

hazardous chemical inventory form and Material Safety Data Sheet (MSDS) required for phosmet with their SERC, LEPC and local fire department. However, facilities that apply phosmet to crops as a pesticide, do not have to file the inventory form or MSDS because chemicals that are used at facilities in routine agricultural operations are not included as hazardous chemicals subject to the reporting requirements.

The purpose of the extremely hazardous substance list is to focus initial efforts in the development of State and local contingency plans. Inclusion of a chemical on the EHS list does not mean state or local communities should ban or otherwise restrict use of a listed chemical. Rather, such identification indicates a need for the community to undertake a program to investigate and evaluate the potential for accidental exposure associated with the production, storage or handling of the chemical at a particular site.

1. Regulatory Background

The list of extremely hazardous substances and their threshold planning quantities are codified in 40 CFR part 355, Appendices A & B. EPA first published the EHS list and TPQs along with the methodology for determining threshold planning quantities as an interim final rule on November 17, 1986 (51 *FR* 41573–41579 and 41580). In the final rule, EPA made a number of revisions to the interim final rule (52 *FR* 13387, April 22, 1987). Among other things, the final rule republished the EHS list, with the addition of four new chemicals and revised the methodology for determining some TPQs. Details of the methodology used to determine whether to list a substance as an extremely hazardous substance and for deriving the threshold planning quantities are found in the November 1986 and April 1987 **Federal Register** notices and in technical support documents in the rulemaking records. These records are found in Superfund Docket No. 300PQ.

EPA has since received a number of petitions to amend the EHS list. To date, 46 chemicals have been delisted from the EHS list in previous rulemakings because they did not meet the toxicity criteria for the list and were originally listed under section 302 in error.

2. Gowan's Petition to Delist Phosmet

EPA received a petition dated August 8, 1996 from Gowan Company to delete the chemical phosmet from the EHS list under Section 302 of EPCRA. Gowan believes that listing of phosmet was based on an inappropriate toxicity study and argues that phosmet should be

removed from the EHS list because there are no valid data that indicate the chemical meets the listing criteria.

Phosmet (O,O-dimethyl-S-phthalimidomethylphosphorodithioate, CAS No. 732-11-6) is a pink to white crystalline solid with chemical formula $C_{11}H_{12}NO_4PS_2$. It is slightly soluble in water and has a relatively low vapor pressure. It is a non-systemic organophosphate insecticide used for agricultural crop protection in fruit, nut and certain field crops. It is also used on trees and ornamental plants. According to EPA's Office of Pesticide Programs (OPP), approximately 1,250,000 pounds active ingredient (a.i.) of phosmet are used annually. Technical grade phosmet contains approximately 94% phosmet. Products containing phosmet can be in the form of dusts, emulsifiable concentrates, soluble concentrates, and wettable powders and can contain varying amounts of the active ingredient phosmet. More information on phosmet can be found in the February 2003 Technical Background Document: Proposed Rule to Delist Phosmet from the EHS List, available in the docket.

II. The EHS Listing Criteria

As previously described, in November 1985, EPA published a list of substances in Appendix A of the "Chemical Emergency Preparedness Program Interim Guidance." Under section 302(a) of EPCRA, Congress required EPA to adopt that same list as the EHS list. Appendix A defines the list of chemicals as those "for which an acute toxicity measure has a value meeting the criteria stated in Chapter 6" of the November 1985 Interim Guidance. The listing criteria discussed in Chapter 6 are the same criteria referenced and discussed in EPA's interim final and final rules establishing the EHS list. Those criteria contain two sets of numerical acute toxicity measures. For purposes of clarification in today's rulemaking, EPA will refer to the two sets of numerical acute toxicity criteria as the primary listing criteria and the secondary listing criteria. In developing these criteria, the Agency presumed that humans may be as sensitive as the most sensitive mammalian species tested.

A. Primary Listing Criteria

The primary acute toxicity criteria are, based on data from mammalian testing:

Inhalation $LC_{50} \leq 0.5$ milligrams per liter of air (mg/L) (for exposure time ≤ 8 hours), or
 Dermal $LD_{50} \leq 50$ milligrams per kilogram of body weight (mg/kg), or
 Oral $LD_{50} \leq 25$ milligrams per kilogram of body weight (mg/kg)

LC_{50} is the median lethal concentration, defined as the concentration level at which 50 percent of the test animals died when exposed by inhalation for a specified time period.

LD_{50} is the median lethal dose, defined as the dose at which 50 percent of the test animals died during exposure.

B. Secondary Listing Criteria

EPA included on the EHS list other chemicals that did not meet the primary acute toxicity criteria. These were added based on the secondary acute toxicity criteria below as well as the following factors: Large volume production and known risk, as indicated by the fact that some of the chemicals have caused death and injury in accidents.

The secondary acute toxicity criteria are, based on data from mammalian testing:

Inhalation $LC_{50} \leq 2$ mg/L for exposure time of ≤ 8 hours, or

Dermal $LD_{50} \leq 400$ mg/kg or

Oral $LD_{50} \leq 200$ mg/kg

The chemical with the lowest production volume that was included as an EHS based on the secondary criteria and high production volume, had an annual production volume of 30 million pounds. In addition to high production chemicals meeting these criteria, several other chemicals slightly less toxic than the secondary criteria, were listed because of their recognized toxicity as a chemical of concern or known hazard; for example several of them have caused death or injury in accidents.

The selection criteria were designed as screening tools to identify highly acute toxic chemicals. The specific values chosen are recognized by the scientific community as indicating a high potential for acute toxicity, and chemicals meeting the toxicity criteria are considered potentially hazardous. Even with the amount of animal data that are available, some chemicals have no standard acute toxicity test data.

In choosing chemicals for the EHS list, EPA matched the criteria against all mammalian test data for all chemicals. A chemical was identified as acutely toxic according to these criteria if mammalian acute toxicity data for any one of the three routes of administration was equal to or less than the numerical criteria specified for that route. The Agency used LC_{LO} or LD_{LO} data for a chemical in cases where median lethal concentration or dose (LC_{50} or LD_{50}) were not available. The lethal concentration low (LC_{LO}) and the lethal dose low (LD_{LO}) are the lowest concentration in air or the lowest dose