



Denatonium Benzoate in Ethylene Glycol Solution

Safety Data Sheet

Section 1 – Identification	
Product Identifier: Manufacturer: Emergency telephone number: Product form: Intended use: Restriction on use:	Denatonium Benzoate in Ethylene Glycol Solution Aversion Technologies, Inc. 1125 West Street, Suite 328 Annapolis, Maryland 21401 USA +1-202-657-6300 +1-202-365-9001 Liquid Alcohol denaturant, bitterant None
Section 2 – Hazard(s) Identification	
2.1 Classification:	This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200) Acute oral toxicity, Category 4 Single exposure target organ toxicity - Central nervous system (CNS), Category 3 Repeated exposure target organ toxicity – Kidney, Liver, Category 2
2.2 Signal Word:	Warning 
2.3 Hazard Statement(s):	Harmful if swallowed May cause drowsiness or dizziness May cause damage to organs through prolonged or repeated exposure
2.4 Precautionary Statement(s):	Prevention Do not breathe dust/fume/gas/mist/vapors/spray Use only outdoors or in a well-ventilated area Response Get medical attention/advice if you feel unwell Inhalation IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing Call a POISON CENTER or doctor/physician if you feel unwell Storage Store in a well-ventilated place. Keep container tightly closed Store locked up Disposal Dispose of contents/container to an approved waste disposal plant
Section 3 – Composition/information on ingredients	
3.1 Common name:	Denatonium Benzoate in Ethylene Glycol
3.2 Chemical name:	ammonium, benzyl, diethyl ((2,6-xylyl carbomoyl) methyl)-benzoate)
3.3 Composition:	Denatonium Benzoate ≥ 25% CAS: 3734-33-6 Acute Tox. 4 (Oral), H302 Skin Irrit. 2, H315 Eye Irrit. 2A, H319 STOT SE 3, H335 Ethylene Glycol ≤ 75% CAS: 107-21-1 Acute Tox. 4, H302
Section 4 – First aid measures	
Eye Contact:	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Obtain medical attention.
Skin Contact:	Wash off immediately with plenty of water for at least 15 minutes. Obtain medical attention.
Inhalation:	Move to fresh air. If breathing is difficult, give oxygen. Get medical attention immediately if symptoms occur.
Ingestion:	Rinse mouth thoroughly. Drink plenty of water.

