1,2-DICHLOROETHANE

Agency for Toxic Substances and Disease Registry • September 1995

This fact sheet answers the most frequently asked health questions about 1,2-dichloroethane. For more information, you may call 404-639-6000. This fact sheet is one in a series of summaries about hazardous substances and their health effects. This information is important because this substance may harm you. The effects of exposure to any hazardous substance depend on the dose, the duration, how you are exposed, personal traits and habits, and whether other chemicals are present.

SUMMARY: Exposure to 1,2-dichloroethane occurs mainly in the workplace. Breathing high levels of 1,2-dichloroethane damages the central nervous system, heart, liver, kidneys, and lungs. This chemical has been found in at least 493 of 1,416 National Priorities List sites identified by the Environmental Protection Agency.

What is 1,2-dichloroethane?

(Pronounced 1,2-dī′klôr′ō ĕth′ān′)

1,2-Dichloroethane is a manufactured chemical that is not found naturally in the environment. It is clear and has a pleasant smell and a sweet taste. It is also called 1,2-ethylene dichloride, dichloroethylene, or ethylene dichloride.

Its most common use today is to make vinyl chloride and other chemicals and to dissolve grease, glue, and dirt. It is also added to leaded gasoline to remove lead.

In the past, 1,2-dichloroethane was used in home products such as cleaning solutions and paint removers. It is rarely used in these products today.

What happens to 1,2-dichloroethane when it enters the environment?

- Most of it goes into the air during manufacturing or use.
- It evaporates very quickly from water into the air.
- In air, it is readily broken down by sunlight.
- It slowly breaks down in water.
- It can stay in groundwater for many years.
- In soil, it can be broken down within several months if another compound called methane is also present.

How might I be exposed to 1,2-dichloroethane?

- Breathing contaminated air in workplaces where it is used
- Breathing contaminated air near factories where 1,2-dichloroethane is made or used
- Breathing contaminated air near hazardous waste sites that contain the chemical
- Drinking water from contaminated wells
- Breathing contaminated air when using cleaning products or other products that contain 1,2-dichloroethane.

How can 1,2-dichloroethane affect my health?

Breathing **high levels** of 1,2-dichloroethane results in many harmful effects to people. It causes damage to the heart, central nervous system, liver, kidneys, and lungs.

These same effects have been seen in people who accidentally ingested **high levels** of the chemical.

We do not know the effects in people of breathing or ingesting **lower levels** of 1,2-dichloroethane over a longer period of time.

Studies in animals have found similar nervous system damage and kidney disease from breathing and ingesting the chemical. Other effects in animals include a reduced ability to fight infection. These effects have not been adequately studied in people.

Animal studies suggest that 1,2-dichloroethane is not likely to harm the ability to reproduce or cause an increase in the number of birth defects.

Animal studies show that direct contact with 1,2-dichloroethane can cause damage to the skin and eyes.

How likely is 1,2-dichloroethane to cause cancer?

The **Department of Health and Human Services** has determined that 1,2-dichloroethane may reasonably be anticipated to be a carcinogen.

Human studies are inconclusive. Several studies have not shown an increase in tumors in workers exposed to 1,2-dichloroethane. One study found an increase in colon and rectal cancer in people who drank contaminated water, but other chemicals were also present in the water.

There is good evidence from animal studies that ingesting large amounts of 1,2-dichloroethane causes an increase in a variety of tumors. In some animal studies, it caused cancer when breathed or absorbed through the skin.

Is there a medical test to show whether I've been exposed to 1,2-dichloroethane?

Tests are available that measure levels of 1,2-dichloroethane in breath, blood, breast milk, and urine. These tests are not usually available in a doctor's office. However, a sample taken in a doctor's office can be sent to a special laboratory if needed.

1,2-Dichloroethane leaves the body fairly quickly, so these tests are only good for exposures that occurred within the previous few days. The tests can't tell if an exposure will result in harmful effects.

Has the federal government made recommendations to protect human health?

The **Environmental Protection Agency (EPA)** has set a limit in drinking water of 0.005 parts of 1,2-dichloroethane per million parts of water (0.005 ppm). **EPA** requires that discharges or spills into the environment of 100 pounds or more of 1,2-dichloroethane be reported.

The **Occupational Safety and Health Administration (OSHA)** has set an occupational exposure limit of 50 parts of 1,2-dichloroethane per million parts of air (50 ppm) for an 8-hour workday, 40-hour workweek.

