

Chemical database Metadata

The OEHHA Chemical Database is a searchable compilation of health hazard information developed by OEHHA, including reference exposure levels, California public health goals, child-specific reference doses, Proposition 65 safe harbor numbers, soil-screening levels, and fish advisories.

For additional information about the database, please contact Laurie Monserrat at laurie.Monserrat@oehha.ca.gov.

IDENTIFIERS

- CAS number: This registry number is assigned to the specific chemical substance by the Chemical Abstract Service.
- Uses: An overview of the primary uses or sources of the chemical.
- Synonyms: Alternate names used for the chemical.

REFERENCE EXPOSURE LEVELS

- REL: The reference exposure level (REL) reflects an air concentration level at or below which no adverse health effects are anticipated in a human population, including sensitive subgroups.
- Acute REL: The acute reference exposure level reflects a concentration level at or below which no adverse health effects are anticipated in a human population, including sensitive subgroups, exposed to that concentration for one hour on an intermittent basis.
- Species: Species involved in studies providing toxicity data.
- Toxicological endpoint: Health effect observed in affected organ systems.
- Severity: The endpoint of choice for determination of a REL, which is intended to protect the health of the community at large, will generally be a mild effect. However, more severe effects may be used if these are in fact the most sensitive endpoint (for example, irreversible developmental effects), or if no data on mild effects are available.
- Target organs: Organ systems affected by the chemical's acute or chronic health effects.
- 8-Hour REL: The eight-hour reference exposure level reflects a concentration level at or below which no adverse health effects are anticipated in a human population, including sensitive subgroups, exposed to that concentration for eight hours as often as daily. This periodic exposure may share characteristics of both acute and chronic exposure. Pharmacokinetic modeling may be appropriate to determine the cumulative dose from serial eight-hour exposures.

- Chronic REL: The chronic reference exposure level reflects a concentration level at or below which no adverse health effects are anticipated in a human population, including sensitive subgroups, exposed to that concentration continuously for up to a lifetime; the exposure metric used is annual average exposure. These measures are primarily for risk characterization of routine industrial emissions.
- US EPA RfC The reference concentration (RfC) is the United States Environmental Protection Agency's estimate of the concentration at which continuous inhalation exposure is likely to be without risk of deleterious non cancer effects during a lifetime.
- Human data Refers to the availability of human-specific toxicity data.

PUBLIC HEALTH GOALS

- CA PHG The California public health goal refers to the concentration of contaminants in drinking water that pose no significant health risk if consumed for a lifetime. This value is calculated and periodically revised by OEHHA, and is based exclusively on public health consideration.
- Health Risk Category Identifies the specific cancer or non-cancer toxicity effects.
- Cancer risk at PHG Frequently, the goal will reflect an excess risk of 1×10^{-6} alternately expressed as an additional one case in a million. Cancer risk is not calculated when cancer is not a toxicological endpoint.
- MCL value: The maximum contaminant level (MCL) refers to the regulatory standard adopted by the California Department of Public Health, taking into account chemical's health risks, detectability and treat ability, and cost of treatment. Health and Safety Code §116365(a) requires CDPH to establish a contaminant's MCL at a level as close to its PHG as technically and economically feasible, placing primary emphasis on the protection of public health. Each MCL is reviewed for amendment at least once every five years.
- Cancer risk at MCL The excess risk for cancer at the MCL value. Cancer risk is not calculated when cancer is not a toxicological endpoint.
- Notification level Notification levels are health-based advisory levels for chemicals in drinking water, established for chemicals for which there are no formal regulatory standards. Upon request by the Department of Public Health Division of Drinking Water and Environmental Management (DDWEM), OEHHA performs a risk assessment and proposes a health-protective level. A notification level is then established by DDWEM, and amended as necessary. When notification levels are exceeded, the drinking water system is required to notify the local governing body of the local agency in which the users of the drinking water reside. Levels of the contaminant at which DPH recommends the drinking water system take the affected water source out of service range from 10 to 100 times the notification level.

CANCER POTENCY INFO

Unit risk: Unit risk is the upper-bound excess lifetime cancer risk estimated to result from continuous inhalation exposure at a concentration of 1 ug/m³, or oral exposure at a concentration of 1 ug/L.

