SAFETY DATA SHEET
Dry Moly Lubricant

Revision: 09/26/2017
Supersedes Revision: 03/18/2014

1. Product and Company Identification

Product Code: C3322

Product Name: Dry Moly Lubricant

Company Name:	CYCLO INDUSTRIES, INC. 902 SOUTH US HIGHWAY 1 JUPITER, FL 33477	**Phone Number:** (800)843-7813
Web site address:	www.cyclo.com	
Email address:	ehs@cyclo.com	
Emergency Contact:	First Aid Emergency CHEMTREC (703) 527-3887	(800)752-7869 (800)424-9300
Information:	First Aid Emergency (Outside U.S.)	(312)906-6194

Intended Use: Lubricant

2. Hazards Identification

Flammable Aerosols, Category 1
Serious Eye Damage/Eye Irritation, Category 2A
Specific Target Organ Toxicity (single exposure), Category 3
Specific Target Organ Toxicity (repeated exposure), Category 2

GHS Signal Word: **Danger**

GHS Hazard Phrases:
H222: Extremely flammable aerosol.
H319: Causes serious eye irritation.
H336: May cause drowsiness or dizziness.
H373: May cause damage to organs through prolonged or repeated exposure.
H229: Pressurized container: May burst if heated.

GHS Precaution Phrases:
P210: Keep away from heat/sparks/open flames/hot surfaces - No smoking.
P211: Do not spray on an open flame or any other ignition source.
P251: Pressurized container: Do not pierce or burn, even after use.
P260: Do not breathe dust/fume/gas/mist/vapors/spray.
P264: Wash hands thoroughly after handling.
P271: Use only outdoors or in a well-ventilated area.
P280: Wear protective gloves/protective clothing/eye protection/face protection.

GHS Response Phrases:
P370+378: In case of fire, use foam, alcohol foam, carbon dioxide, dry chemical or water fog for extinction.
P370+378: In case of fire, use foam, alcohol foam, carbon dioxide, dry chemical or water fog for extinction.
P303+361+353: IF ON SKIN (or hair): Remove/take off immediately all contaminated clothing. Rinse skin with water/shower.
P301+330+331: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P304+340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P303+361+353: IF ON SKIN (or hair): Remove/take off immediately all contaminated clothing. Rinse skin with water/shower.
P363: Wash contaminated clothing before reuse.
P305+351+338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P309+311: Call a POISON CENTER or doctor/physician if exposed or you feel unwell.

GHS Storage and Disposal P405: Store locked up.

Phrases: P410+412: Protect from sunlight and do not expose to temperatures exceeding 50 ºC/122 ºF.
P501: Dispose of contents/container in accordance with local/regional/national/international regulation.

3. Composition/Information on Ingredients

CAS #	Hazardous Components (Chemical Name)	Concentration
67-64-1	Acetone	35.0 -45.0 %
78-93-3	Methyl ethyl ketone	25.0 -35.0 %
74-98-6	Propane	5.0 -10.0 %
106-97-8	Butane	5.0 -10.0 %
67-63-0	Isopropyl alcohol	1.0 -10.0 %

4. First Aid Measures

Emergency and First Aid Procedures: If swallowed, do not induce vomiting. If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. IIf in eyes, rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. In case of skin contact, wash with soap and large amounts of water. Remove contaminated clothing. Wash contaminated clothing before reuse. Call physician immediately if adverse reaction occurs.

5. Fire Fighting Measures

Flash Pt: -156.00 F (-104.4 C) Method Used: Estimate

Explosive Limits: LEL: 1.8 UEL: 13

Autoignition Pt: No data.

Suitable Extinguishing Media: Foam, CO2, dry chemical, water fog.

Fire Fighting Instructions: As in any fire, wear self-contained breathing apparatus pressure-demand (MSHA/NIOSH approved or equivalent) and full protective gear. Keep containers and surroundings cool with water spray.

Flammable Properties and Hazards: Closed containers may explode from internal pressure build-up when exposed to extreme heat and discharge contents. Vapor accumulation can flash or explode if ignited. Overexposure to decomposition products may cause a health hazard. Symptoms may not be readily apparent. Obtain medical attention.

Hazardous Combustion Products: No data available.

6. Accidental Release Measures

Steps To Be Taken In Case Material Is Released Or Spilled: Avoid breathing vapors. Ventilate area. Remove all sources of ignition. Clean up area with absorbent material & place in closed containers for disposal.

7. Handling and Storage

Precautions To Be Taken in Handling: Keep away from heat/sparks/open flames/hot surfaces - No smoking. Do not spray on an open flame or any other ignition source. Pressurized container: Do not pierce or burn, even after use.Do no breathe dust/fume/gas/mist/vapors/spray. Wash hands thoroughly after handling. Use only outdoors or in a well-ventilated area. Wear protective gloves/protective clothing/eye protection/face protection. In case of inadequate ventilation wear respiratory protection. Keep out of the reach of children.

Precautions To Be Taken in Storing: Store locked up. Protect from sunlight and do not expose to temperatures exceeding 50 ºC/122 ºF.

8. Exposure Controls/Personal Protection

CAS #	Partial Chemical Name	OSHA TWA	ACGIH TWA	Other Limits
67-64-1	Acetone	PEL: 1000 ppm	TLV: 500 ppm STEL: 750 ppm	No data.
78-93-3	Methyl ethyl ketone	PEL: 200 ppm	TLV: 200 ppm STEL: 300 ppm	No data.
74-98-6	Propane	PEL: 1000 ppm	TLV: (2500 ppm)	No data.
106-97-8	Butane	No data.	TLV: (800 ppm)	No data.
67-63-0	Isopropyl alcohol	PEL: 400 ppm	TLV: 200 ppm STEL: 400 ppm	No data.