The **National Institute for Occupational Safety and Health (NIOSH)** has recommended an occupational exposure limit of 1 ppm of 1,2-dichloroethane for a 10-hour workday, 40-hour workweek.

Glossary

Carcinogen: A substance that can cause cancer

Ingesting: Taking food or drink into your body

PPM: Parts per million

Tumor: An abnormal mass of tissue

References

Agency for Toxic Substances and Disease Registry (ATSDR). 1994. Toxicological profile for 1,2-dichloroethane. Atlanta, GA: U.S. Department of Health and Human Services, Public Health Service.

Where can I get more information?

ATSDR can tell you where to find occupational and environmental health clinics. Their specialists can recognize, evaluate, and treat illnesses resulting from exposure to hazardous substances. You can also contact your community or state health or environmental quality department if you have any more questions or concerns. For more information, contact: Agency for Toxic Substances and Disease Registry, Division of Toxicology, 1600 Clifton Road NE, Mailstop E-29, Atlanta, GA 30333, Phone: 404-639-6000, FAX: 404-639-6315.

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Comments Offered

During a meeting May 16, commenters offered various views of the proposed new standard.

A number of speakers noted the variations among regions in the composition of air pollution, asking that the standard have flexibility to address those differences.

Greg Schaefer, speaking for the Wyoming and Colorado mining associations, called for averaging monitor readings in determining compliance with the proposed regulation, elimination of the PM-10 24-hour standard, and evaluation of alternative forms of the standard to deal with daily variations in the ratio of PM 2.5 and PM 10.

Dale Lundgren, speaking for the National Mining Association, focused on nature's and traffic's contributions to background particulate levels.

Jon Heuss of General Motors said there had been a steadily decreasing amount of PM pollution from U.S. vehicles.

Alfonse Mannato of the American Petroleum Institute asked that the staff and advisory committee consider whether the risk assessment used inflated estimates of health risk from particulates and to address what he called an understatement of the uncertainties about causes and results.

He said the proposed standard would greatly increase the number of non-attainment areas for air quality in the United States. The recommended standard does not have an adequate scientific basis, he said, and EPA should reaffirm its existing standard.

Deborah S. Shprentz of the Natural Resources Defense Council argued for an even lower range for the standard, based on an NRDC estimate of the effects of a PM-2.5 standard of 10 micrograms on mortality and morbidity in 239 metropolitan areas.

She listed "breath-taking uncertainties" and "breath- taking risk ratios" in analyzing the scientific database, but noted the study's findings of thousands of lives prolonged at a PM-2.5 standard of 10.

Ronald White of the American Lung Association said the revised document was a "significant improvement" over the November 1995 draft.

"The American Lung Association agrees with EPA that the current [particulate matter] standard is not protective of human health," White said. "The ALA recommends that you adopt the bottom end of the range."□

Drinking Water

HEALTH ADVISORY GUIDANCE FROM EPA MAY REFLECT NEW INFORMATION ON CANCER

The Environmental Protection Agency may publish new drinking water health advisories, or update existing ones, using new information on cancer risks, an agency official said May 21.

Jennifer Orme-Zavaleta, chief of the Human Risk Assessment Branch in EPA's water office, told a meeting of interested parties that health advisories are currently based on noncarcinogenic effects.

As the agency revises its cancer risk guidelines to recognize that not all carcinogens are the same, this information may be included in its advisories, she said.

Health advisories are studies on the health effects of contaminants in drinking water. Intended to provide guidance for the general public, they also are used to determine the maximum contaminant level of regulated substances.

The agency was seeking input on how the advisories are used, whether changes in their methodologies should be made, how they should be formatted, and how they should best be used.

State, municipal, and water utility representatives told EPA officials the advisories are used for chemical spill incidents, as guidance for treatment techniques and technology, for enforcement, and by schools.

Participants asked the agency to focus its advisories on those contaminants that are most likely to be found in water systems. They also asked for less technical, "reader-friendly" documents. It was suggested that EPA prepare different fact sheets, more concise forms of these advisories, for different audiences.

EPA has published health advisories on 146 contaminants. Additional advisories are under development for cyanazine, chlorine dioxide, chloral hydrate, chlorine, dichloracetic acid, trichloracetic acid, trichloroethylene, manganese, methyl-t-butyl ether, chloramines, trihalomethanes, bentazon, arsenic, sulfate, polychlorinated biphenyls, hexazinone, and toxaphene.

