

**TOXIC CHEMICALS IN  
SCENTED LAUNDRY DETERGENT AND FABRIC SOFTENER  
AND HEALTH HAZARDS**

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Health effects obtained from the National Library of Medicine's Toxicology Data Network (TOXNET®). Note that fragranced consumer products are not required to disclose all chemicals, not even ones classified as toxic or hazardous under federal laws. None of these chemicals were listed on the product label or material safety data sheet.

**1,4-DIOXANE (123-91-1)**

“Highly toxic by inhalation. Easily absorbed through lungs. Symptoms include irritation of the respiratory tract, headache, nausea, vomiting, dizziness, and narcosis.” “Can cause liver damage and brain and lung edema. Death may occur from kidney failure.” “sore throat, abdominal pain.” Other symptoms parallel to those from inhalation.” “Causes irritation to the skin.” “May be absorbed through the skin with possible systemic effects.” “can cause severe irritation, possible corneal burns and eye damage.” “may cause central nervous system depression, loss of appetite, nausea, abdominal tenderness, and liver or kidney damage.” “mucous membrane irritation; ocular, nasal, and pulmonary irritation; and hepatic and renal damage.” “ can result in confusion, ataxia, drowsiness, convulsions, renal and hepatic damage”

Recognized Carcinogen

Cardiovascular or Blood Toxicant, Gastrointestinal or Liver Toxicant, Immunotoxicant, Kidney Toxicant, Neurotoxicant, Respiratory Toxicant, Skin or Sense Organ Toxicant

Regulated as toxic/hazardous chemical under the following law(s):

Air Contaminants (OSHA), Hazardous Air Pollutants (CAA), Hazardous Constituents (RCRA), Hazardous Substances (CERCLA), Toxic Release Inventory Chemicals (EPCRA), Air Contaminants (CA OSHA), Toxic Air Contaminant (CA TAC)

**ACETALDEHYDE (75-07-0)**

“Inhalation is associated with irritation of the eyes, skin, and respiratory tract” “Irritates nose and mucous membranes of the upper respiratory system.” “considered a potential developmental toxin and a probable human carcinogen.” “May cause cancer based on animal studies. May cause lung damage. May cause central nervous system (CNS) depression. May cause liver and kidney damage. Marine pollutant.”

Recognized Carcinogen

Developmental Toxicant, Immunotoxicant, Kidney Toxicant, Neurotoxicant, Respiratory Toxicant, Skin or Sense Organ Toxicant

Regulated as toxic/hazardous chemical under the following law(s):

Air Contaminants (OSHA), Hazardous Air Pollutants (CAA), Hazardous Substances (CERCLA), Regulated Toxic, Explosive, or Flammable Substances (CAA), Toxic Release Inventory Chemicals (EPCRA), Air Contaminants (CA OSHA)

**CHLOROMETHANE (74-87-3)**

“Inhalation may cause dizziness, vomiting, diarrhea, abdominal pain, convulsions, and visual disturbances.” “will severely irritate and damage the skin, eyes, mucous membranes and upper respiratory tract.” “may cause unconsciousness and death.” “Symptoms may be delayed.” “can have serious effects on nervous system, including convulsions and coma. “can also cause staggering, blurred or double vision, dizziness, fatigue, personality changes, confusion, tremors, nausea, or vomiting.” “symptoms can last for several months or years.” “can harm liver and kidneys.”

Recognized Developmental Toxicant

Suspected Carcinogen, Cardiovascular or Blood Toxicant, Gastrointestinal or Liver Toxicant, Kidney Toxicant, Neurotoxicant, Reproductive Toxicant, Respiratory Toxicant, Skin or Sense Organ Toxicant

Regulated as toxic/hazardous chemical under the following law(s):

Air Contaminants (OSHA), Hazardous Air Pollutants (CAA), Hazardous Constituents (RCRA), Hazardous Substances (CERCLA), Priority Pollutants (CWA), Regulated Toxic, Explosive, or Flammable Substances (CAA), Toxic Release Inventory Chemicals (EPCRA), Air Contaminants (CA OSHA)

**BENZYL ACETATE (140-11-4)**

“toxicity high via inhalation route; capable of causing death or permanent injury” “incapacitating and poisonous” “Hazardous in case of skin contact (irritant), of eye contact (irritant), of ingestion, of inhalation.” “toxic to central nervous system (CNS). Repeated or prolonged exposure to the substance can produce target organs damage.” “Target organ(s): Kidneys. Nerves.” “Mutagenic.” “May affect behavior, brain and central nervous system (general anesthetic), respiration, urinary system.” “From vapors: irritating to eyes and respiratory passages.” “Can be absorbed through the skin causing systemic effects.” “Do not flush to sewer.”

