

G038
1,2-Dichloropropane [78-87-5]

Results of Testing

Chemical Name	CAS No.	Study Code/Type	Protocol/Guideline	Species	Exposure	Dose/Concentration	No. per Group	Results	Reference
1,2-Dichloropropane	78-87-5	EEATOX Algae acute toxicity	40 CFR 797.1050	<i>Skeletonema costatum</i> (algae)	5 days	10, 18, 32, 56, 100 mg/L (nominal)	Not applicable	Although a general trend of decreasing algal population growth with increasing nominal concentrations of the test substance was observed, the measured concentrations for each nominal value display sufficient variability that it is not appropriate to determine EC values. There were no significant differences between the mean cell counts in the 10 and 18 mg/L concentrations and the control on any of the exposure days. Thus, the no-observed-effect-concentration (NOEC) across all exposure days is 18 mg/L. It was not possible to distinguish algalistic from algicidal effects.	53 FR 49227; 12/6/88 OTS0527733
Dichloropropane, 1,2-	78-87-5	HEDIRR Permeability coefficient (Kp)	69 FR 22402 OPPT-2003-0006		in vitro			TEST DATA IN REVIEW PROCESS	71 FR 13390 3/15/06 OPPT-2003-0006
Dichloropropane, 1,2-	78-87-5	HEDIRR Dermal absorption	69 FR 22402 OPPT-2003-0006		in vitro	10 minutes		TEST DATA IN REVIEW PROCESS	71 FR 13390 3/15/06 OPPT-2003-0006
Dichloropropane, 1,2-	78-87-5	HEDIRR Dermal absorption	69 FR 22402 OPPT-2003-0006		in vitro	60 minutes		TEST DATA IN REVIEW PROCESS	71 FR 13390 3/15/06 OPPT-2003-0006
1,2-Dichloropropane	78-87-5	EEATOX Algae acute toxicity	40 CFR 797.1050	<i>Selenastrum capricornutum</i> (algae)	5 days	100, 180, 320, 560, 1000 mg/L (nominal)	Not applicable	Although a weak trend of decreasing algal population growth with increasing concentrations of the test substance was observed for some sampling days, the measured concentrations for each value display sufficient variability that it is not appropriate to determine EC values. There were no significant differences between the mean cell counts in any of the test concentrations and the control on exposure days 2, 4, and 5. Thus, the no-observed-effect-concentration (NOEC) for these exposure days is 1000 mg/L. The mean cell counts in the 180, 560, and 1000 mg/L test concentrations on day 3 were significantly different from that in the control, although the mean cell count in the 320 mg/L was not. The test material did not exhibit any algalistic or algicidal effects.	53 FR 49227; 12/6/88 OTS0527733
1,2-Dichloropropane	78-87-5	EEATOXCRST Mysid shrimp acute toxicity	40 CFR 797.1930	mysid shrimp	flow-through, 96 hr	0, 6.5, 10.8, 18, 30, 50 mg/L (nominal)	Not applicable	Results indicate that the 24-hour old mysids have a 96-hour LC ₅₀ value of 24.79 mg/L and the NOEL is 4.92 mg/L with no sublethal effects observed during the test. The 3-4 day old mysids have a 96-hour LC ₅₀ value greater than 26.65 mg/L and the NOEL is 4.92 mg/L.	53 FR 49227; 12/6/88 OTS0527733