Slope factor: The slope factor quantifies the relationship between dose and response, specifically the upper bound of 95% confidence level on increased cancer risk from lifetime exposure.

US EPA classification: United States Environmental Protection Agency classification designation regarding type and weight of evidence for human carcinogenicity. See <http://www.epa.gov/ttnatw01/toxsource/carcinogens.html> for more information.

IARC classification: International Agency for Research on Cancer classification designation regarding type and weight of evidence for human carcinogenicity. See <http://monographs.iarc.fr/ENG/Classification/> for more information.

CHILD-SPECIFIC REFERENCE DOSE

chRD: Health and Safety Code Section 901(g) requires OEHHA, in consultation with the appropriate entities within the California Environmental Protection Agency, to identify those chemical contaminants commonly found at school sites and determined by OEHHA to be of greatest concern based on child-specific physiological sensitivities. This child-specific reference dose (chRD) is the OEHHA estimate of the concentration at which continuous ingestion exposure is likely to be without risk of deleterious noncancer effects during a lifetime.

PROPOSITION 65

Consideration for Listing/delisting: Mechanisms by which carcinogens and reproductive toxicants may be listed under Proposition 65.

AB: Authoritative Body. A chemical may be listed under Proposition 65 if an organization designated as an “authoritative body” by the Carcinogen Identification Committee (CIC) or Developmental and Reproductive Toxicity (DART) Identification Committee has identified it as causing cancer or birth defects or other reproductive harm. Specific authoritative bodies are identified below:

AB-FDA: Authoritative Body - U.S. Food and Drug Administration.

AB-IARC: Authoritative Body - International Agency for Research on Cancer

AB-NIOSH: Authoritative Body - National Institute for Occupational Safety and Health

AB-NIOSH/FDA: Authoritative Body - National Institute for Occupational Health and Safety / Food and Drug Association

AB-NTP-CERHR: Authoritative Body - National Toxicology Program- Center for the Evaluation of Risks to Human Reproduction

AB-NTP: Authoritative Body - National Toxicology Program

AB-US EPA: Authoritative Body - U.S. Environmental Protection Agency

LC Labor Code: One of the mechanisms for listing a chemical under Proposition 65. A chemical must be listed if it is identified by reference in Labor Code section 6382(b)(1) or (d) as causing cancer or birth defects or other reproductive harm.

LC-IARC: Labor Code section 6382 (b)(1) refers to substances identified as human or animal carcinogens by the International Agency for Research on Cancer (IARC).

LC - Federal Hazard Communication Standard:

Labor code section 6382(d) refers to chemicals that are within the scope of the Federal Hazard Communications Standard.

FR: Formerly Required. A chemical must be listed under Proposition 65 if a state or federal agency formally requires it to be identified or labeled as a carcinogen or reproductive toxicant. Most chemicals listed in this manner are prescription drugs that are required by the U.S. FDA to contain warnings relating to cancer or birth defects or other reproductive harm.

SQE: State Qualified Expert: Under Proposition 65, a chemical must be listed if one of the State’s Qualified Expert committees decides that a chemical has been clearly shown to cause cancer or reproductive toxicity. Members of 2

committees - the Carcinogen Identification Committee (CIC) and the Developmental and Reproductive Toxicity (DART) Identification Committee - are part of OEHHA's Science Advisory Board, and have been designated as SQEs for evaluating chemicals under Proposition 65.

- NSRL: The "no significant risk level" (NSRL) represents the daily intake level posing a 10^{-5} excess risk of cancer over a lifetime, alternately expressed as an excess one case in 100,000.
- MADL: The "maximum allowable daily level" (MADL) for reproductive toxicants represents the level at which the chemical would have no observable adverse reproductive effect assuming exposure 1,000 times that level.

SOIL SCREENING

Soil-screening number: The soil-screening number represents the level below which there is no significant risk, and above which remediation is recommended. The screening number may be based on a carcinogenic potency factor, reference level for chronic non-cancer toxic effects, or the maximum concentration allowed (100,000 mg/kg).

Fish Advisories: Fish can take in harmful chemicals when they eat, and the levels of chemicals in fish vary depending on the type of fish and where it lives. The most common chemicals found in fish in California are mercury, PCBs, DDTs, and dieldrin. OEHHA develops advisories for eating fish caught in California.