Gastrointestinal or Liver Toxicant, Kidney Toxicant, Neurotoxicant, Respiratory Toxicant

Regulated as toxic/hazardous chemical under the following law(s):

Air Contaminants (CA OSHA)

**2-BUTANONE (METHYL ETHYL KETONE) (78-93-3)**

“Exposure may cause skin dryness or cracking. “Vapors may cause drowsiness and dizziness.” “irritating to the eyes, nose and throat.” “Prolonged exposure may produce central nervous system depression.” “Neurotoxin”

Cardiovascular or Blood Toxicant, Developmental Toxicant, Gastrointestinal or Liver Toxicant, Kidney Toxicant, Neurotoxicant, Reproductive Toxicant, Respiratory Toxicant, Skin or Sense Organ Toxicant

Regulated as toxic/hazardous chemical under the following law(s):

Air Contaminants (OSHA), Hazardous Air Pollutants (CAA), Hazardous Constituents (RCRA) Hazardous Substances (CERCLA), Toxic Release Inventory Chemicals (EPCRA), Air Contaminants (CA OSHA), Toxic Air Contaminant (CA TAC)

**Tert-BUTYL ALCOHOL (75-65-0)**

“Causes skin irritation” “Causes eye irritation” “Causes respiratory tract and mucous membrane irritation” “May also affect behavior/central nervous system (ataxia, somnolence), respiration (dyspnea), urinary system” “Can cause gastrointestinal irritation” “Exposure can cause nausea, headache and vomiting”

Developmental Toxicant, Kidney Toxicant, Neurotoxicant

Regulated as toxic/hazardous chemical under the following law(s):

Air Contaminants (OSHA), Registered Pesticides (FIFRA), Toxic Release Inventory Chemicals (EPCRA), Air Contaminants (CA OSHA)

**3-CARENE (BICYCLO(4.1.0)HEPT-3-ENE, 3,7,7-TRIMETHYL-) (13466-78-9)**

“May cause eye irritation.” “Causes skin irritation. May be harmful if absorbed through the skin. May cause sensitization by skin contact.” “May cause irritation of the digestive tract. May be harmful if swallowed.” “May cause respiratory tract irritation. May be harmful if inhaled.”

**2,4-DIMETHYL-3-CYCLOHEXENE-1-CARBOXALDEHYDE (68039-49-6)**

“Irritating to the eyes.” “Irritating to the skin.” “Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.” “may cause irritation of the throat and nose, headache, nausea and drowsiness.”

**ETHANOL (64-17-5)**

“May cause irritation of eyes, and mucous membranes.” “May cause central nervous system depression” “Preexisting eye, skin, and respiratory disorders may be aggravated by exposure to this product.”

Suspected Carcinogen, Cardiovascular or Blood Toxicant, Developmental Toxicant, Endocrine Toxicant, Gastrointestinal or Liver Toxicant, Kidney Toxicant, Neurotoxicant, Reproductive Toxicant, Respiratory Toxicant, Skin or Sense Organ Toxicant

Regulated as toxic/hazardous chemical under the following law(s):

Air Contaminants (OSHA), Registered Pesticides (FIFRA), Air Contaminants (CA OSHA)

**ETHYL ACETATE (141-78-6)**

“can cause drying of skin.” “Irritating to the eyes.” “irritating to nasal passage and throat.” “can cause stupor and headaches” “can cause headache, drowsiness and unconsciousness.”

Neurotoxicant, Respiratory Toxicant, Skin or Sense Organ Toxicant

Regulated as toxic/hazardous chemical under the following law(s):

Air Contaminants (OSHA), Hazardous Substances (CERCLA), Registered Pesticides (FIFRA), Air Contaminants (CA OSHA)

**d-LIMONENE (138-86-3)**

“Extremely hazardous in case of eye contact. Very hazardous in case of skin contact.” “may lead to chronic respiratory irritation.” “Prevent its contact with skin or eyes.” “Always wash thoroughly after using this material and before eating, drinking, ...applying cosmetics. Do not inhale limonene vapor.” “symptoms include...burning pain in the mouth and throat, abdominal pain, nausea, vomiting, diarrhea, transient excitement, ataxia, delirium, stupor, coughing, choking, dyspnea, cyanosis, fever and tachycardia. In addition, pulmonary edema and pneumonitis may occur with limonene aspiration or systemic absorption. Dizziness and suffocation may be observed following limonene inhalation.”

**$\alpha$ -PINENE (2,6,6-TRIMETHYLBICYCLO(3.1.1)-2-HEPT-2-ENE) (80-56-8)**

“Irritates skin, mucous membranes.” “Causes skin eruption, GI irritation, delirium, ataxia, kidney damage, coma.” “Inhalation causes palpitation, dizziness, nervous disturbances, chest pain, bronchitis, nephritis.” “Benign skin tumors” “Damaging to the immune system.”

Neurotoxicant, Respiratory Toxicant, Skin or Sense Organ Toxicant

Regulated as toxic/hazardous chemical under the following law(s):

Registered Pesticides (FIFRA)

**$\beta$ -PINENE (“2(10)-PINENE”) (127-91-3)**

“Skin, eye and respiratory irritant.” “very destructive of mucous membranes.” “Vapors may cause dizziness or suffocation.” “Severe irritation.” “Shortness of breath, headache, nausea, and vomiting.”

**$\alpha$ -TERPINENE (99-86-5)**

“Irritating to eyes, respiratory system and skin.” “Toxic to aquatic organisms, may cause long-term adverse effects.”