Meeting participants suggested the agency prepare health advisories for acetochlor, chlorometron, nitrate, dioxin, and triazines.□

Ozone Depletion

ALL REFRIGERANT SUBSTITUTES MAY BE SUBJECT TO USE CONDITIONS, EPA SAYS IN PROPOSAL

Conditions imposed on certain ozone-depleting chemicals would be extended to all substitutes for CFC-12 that are used in vehicle air conditioners under an Environmental Protection Agency proposal to be published May 22.

EPA proposed to apply use conditions imposed on certain compounds to all substitutes for CFC-12, a chlorofluorocarbon used as a coolant. In June 1995 EPA issued a rule to apply the conditions for two alternatives (112 DEN A-4, 6/13/95) (60 FR 31092). It then proposed to apply those conditions to two other compounds Oct. 2, 1995, and will make that proposal final in a separate notice scheduled to appear May 22 (190 DEN A-2, 10/2/95) (60 FR 51383).

CFC production was banned in 1995 because the chemicals are considered class I ozone depleting substances under the Clean Air Act. Provisions in that law implement requirements under the Montreal Protocol on Substances that Deplete the Ozone Layer.

Among the use conditions set up by EPA are restrictions designed to prevent cross contamination between CFCs and their substitutes and to smooth the transition to alternatives. For example, each refrigerant may be used only with the fittings unique to that compound. The conditions also include labeling requirements and a ban on using a substitute to "top off" a system that uses another refrigerant, EPA said.

copy to Brad Kokin GPS

Lambchops, potatoes, and mushrooms also would not meet the RCRA exit level criteria because they have at least one constituent found at higher levels than what EPA proposed.

Other common items that would fail the RCRA exit level include human blood, plasma, transfused blood, municipal sewage sludge, asphalt, and soil, Ekart said.

Sludges that are considered non-hazardous in publicly owned treatment works would be considered hazardous under the HWIR proposal because the constituent levels in the waste water are higher than the HWIR proposal, Ekart said.

For industry to meet the conservative exit levels, "it means our waste water and sludges have to be much cleaner than the food we eat and the soil we walk on," Ekart said. "And in some instances, it has to be cleaner then the water we drink."

A greater concern for the waste generating industry is that little environmental benefit can be gained from meeting the exit levels and that the risk assessment will be used on future rulemakings agencywide, she said.

Agency Expected Comparisons

The agency anticipated that the waste generating industry would make comparisons such as the one Ekart made, Tina Kaneen, an attorney in EPA's Office of General Council, said at the panel discussion. While EPA made similar comparisons, "Ours didn't look quite as dismal," she said.

The agency's intention is not to propose exit levels that are in the range of naturally occurring compounds in the environment, Kaneen said.

"We wouldn't want to achieve that result, or we would want to have a good explanation for doing so," she said. The agency will look at seemingly conservative exit levels and determine whether the risk assessment methodology on those constituents is flawed and can be amended, Kaneen said.

The treatment industry, on the other hand, is concerned that the exit levels for some constituents are too high. David Case, general counsel for the Environmental Technology Council, said at the panel discussion.

At the proposed exit levels for lead, waste will easily corrode the liners in solid waste landfills, Case said. "Our perspective is this approach ought to be conservative. This is a very large step for EPA to take," Case said.

The multipathway risk assessment is important for EPA to have developed because in the first HWIR rule, the exit levels were based on ground water contamination only. That approach was unacceptable to the states and to the technology council, Case said.

He acknowledged that some of the proposed exit levels are conservative, but defended the agency's proposal. "The rule was never intended to allow waste as generated to exit RCRA Subtitle C in large volumes," Case said. "We're talking about a relief valve" for materials that are mixed with or derived from hazardous waste. The HWIR rule is only supposed to apply to very low-risk wastes, such as residues of waste treated to land disposal restriction levels, Case said.

Kaneen noted that only about 21 percent of hazardous wastes could qualify to exit the RCRA Subtitle C regime under the proposal.

While the focus of the HWIR proposal has been on the mutlipathway risk assessment, Case urged that commenters and EPA pay attention to the implementation of the rule.

Self Implementation

The agency is calling for a self-implementing system, in which industry would sample and analyze its wastes and test them for levels of constituents. If those levels meet the exit criteria, industry would just have to document that the waste is not subject to RCRA Subtitle C regulations.

But Case said self-implementation may not be credible. Public participation is cut down in a self-implementing rule, he said. The rule proposes that a newspaper notice be placed in the community where the waste is generated. But Case noted that the community receiving the waste that is considered no longer hazardous also should receive notice.

