent electroplating solutions may also contain cyanide. Waste that is corrosive or contains dissolved metals is generally harmful to human health and the environment, and is therefore considered hazardous [1].

Why must this waste be managed safely?

Because this waste is hazardous to human health and the environment, it is important to manage it safely, even if the waste contains precious metals. Current laws and regulations tell you how to manage hazardous waste in order to protect public health and safety, and the environment [2]. These regulations also specify how to recover precious metals from hazardous wastes that contain precious metals. Jewelry manufacturers can protect public health and safety, and avoid costly fines and penalties, by managing their hazardous wastes in compliance with these laws and regulations.

How should I manage this waste?

If your business generates a hazardous waste, it is your responsibility to ensure that waste is properly managed (please see the Department of Toxic Substances Control (DTSC) fact sheet on "Hazardous Waste Generator Requirements For Jewelry Mart Operators").

It is unlawful to dump any hazardous waste into the trash or onto the land, or to pour hazardous waste down the sink, into a storm drain, or down

** "Corrosive" is described in California Code of Regulations, title 22, section 66261.22.
‡ "Treatment" is any method, technique, or process which is designed to change the physical, chemical, or biological character or composition of any hazardous waste or any material contained therein, or removes or reduces its harmful properties or characteristics for any purpose, including, but not limited to, energy recovery, material recovery, or reduction in volume. (Health & Saf. Code, § 25123.5 and Cal. Code Regs., tit. 22, § 66260.10.)

The energy challenge facing California is real. Every Californian needs to take immediate action to reduce energy consumption. For a list of simple ways you can reduce demand and cut your energy costs, see our web site at www.dtsc.ca.gov.

the toilet. If you want to treat the hazardous waste that you generate, you must get a grant of authorization or permit for onsite hazardous waste treatment. You can contact your local Certified Unified Program Agency (CUPA) for assistance, or DTSC at (800) 728-6942.

The CUPA cannot grant you authorization to treat hazardous waste that contains cyanide. If you want to treat any waste that contains cyanide, you should contact DTSC for assistance. For additional information regarding cyanide waste, see the DTSC fact sheet on "Cyanide Waste Produced in Jewelry Manufacturing."

You must also have a permit from your local wastewater treatment facility if you want to discharge treated waste to the sewer. Your local CUPA can assist you in complying with the laws and regulations governing the discharge of treated waste.

You can also have your spent electroplating solutions treated offsite by a facility that is permitted to treat the waste. However, it is unlawful to use the United States Postal Service, any common parcel carrier, or anyone who is not a DTSC-registered transporter to transport your hazardous waste offsite. For information about transport requirements, please see the DTSC fact sheet, "Hazardous Waste Generator Requirements for Jewelry Mart Operators."

Can I send my spent electroplating solutions to a company that recovers precious metals?

Yes. However, because spent electroplating solutions are hazardous waste, they can only be sent to a permitted facility that is authorized by DTSC to recover precious metals. You must also use a DTSC-registered transporter to transport the spent electroplating solutions.

Can I reduce the amount of waste that I generate from electroplating?

Yes. The DTSC Office of Pollution Prevention and Technology Development (OPPTD) can help you reduce the amount of hazardous waste you gen-

erate. You can contact OPPTD at (800) 700-5854. For more information, see the DTSC fact sheet on "Jewelry Manufacturing Industry Pollution Prevention Recommendations." By reducing the amount of hazardous waste that you generate from your electroplating operations, you may reduce your costs and legal responsibility associated with hazardous waste management and disposal.

Disclaimer

This fact sheet is intended to provide guidance for managing hazardous spent electroplating solutions. This fact sheet covers only some of the basic management requirements under the Health and Safety Code and the California Code of Regulations. This document does not replace or supersede relevant statutes and regulations. This fact sheet was prepared in January 2002 and is based on statutes and regulations in effect at that time. Interested parties should always review the most current statutes and regulations.

References

1. Cal. Code .Regs., tit. 22, div. 4.5, ch. 11.
2. Health & Saf. Code, div. 20, ch. 6.5, and Cal. Code .Regs., tit. 22, div. 4.5.

¥ The term "onsite facility" is summarized for purposes of this fact sheet to mean a hazardous waste facility at which hazardous waste is generated, and which is owned by, leased to, or under the control of the generator of the waste. (Health and Saf. Code, § 25117.12 and Cal. Code Regs., tit.22, § 66260.10.)† An "offsite facility" means a hazardous waste facility that is not an onsite facility. (Health & Saf. Code § 25117.11 and Cal. Code Regs., tit. 22, § 66260.10.)

Please direct questions to the DTSC Office nearest you, or call the regional Public and Business Liaisons at (800) 72TOXIC (1-800-728-6942) or visit www.dtsc.ca.gov

This fact sheet is also available in Armenian, Spanish, and Vietnamese.

Esta información se encuentra disponible también en armenio, español y vietnamita.

Այս իրողութեան էջերը տրամադրուած են Անգլերենով, Հայերենով, Սպաներենով եւ Վիեթնամերենով:
Tài liệu này được viết bằng tiếng Armenia, tiếng Tây Ban Nha và tiếng Việt