

CHAPTER 7. REGULATIONS AND GUIDELINES

Pertinent international and national regulations, advisories, and guidelines regarding vinyl acetate in air, water, and other media are summarized in Table 7-1. This table is not an exhaustive list, and current regulations should be verified by the appropriate regulatory agency.

ATSDR develops MRLs, which are substance-specific guidelines intended to serve as screening levels by ATSDR health assessors and other responders to identify contaminants and potential health effects that may be of concern at hazardous waste sites. See Section 1.3 and Appendix A for detailed information on the MRLs for vinyl acetate.

Table 7-1. Regulations and Guidelines Applicable to Vinyl Acetate

| Agency | Description | Information | Reference |
|-------------------------|--|---|--|
| Air | | | |
| EPA | RfC | 0.2 mg/m ³ (0.06 ppm) | IRIS 1990 |
| WHO | Air quality guidelines | No data | WHO 2010 |
| Water & Food | | | |
| EPA | Drinking water standards and health advisories | Not listed | EPA 2018a |
| | National primary drinking water regulations | Not listed | EPA 2023b |
| | RfD | Not assessed | IRIS 1990 |
| WHO | Drinking water quality guidelines | No data | WHO 2022 |
| FDA | Substances added to food ^a | Allowed for specific uses under food additives regulations (masticatory substance, solvent, or vehicle) | FDA 2024 |
| Cancer | | | |
| HHS | Carcinogenicity classification | Not evaluated | NTP 2021 |
| EPA | Carcinogenicity classification | Not evaluated | IRIS 1990 |
| IARC | Carcinogenicity classification | Group 2B ^b | IARC 1995 |
| Occupational | | | |
| OSHA | PEL (8-hour TWA) for general industry, construction, and shipyards | Not listed | OSHA 2023a , 2023b , 2023c |
| NIOSH | Ceiling REL (15-minute) | 4 ppm (15 mg/m ³) | NIOSH 2019 |

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| Agency | Description | Information | Reference |
|---------------------------|----------------------------------|-------------|---------------------------|
| Emergency Criteria | | | |
| EPA | AEGLs-air | | EPA 2018b |
| | AEGL 1 ^c | | |
| | 10-minute | 6.7 ppm | |
| | 30-minute | 6.7 ppm | |
| | 60-minute | 6.7 ppm | |
| | 4-hour | 6.7 ppm | |
| | 8-hour | 6.7 ppm | |
| | AEGL 2 ^c | | |
| | 10-minute | 46 ppm | |
| | 30-minute | 46 ppm | |
| | 60-minute | 36 ppm | |
| | 4-hour | 23 ppm | |
| | 8-hour | 15 ppm | |
| | AEGL 3 ^c | | |
| | 10-minute | 230 ppm | |
| 30-minute | 230 ppm | | |
| 60-minute | 180 ppm | | |
| 4-hour | 110 ppm | | |
| 8-hour | 75 ppm | | |
| | Level of distinct odor awareness | 0.25 ppm | |
| DOE | PACs-air | | DOE 2024a |
| | PAC-1 ^d | 6.7 ppm | |
| | PAC-2 ^d | 36 ppm | |
| | PAC-3 ^d | 180 ppm | |

^aThe Substances Added to Food inventory replaces EAFUS and contains the following types of ingredients: food and color additives listed in FDA regulations, flavoring substances evaluated by FEMA or JECFA, GRAS substances listed in FDA regulations, substances approved for specific uses in food prior to September 6, 1958, substances that are listed in FDA regulations as prohibited from use in food, delisted color additives, and some substances "no longer FEMA GRAS."

^bGroup 2B: possibly carcinogenic to humans.

^cDefinitions of AEGL terminology are available from U.S. Environmental Protection Agency (EPA 2018c).

^dDefinitions of PAC terminology are available from U.S. Department of Energy (DOE 2024b).

AEGL = acute exposure guideline levels; DOE = U.S. Department of Energy; EAFUS = Everything Added to Food in the United States; EPA = U.S. Environmental Protection Agency; FAO = Food and Agriculture Organization of the United Nations; FDA = Food and Drug Administration; FEMA = Flavor and Extract Manufacturers Association of the United States; GRAS = generally recognized as safe; HHS = Department of Health and Human Services; IARC = International Agency for Research on Cancer; JECFA = Joint FAO/WHO Expert Committee on Food Additives; NIOSH = National Institute for Occupational Safety and Health; OSHA = Occupational Safety and Health Administration; PAC = protective action criteria; PEL = permissible exposure limit; ppm = parts per million; REL = recommended exposure limit; RfC = inhalation reference concentration; RfD = oral reference dose; TWA = time-weighted average; WHO = World Health Organization