"We think the most important thing is for HWIR to be credible," Case said. Without extensive public participation, credibility is diminished.□

— By Amy Porter

Chemical Safety

EU DRAFT LIST OF CHEMICALS FOR TESTING, ASSESSMENT, TRIGGERS CRITICISM FROM U.S.

The European Union has drafted a list of 42 chemicals for possible testing and risk assessment, prompting a new round of criticism from U.S. officials, who argue that European countries should focus on substances for which there is little information about health or ecological effects.

In a series of interviews with BNA Feb. 12-23, officials from both sides of the Atlantic discussed whether the selection of chemicals in the EU's draft third priority list was compatible with a voluntary chemical testing program set up under the Organization for Economic Cooperation and Development.

A chief criticism by U.S. officials is that the EU draft list targets chemicals which, for the most part, already have been tested extensively. When the list is issued in final form, it also will serve as the EU's contribution to the OECD chemical testing program, which is called the Screening Information Data Sets program.

Bringing well-studied chemicals into the SIDS program thwarts the goals of the program, according to the U.S. officials.

SIDS, established in 1989, was designed to obtain a base set of health and ecological effects data on high production volume chemicals to identify those that may pose a hazard or need additional in-depth testing. Another goal was to spread the cost of chemical testing evenly among industrialized countries with each OECD member country agreeing to be responsible for a certain percentage of the chemicals reviewed in SIDS.

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For several of the chemicals selected by the EU, such as formaldehyde and cadmium, the level of understanding about their potential adverse health effects is so great that sophisticated risk assessments have been done for them, Ellen Silbergeld, a University of Maryland toxicologist, said.

Silbergeld, who represents U.S. environmental groups at SIDS meetings, said those chemicals are not appropriate for the OECD screening program.

EU Third Priority List

The draft list is the third such list since the EU's chemical regulation was established in 1993. The list is expected to be made final by the end of 1996, European officials said. Patrick McCucheon, a senior official with the Commission of the European Union, told BNA composition of the final list is not likely to change significantly.

The underlying regulation authorizes the EU to obtain information about chemicals in commerce and regulate them if they pose a threat. It calls for the annual publication of a priority list of chemicals for regulatory review. The EU regulation is comparable to the chemical reporting, testing, and control provisions in the Toxic Substances Control Act.

The EU's selection of well-studied chemicals in its first and second priority lists also sparked the ire of U.S. chemical makers. U.S. companies said the EU was not carrying its fair share of the testing burden in the OECD screening program (184 DEN AA-1, 8/10/95).

U.S. Companies, Environmentalists Concerned

After reviewing the draft third priority list, representatives of U.S. environmental groups joined U.S. chemical makers in expressing disappointment.

Third EU Draft Priority List

EINECS No.	CAS No.	Substance	Sponsor Country
203-713-7	109-86-4	2-metoxyethanol	Austria
231-152-8	7440-43-9	cadmium compounds	Belgium
202-716-0	98-95-3	nitrobenzene	Germany
204-539-4	122-39-4	diphenylamine	Germany
225-768-6	5064-31-3	trisodium nitrilotriacetate	Germany
233-118-8	10039-54-0	bis(hydroxylammonium) sulphate	Germany
239-148-8	15096-52-3	trisodium hexafluoroaluminate	Germany
250-378-8	30899-19-5	pentanol	Germany
287-477-0	85535-85-9	alkanes, C_{14-17}, chloro	Germany
231-111-4	7440-02-0	nickel	Denmark
232-104-9	7786-81-4	nickel sulfate	Denmark
200-838-9	75-09-2	dichloromethane	France
203-905-0	111-76-2	2-butoxyethanol	France
204-371-1	120-12-7	anthracene, pure	Greece
231-555-9	7632-00-0	sodium nitrite	Italy
231-959-5	7782-50-5	chlorine	Italy
200-001-8	50-00-0	formaldehyde	The Netherlands
200-915-7	75-91-2	tert-butyl hydroperoxide	The Netherlands
201-178-4	79-11-8	chloroacetic acid	The Netherlands
266-028-2	65996-93-2	pitch, coal tar, high temperature	The Netherlands
203-806-2	110-85-0	piperazine	Sweden
247-148-4	25637-99-4	hexabromocyclododecane	Sweden
216-653-1	1634-04-4	tert-butyl methyl ether	Sweden/France
203-458-1	107-06-2	1,2-dichloroethane	United Kingdom
231-906-6	7778-50-9	potassium dichromate	United Kingdom
232-143-1	7789-09-5	ammonium dichromate	United Kingdom
234-190-3	10588-01-9	sodium dichromate	United Kingdom
265-150-3	64742-48-9	naphtha (petroleum), hydrotreated heavy	United Kingdom
265-151-9	64742-49-0	naphtha (petroleum), hydrotreated light	United Kingdom
265-178-6	64742-73-0	naphtha (petroleum), hydrodesulfurized light	United Kingdom
270-093-2	68410-97-9	distillates (petroleum), light hydrotreating process-low boiling	United Kingdom
286-511-9	85116-60-5	naphtha (petroleum), hydrodesulfurized thermal cracked light	United Kingdom
286-512-4	85116-61-6	naphtha (petroleum), hydrotreated light, cycloalkane-containing	United Kingdom
295-432-1	92045-51-7	naphtha (petroleum), heavy steamed-cracked, hydrogenated	United Kingdom
295-433-7	92045-52-8	naphtha (petroleum), hydrodesulfurized full range	United Kingdom
295-438-4	92045-57-3	naphtha (petroleum), hydrotreated light, steam cracked	United Kingdom
295-443-1	92045-61-9	hydrocarbons, C_{4-12}, naphtha cracking hydrotreated	United Kingdom
295-529-9	92062-15-3	solvent naphtha (petroleum), hydrotreated light naphthenic	United Kingdom
296-942-7	93165-55-0	naphtha (petroleum), light steam-cracked hydrogenate	United Kingdom
297-852-0	93763-83-8	hydrocarbons, C_{6-11}, hydrotreated, dearomatized	United Kingdom
297-853-6	93763-34-9	hydrocarbons, C_{9-12}, hydrotreated, dearomatized	United Kingdom