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1,2-Dichloropropane	78-87-5	EECTOX Chronic toxicity in daphnids	40 CFR 797.1330	<i>Daphnia magna</i>	flow-through, 21 days	0, 7.5, 12, 21, 36, 60 mg/L (nominal)	Not applicable	Exposure to the test substance resulted in a 21-day no observed effect level (NOEL) is 8.3 mg/L. The lowest observed effect level (LOEL) is 15.8 mg/L. The maximum acceptable toxicant concentration (MATC) is 11.4 mg/L.	53 FR 49227; 12/6/88 OTS0527733
1,2-Dichloropropane	78-87-5	EECTOXRST Mysid shrimp chronic toxicity	40 CFR 797.1390	<i>Mysidopsis bahia</i> (mysid shrimp)	flow-through, 28 days	0.41, 0.97, 1.35, 2.48, and 4.09 mg/L	Not specified	A LOEC was not established due to lack of any significant effects on G ₁ mysid survival, growth, or reproduction. The NOEC was 4.09 mg/L. Therefore, the MATC was > 4.09 mg/L, the highest concentration tested.	54 FR 11273; 3/17/89. OPTS0527735, Docket# 44527
1,2-Dichloropropane	78-87-5	HEADME Pharmacokinetics studies	40 CFR 795.230 (modified)	rat	oral (gavage), single-dose	1 or 100 mg/kg/day	4/sex/group	Following administration of the test substance, between 91 and 107% of the administered radioactivity was recovered. The main routes of elimination were the urine (50%), expired air (30%), feces (6%), and cage washes (3%). The test substance was widely distributed among organs and tissues, with the liver containing the most radioactivity. The majority of the urinary, pulmonary, and fecal elimination of radioactivity occurred in the first 24-hours after dosing. Labeled DCP comprised 82% of the ¹⁴ C exhaled at the 100 mg/kg dose. Three of 4 metabolites detected in urine were mercapturic acid metabolites.	54 FR 21282; 5/17/89 OTS527713
1,2-Dichloropropane	78-87-5	HEADME Pharmacokinetics studies	40 CFR 795.230 (modified)	rat	oral, gavage, 1/d, 8 days	1 mg/kg/day (non-labeled) for 7-days; on the 8th day rats received 1 mg/kg/day (labeled)	4/sex/group	Following administration of the test substance, 96% of the administered radioactivity was recovered. The main routes of elimination were the urine (44%), expired air (55%), feces (6%), and cage washes (3%). The test substance was widely distributed among organs and tissues, with the liver containing the most radioactivity. The majority of the urinary, pulmonary, and fecal elimination of radioactivity occurred in the first 24-hours after dosing. Three of the four metabolites detected in urine were mercapturic acid metabolites.	54 FR 21282; 5/17/89 OTS527713
1,2-Dichloropropane	78-87-5	HEADME Pharmacokinetics studies	40 CFR 795.230 (modified)	rat	inhalation, 6 hours	0, 5, 50, 100 ppm	4/sex/group	The main routes of elimination were the urine (60%) and expired air (20%). As the exposure concentration increased, the amount of exhaled volatile organics increased. The liver and kidneys had a greater amount of radioactivity among the tissues analyzed. The feces represented a minor excretory pathway (8%). The majority of the urinary, pulmonary, and fecal elimination of radioactivity occurred in the first 24-hours after dosing. Half-life elimination from blood was 30 and 24 minutes for males and females, respectively. Dose-related peak plasma concentrations were observed 4 hours after exposure. Analysis of urine revealed 5 metabolites, no parent compound was identified. Three of the metabolites detected in urine were mercapturic acid metabolites.	54 FR 21282; 5/17/89 OTS527713

