

DR-0002-5310 HEXACHLOROBENZENE

REPT Z

LATEST REVISIONS: 05/17/92

This information applies to the stated material and may not apply to dilutions or formulations of the material.

CAS NUMBER: 000118-74-1
OTHER IDENTIFIERS: K-002688
SYNONYMS: BENZENE, HEXACHLORO-
PERCHLOROBENZENE
HCB

CHEMICAL AND PHYSICAL PROPERTIES

These data compiled from various sources and not verified. Additional information is available through your site's Reactive Chemical Program.

APPEARANCE: WHITE NEEDLES

MOLECULAR WEIGHT: 284.80

BOILING POINT: 322 C

MELTING POINT: 229 C (SUBLIMES)

VAPOR PRESSURE: <1 mm Hg @ 25C

1 mm Hg @ 114.4C

FLASH POINT: 242 C

STABILITY/REACTIVITY:

VERY STABLE -- UNREACTIVE

ODOR DESCRIPTION: musty, oily, solvent-like

POTENTIAL HEALTH EFFECTS

(Revised:05/17/92)

This section includes possible adverse effects which could occur if this material is not handled in the recommended manner.

EYE:

- Essentially nonirritating to eyes.

SKIN:

- Essentially nonirritating to skin.
- A single prolonged exposure is not likely to result in the material being absorbed through skin in harmful amounts.
- The LD50 for skin absorption in rabbits is >2000 mg/kg.
- Repeated skin contact presents a hazard due to accumulation of HCB in the body.

INGESTION:

- Single dose oral toxicity is low.
- The oral LD50 for rats is 3500 mg/kg.
- Although single-dose oral toxicity is low, ingestion of small amounts presents a hazard due to accumulation of HCB in the body.

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ACUTE INHALATION EFFECTS:

- Vapors are unlikely due to physical properties.
- Exposure to dusts may contribute to the accumulation of HCB in the body.

SUBCHRONIC EFFECTS:

- Excessive exposure may cause neurologic signs and symptoms.
- Observations in animals include ovarian effects.
- Repeated excessive exposures may cause altered blood/bile pigment metabolism (porphyria) and liver, kidney, skin, nervous, skeletal, muscular and immune system effects.

CHRONIC EFFECTS / CARCINOGENICITY:

- Has been shown to cause cancer in laboratory animals.
- For hazard communication purposes under OSHA Standard 29 CFR Part 1910.1200, this chemical is listed as a potential carcinogen by NTP and IARC.

TERATOGENIC EFFECTS:

- Has caused birth defects in laboratory animals only at doses toxic to the mother.
- Has been toxic to the fetus in laboratory animals at doses nontoxic to the mother.
- Toxicity to the neonate but not birth defects have occurred in offspring of humans known to have ingested toxic amounts of hexachlorobenzene.

REPRODUCTIVE EFFECTS:

- In animal studies, has been shown to interfere with reproduction.
- HCB is bioconcentrated in body fat and is transferred to the fetus via the placenta and to the neonate via lactation.

MUTAGENICITY:

- Results of in vitro ('test tube') mutagenicity tests have been negative.
- Results of mutagenicity tests in animals have been negative.

EXPOSURE GUIDELINES

Hexachlorobenzene: Dow Biological Limit Guide is 150 ppb in the blood.
There is no guideline for airborne concentrations.

IR-0002-5310

HEXACHLOROBENZENE

REPT Z

HANDLING PRECAUTIONS AND PROTECTIVE EQUIPMENT (REVISED:05/06/87)

These recommended precautions are intended for use during normal operating conditions; emergency conditions could require additional precautions. (For an explanation of the low, moderate and high potential exposure categories or specific recommendations for your specific operation contact your industrial hygienist.)

EYE

- LOW - Use safety glasses.
- MODERATE - Use safety glasses.
- HIGH - Use safety glasses.

SKIN

- LOW - No precautions other than clean body-covering clothing should be needed.
- MODERATE - Use protective clothing impervious to this material. Selection of specific items such as gloves, boots, apron, or full-body suit will depend on operation.
- HIGH - Use protective clothing impervious to this material. Selection of specific items such as gloves, boots, apron, or full-body suit will depend on operation.

INHALATION

- LOW - No respiratory protection should be needed.
- MODERATE - Use an approved air-purifying respirator.
- HIGH - Use an approved respirator. Selection of air-purifying or positive-pressure supplied-air will depend on the specific operation and the potential airborne concentration of the material.

INGESTION

- Avoid ingestion of even very small amounts; do not consume or store food or tobacco in the work area; wash hands and face before smoking or eating.

WARNING PROPERTIES:

- Odor is inadequate warning of excessive exposure.

VENTILATION

- Good general ventilation should be sufficient for most conditions.

PROTECTIVE EQUIPMENT INFORMATION

- The following should be effective protective clothing materials: neoprene, nitrile butadiene rubber.
- There are no respirator test data available for this chemical or mixture. Data for related chemicals indicate that the following should be effective types of air-purifying respirators: organic vapor with dust prefilter.

DR-0002-5310

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EMERGENCY TREATMENT AND MEDICAL NOTES Revised:05/06/92)

EYE

- Flush eyes with plenty of water.

SKIN

- Wash off in flowing water or shower.

INGESTION

- Induce vomiting if large amounts are ingested. Consult medical personnel.

INHALATION

- Remove to fresh air if effects occur. Consult a physician.

NOTES TO PHYSICIAN:

- Individuals with chronic or long time exposure to hexachlorobenzene should receive biological monitoring of blood levels.
- No specific antidote.
- Supportive care. Treatment based on judgment of the physician in response to reactions of the patient.

END OF REPORT; FOR ADDITIONAL INFORMATION CONTACT:

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