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"That the EU is throwing chemicals into the SIDS program like cadmium doesn't make sense," Silbergeld said. Current cadmium testing is sophisticated to the point where researchers are evaluating the chemical at the molecular level, she said.

To use the SIDS framework — which was designed to evaluate high production, data-poor chemicals — for cadmium is ridiculous, she said, adding that there is more data on cadmium than can fit into a SIDS dossier.

An entire SIDS review meeting, where normally data on 20 chemicals are evaluated, would be needed to do a proper review of cadmium data, Silbergeld said.

By the EU selecting well-studied chemicals, the SIDS program is being asked to become more than a chemical screening and testing program, Ed Miller, a senior technical associate from Eastman Chemical Co., based in Kingsport, Tenn., said. Miller also participates in OECD's SIDS program.

The well-studied chemicals should be evaluated to determine if risk reduction action are needed, the U.S. officials said. This type of risk management activity was not envisioned to happen as part of SIDS, they said.

OECD has a separate program, the risk reduction program, where OECD members have struggled to reach consensus on how and whether to control uses of substances like lead, mercury, cadmium, methylene chloride, and brominated flame retardants.

U.S. industry remains committed to SIDS program, Miller said. Silbergeld agreed. She said the SIDS program has become a "How can I meet my workload?" resource for many countries.

EU: Substances That Could Pose Risk

McCucheon acknowledged the disagreement between the EU and United States about the type of chemicals that should be brought into SIDS. He said the EU's regulatory program was frustrated by the first chemicals that completed the SIDS program. Those chemicals were determined not to pose a risk and need no additional work, he said, adding that was not a good use of limited chemical screening and testing resources.

"We have a slightly different view of OECD program [than U.S. representatives]. We think the SIDS program should do more than fill data gaps. It should produce an initial assessment that should be the basis for OECD risk reduction activity," he said.

As a result, the EU has selected only chemicals thought to pose a risk for its priority lists and its contribution to the SIDS program, McCucheon said.□

— By Sara Thurin Rollin

Mining

HOUSE RESOURCES SUBCOMMITTEE TO HOLD HEARING ON MINE ON YELLOWSTONE BORDER

A House subcommittee will hold a hearing on the controversial gold mine planned for the northern border of Yellowstone National Park in Montana, members of the panel announced Feb. 29.

Rep. James Hansen (R-Utah), chairman of the House Resources Subcommittee on National Parks, Forests, and Lands, Feb. 29 agreed to conduct the hearing, according to two members of the panel. The two, Ranking Minority Member Bill Richardson (D-NM) and Rep. Pat Williams (D-Mont), asked Hansen to hold the hearing.

An aide to the subcommittee told BNA no date has been set for the hearings.