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Chemical Name	CAS No.	Study Code/Type	Protocol/Guideline	Species	Exposure	Dose/Concentration	No. per Group	Results	Reference
1,2-Dichloropropane	78-87-5	HECTOXCARC Carcinogenicity Study	National Toxicology Program (NTP)	F344/N rats	gavage, 5/wk, 103 weeks	0, 62, 125 mg/kg (males); 0, 125, 250 mg/kg (females)	50 males 50 females	No evidence of carcinogenicity for male rats at all dose levels. There was equivocal evidence of carcinogenicity in female rats at the 250 mg/kg level based on a marginally increased incidence of adenocarcinomas in the mammary gland which occurred concurrent with decreased survival and reduced body weight.	NTP TR-263, April 1986; NTIS PB 871114443/AS
1,2-Dichloropropane	78-87-5	HECTOXCARC Carcinogenicity Study	National Toxicology Program (NTP)	B6C3F ₁ mice	gavage, 5/wk, 103 weeks	125, 250 mg/kg	50 males 50 females	There was some evidence of carcinogenicity for male and female mice as indicated by increased incidences of hepatocellular neoplasms, primarily adenomas.	NTP TR-263, April 1986; NTIS PB 871114443/AS
1,2-Dichloropropane	78-87-5	HEGTOXCHRM Rodent dominant lethal assay	40 CFR 798.5450	rats	oral (diet), 14 weeks	0, 0.024, 0.10, 0.24%	30/males/group	Treated male rats were mated to pairs of untreated adult females each week for 2-weeks. Female rats were killed 14-days after the middle of the breeding period for evaluation of dominant lethal effects by measurement of the resorption rate. High-dose males had decreased water consumption and mid- and high-dose males had decreased body weight. The treatment had no adverse effects on male fertility as determined by mating performance and resorption rate. The treatment did not induce a dominant lethal effect, indicating that the test substance was not mutagenic to male germ cells.	54 FR 25167; 6/13/89 OTS527736
1,2-Dichloropropane	78-87-5	HENEUR Functional observational battery	40 CFR 798.6050	rats	oral (gavage), 5 d/wk for 13 weeks	0, 20, 65, 200 mg/kg/day	15/sex/group	Clinical signs of high-dose males included depressed weight gain and was also noted in mid-dose males and high-dose females. No effects were noted upon the functional observation battery, hind limb grip strength, or motor activity at any of the monthly intervals throughout the study. No gross or histopathologic effects on the nervous system, either central or peripheral, were demonstrated.	53 FR 49227; 12/06/88 OTS0527733
1,2-Dichloropropane	78-87-5	HENEUR Motor activity	40 CFR 798.6200	rats	oral (gavage), 2 weeks	0, 300, 500 mg/kg/d	10 male; 10 female	Observations included tearing, blinking, and lethargy (300 and 500 mg/kg). There were no statistically significant differences in motor activity between treated and control animals.	53 FR 49227; 12/6/88 OTS0517725
1,2-Dichloropropane	78-87-5	HENEUR Neuropathology	40 CFR 798.6400	rats	oral (gavage), 2 weeks	0, 300, 500 mg/kg/d	10 male; 10 female	Decreased respiration was noted in 4 females in each treatment group. There were no effects on hematologic values. Liver and kidney weights were increased in treated test animals.	53 FR 49227; 12/6/88 OTS0517725
1,2-Dichloropropane	78-87-5	HERTOXTERA Developmental toxicity	40 CFR 798.4900	rabbits	oral (gavage), days 7-19 of gestation	0, 25, 100, 250 mg/kg	7 pregnant females	Mortality increased in the 250 mg/kg/day dose group. Treatment-related anemia was observed in both the 100 and 250 mg/kg/day dose groups. This was evident by decreased hematocrit, hemoglobin concentration, and red blood cell count. There was an increase in the reabsorption rate at the 250 mg/kg/day dose level.	54 FR 21282; 5/17/89 OTS0516583

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1,2-Dichloropropane	78-87-5	HERTOXTERA Developmental toxicity	40 CFR 798.4900	rats	oral (gavage), days 6-15 of gestation	0, 50, 125, 250, 500 mg/kg/d	10 pregnant females	Treatment with test material produced statistically significant lower body weights at 125 and 500 mg/kg/day. Slight decreases in mean red blood cell number, hemoglobin concentration, and hematocrit were noted at 500 mg/kg/day. No signs of embryolethality or reproductive effects were noted.	54 FR 25167; 6/13/89 OTS0516720
1,2-Dichloropropane	78-87-5	HERTOXTERE Reproductive/fertility study	40 CFR 798.4700	rats	oral (drinking water), 2 generations	0, 0.024, 0.10, 0.24% (limit of solubility)	30/sex/generation	Concentration-related reduced water consumption and weight gain were noted. No gross pathological effects were seen at any level, but increased hepatocellular granularity was noted in both generations. High-exposure animals of both generations had litters with reduced neonatal body weights and survival rates.	55 FR 27303; 7/02/90 OTS0527738