Most important symptoms/effects	No information available.
Notes to physician:	Treat symptomatically
Section 5 – Fire fighting measures	
Suitable extinguishing media:	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Unsuitable extinguishing media:	No information available
Specific hazards arising from the chemical:	Thermal decomposition can lead to release of irritating gases and vapors. Keep product and empty container away from heat and sources of ignition.
Hazardous combustion products:	Carbon monoxide (CO) Carbon dioxide (CO ₂)
Protective equipment and precautions for firefighters:	As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.
Section 6 – Accidental release measures	
Personal precautions, protective equipment and emergency procedures:	Ensure adequate ventilation. Use personal protective equipment.
Environmental precautions and protective procedures:	Should not be released into the environment. See Section 12 for additional ecological information.
Methods for Containment and Clean Up:	Soak up with inert absorbent material. Keep in suitable, closed containers for disposal.
Section 7 – Handling and storage	
Precautions:	Wear personal protective equipment. Ensure adequate ventilation. Do not breathe vapors or spray mist. Avoid contact with skin, eyes and clothing.
Storage:	Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from heat and sources of ignition.
Section 8 – Exposure controls/personal protection	
Occupational Exposure Limits:	ACGIH TLV: Ceiling: 100 mg/m ³ OSHA PEL: (Vacated) Ceiling: 50 ppm (Vacated) Ceiling: 125 mg/m ³ NIOSH IDLH: Not available Biological exposure index: Not available EU Regulation: Not available
Appropriate engineering controls:	Provide local exhaust ventilation system or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value. Check legal suitability of exposure level.
Respiratory Protection:	Respiratory protection: Wear NIOSH or European Standard EN 149 approved full or half face piece (with goggles) respiratory protective equipment.
Protective Gloves:	Wear appropriate chemical-resistant gloves that protect chemicals directly
Eye Protection:	An eye wash unit and safety shower station should be available nearby work place. Wear face piece with goggles to protect from scattering toxic substance.
Skin and Body Protection:	Wear appropriate protective chemical-resistant clothing.
Section 9 – Physical and chemical properties	
Physical State:	Viscous Liquid
Color:	Colorless
Odor:	Odorless
pH:	Need pH
Melting Point:	-13 °C / 8.6 °F
Boiling Point:	196 - 198 °C / 384.8 - 388.4 °F
Flash Point:	116 °C / 240.8 °F
Decomposition Temperature:	> 500°C
Relative Density:	1.113
Processing Temperature:	340°C
Chemical Family:	Glycols
Substances:	Ethylene glycol with a 25% solution of denatonium benzoate
Section 10 – Stability and reactivity	
Stability:	Hygroscopic; Stable under normal temperatures and pressures.
Incompatibility (Materials to Avoid):	Strong oxidizing agents, Strong acids, Strong bases, Aldehydes
Conditions to Avoid:	Avoid heat, sparks, flames and other sources of ignition. Avoid contact with prohibited mixture materials. Avoid release to the environment.
Possibility of hazardous reactions:	No dangerous reaction known under conditions of normal use.
Hazardous decomposition products:	May cause methane, propane, carbon oxide, aldehyde and other organic vapors when thermal decomposition occurs.
Section 11 – Toxicological information	
Acute oral toxicity LD50 rat:	4000 - 10200 mg/kg
Dermal LD50 rabbit:	9530 µL/kg
Acute inhalation toxicity:	No data available
Irritation:	Irritating to the eye. Minor skin irritation.

Sensitization:	No data available
Reproductive Effects:	Experiments have shown reproductive toxicity effects on laboratory animals.
Teratogenicity:	Teratogenic effects have occurred in experimental animals.
STOT - single exposure:	Central nervous system (CNS)
STOT - repeated exposure:	Kidney, spleen, blood
Section 12 – Ecological Information	
Freshwater Algae:	6500 - 13000 mg/L EC50 96 h
Freshwater Fish:	16000 mg/L LC50 96 h 40000 - 60000 mg/L LC50 96 h 40761 mg/L LC50 96 h 27540 mg/L LC50 96 h 14 - 18 mL/L LC50 96 h 41000 mg/L LC50 96 h
Microtox:	No Data Available
Water Flea:	46300 mg/L EC50 = 48 h
Persistence and Degradability:	Miscible with water. Persistence is unlikely based on information available.
Bioaccumulation/ Accumulation:	No information available.
Mobility:	Will likely be mobile in the environment due to its water solubility.
Section 13 – Disposal Considerations	
Waste Disposal Methods:	Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.
Section 14 – Transport information	
DOT	Not regulated
TDG	Not regulated
IATA	Not regulated
IMDG/IMO	Not regulated
Section 15 – Regulatory Information	
Label for Supply:	
U.S. Federal Regulations	
TSCA 12(b)	Not applicable
SARA 313	Not applicable
SARA 311/312 Hazardous Categorization	
Acute Health Hazard	Yes
Chronic Health Hazard	Yes
Fire Hazard	No
Sudden Release of Pressure Hazard	No
Reactive Hazard	No
Clean Water Act	Not applicable
Clean Air Act	Not applicable
OSHA Occupational Safety and Health	Not applicable
Administration	
CERCLA	Not applicable
California Proposition 65	This product does not contain any Proposition 65 chemicals
U.S. Department of Transportation	
Reportable Quantity (RQ)	No
DOT Marine Pollutant	No
DOT Severe Marine Pollutant	No
U.S. Department of Homeland Security	This product does not contain any DHS chemicals.
Section 16 – Other Information	
Revised: 08/20/2016	
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