Concern about the proposed mine, which would be dug 2½ miles from the northeast corner of Yellowstone, focuses on its high-altitude, high-precipitation, earthquake-prone location and a planned 5.5 million ton tailing impoundment. Crown Butte Mines Inc., a Canadian-owned corporation based in Montana, plans to extract gold, silver, and copper from the site in the Gallatin National Forest, according to a Feb. 29 hearing request letter from Williams to Hansen.

In the letter, Williams said, "We frankly need to hear what impact there may be on Yellowstone's wildlife; what precautions are necessary to avoid a catastrophic spill into the local streams and watershed; who will ultimately bear the cost of potential environmental degradation."

Williams noted that Richardson in 1995 introduced HR 1846, a measure that would cancel Crown Butte Mines' federal land leases.

"I haven't signed onto this particular bill," the Montana congressman wrote. But, he said, Richardson's legislation "is a seriously intentioned and inventive bill and would be a useful focus of a hearing and discussion" on the mine.

Williams said Congress should investigate "whether this mine can be safely operated or should be operated at all on Yellowstone National Park's border." The Montana Democrat called Yellowstone, the world's first national park, "the crown jewel of America's park system"

Meanwhile, Tom Cassidy, general counsel for conservation group American Rivers, said, "The mountains above Yellowstone National Park and the Clarks Fork of the Yellowstone River are the most unsuitable place imaginable for a large mine." If mined, the site would pose "long-term chronic and potentially catastrophic environmental damage," he said in a statement.

"The recreational, ecological, fish and wildlife, and scenic value of these lands to the American public far outweigh the short-term profits and long-term environmental threats posed by the mine," Cassidy said.

According to American Rivers, the company will have to pay $5 per acre — for a total of $220 — to mine the site, paying no royalties. The dollar figure and policy on royalties are mandated by the 1872 Mining Law.□

Risk Assessment

NEW REPORT FROM SCIENCE ADVISORY B ARD TO ADDRESS ECONOMICS, QUALITY OF LIFE

The board of scientists advising the Environmental Protection Agency will probably add "quality of life" issues and increased economic data to its next analy-

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1,2-DICHLOROETHANE

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This fact sheet answers the most frequently asked health questions about 1,2-dichloroethane. For more information, you may call 404-639-6000. This fact sheet is one in a series of summaries about hazardous substances and their health effects. This information is important because this substance may harm you. The effects of exposure to any hazardous substance depend on the dose, the duration, how you are exposed, personal traits and habits, and whether other chemicals are present.

SUMMARY: Exposure to 1,2-dichloroethane occurs mainly in the workplace. Breathing high levels of 1,2-dichloroethane damages the central nervous system, heart, liver, kidneys, and lungs. This chemical has been found in at least 493 of 1,416 National Priorities List sites identified by the Environmental Protection Agency.

What is 1,2-dichloroethane?

(Pronounced 1,2-dī′klôr′ō ĕth′ān′)

1,2-Dichloroethane is a manufactured chemical that is not found naturally in the environment. It is clear and has a pleasant smell and a sweet taste. It is also called 1,2-ethylene dichloride, dichloroethylene, or ethylene dichloride.

Its most common use today is to make vinyl chloride and other chemicals and to dissolve grease, glue, and dirt. It is also added to leaded gasoline to remove lead.

In the past, 1,2-dichloroethane was used in home products such as cleaning solutions and paint removers. It is rarely used in these products today.

What happens to 1,2-dichloroethane when it enters the environment?

- Most of it goes into the air during manufacturing or use.
- It evaporates very quickly from water into the air.
- In air, it is readily broken down by sunlight.
- It slowly breaks down in water.
- It can stay in groundwater for many years.
- In soil, it can be broken down within several months if another compound called methane is also present.

How might I be exposed to 1,2-dichloroethane?

- Breathing contaminated air in workplaces where it is used
- Breathing contaminated air near factories where 1,2-dichloroethane is made or used
- Breathing contaminated air near hazardous waste sites that contain the chemical
- Drinking water from contaminated wells
- Breathing contaminated air when using cleaning products or other products that contain 1,2-dichloroethane.

How can 1,2-dichloroethane affect my health?

Breathing **high levels** of 1,2-dichloroethane results in many harmful effects to people. It causes damage to the heart, central nervous system, liver, kidneys, and lungs.

These same effects have been seen in people who accidentally ingested **high levels** of the chemical.

We do not know the effects in people of breathing or ingesting **lower levels** of 1,2-dichloroethane over a longer period of time.