Respiratory Equipment (Specify Type): Avoid breathing vapors. Use with adequate ventilation equal to out of doors. In restricted areas, use approved chemical/mechanical filters designed to remove a combination of particles and vapor. In confined areas, use approved air line type respirator or hood. Self-contained breathing apparatus is required for vapor concentrations above PEL/TLV limits.

Eye Protection: Use of safety glasses with splash guards or full face shield is recommended.

Protective Gloves: Solvent resistant gloves required for prolonged or repeated contact.

Other Protective Clothing: Use of solvent resistant aprons or other clothing is recommended.

Engineering Controls (Ventilation etc.): Sufficient to prevent inhalation of solvent vapors. General dilution and/or local exhaust ventilation in volume or pattern to keep PEL/TLV of most hazardous ingredient below acceptable limit and LEL below stated limit.

Work/Hygienic/Maintenance Practices: Eye washes and safety showers in the workplace are recommended.

9. Physical and Chemical Properties

Physical States: [ ] Gas [X] Liquid [ ] Solid

Appearance and Odor: Aerosol product.

pH: No data.

Melting Point: No data.

Boiling Point: -44.00 F (-42.2 C) - 177.00 F (80.6 C)

Flash Pt: -156.00 F (-104.4 C) Method Used: Estimate

Evaporation Rate: No data.

Flammability (solid, gas): No data available.

Explosive Limits: LEL: 1.8 UEL: 13

Vapor Pressure (vs. Air or mm Hg): No data.

Vapor Density (vs. Air = 1): > air

Specific Gravity (Water = 1): .73

Solubility in Water: NIL

Octanol/Water Partition Coefficient: No data.

Percent Volatile: 97.3 % by weight.

Autoignition Pt: No data.

Decomposition Temperature: No data.

Viscosity: No data.

10. Stability and Reactivity

Stability: Unstable [ ] Stable [X]

Conditions To Avoid - Instability: Application to hot surfaces. Storage above 120 degrees F. Exposure to open flame.

Incompatibility - Materials To Avoid: Strong oxidizing agents.

Hazardous Decomposition or Byproducts: May produce fumes when heated to decomposition. Fumes may contain carbon monoxide & other toxic fumes.

Possibility of Hazardous Reactions: Will occur [ ] Will not occur [X]

Conditions To Avoid - Hazardous Reactions: No data available.

11. Toxicological Information

Toxicological Information: No data available.

CAS #	Hazardous Components (Chemical Name)	NTP	IARC	ACGIH	OSHA
67-64-1	Acetone	n.a.	n.a.	A4	n.a.
78-93-3	Methyl ethyl ketone	n.a.	n.a.	n.a.	n.a.
74-98-6	Propane	n.a.	n.a.	n.a.	n.a.
106-97-8	Butane	n.a.	n.a.	n.a.	n.a.
67-63-0	Isopropyl alcohol	n.a.	3	A4	n.a.

12. Ecological Information

General Ecological Information:

CAS# 67-63-0:
LC50, Fathead Minnow (Pimephales promelas), juvenile(s), 11830000. UG/L, 1 H, Mortality, Water temperature: 18.00 C (64.4 F) - 22.00 C (71.6 F) C.
Results:
No observed effect.
- Acute Toxicity of Selected Organic Compounds to Fathead Minnows, Mattson, V.R., J.W. Arthur, and C.T. Walbridge, 1976

LC50, Fathead Minnow (Pimephales promelas), juvenile(s), 11160000. UG/L, 24 H, Mortality, Water temperature: 18.00 C (64.4 F) - 22.00 C (71.6 F) C.
Results:
No observed effect.
- Acute Toxicity of Selected Organic Compounds to Fathead Minnows, Mattson, V.R., J.W. Arthur, and C.T. Walbridge, 1976

LC50, Fathead Minnow (Pimephales promelas), juvenile(s), 11130000. UG/L, 48 H, Mortality, Water temperature: 18.00 C (64.4 F) - 22.00 C (71.6 F) C.
Results:
Age Effects.
- Acute Toxicity of Selected Organic Compounds to Fathead Minnows, Mattson, V.R.,

J.W. Arthur, and C.T. Walbridge, 1976

LC50, Fathead Minnow (Pimephales promelas), juvenile(s), 11130000. UG/L, 72 H, Mortality, Water temperature: 18.00 C (64.4 F) - 22.00 C (71.6 F) C.
Results:
Age Effects.
- Acute Toxicity of Selected Organic Compounds to Fathead Minnows, Mattson, V.R., J.W. Arthur, and C.T. Walbridge, 1976

LC50, Fathead Minnow (Pimephales promelas), juvenile(s), 11130000. UG/L, 96 H, Mortality, Water temperature: 18.00 C (64.4 F) - 22.00 C (71.6 F) C.
Results:
Age Effects.
- Acute Toxicity of Selected Organic Compounds to Fathead Minnows, Mattson, V.R., J.W. Arthur, and C.T. Walbridge, 1976

LC50, Fathead Minnow (Pimephales promelas), 10400000. UG/L, 96 H, Mortality, Water temperature: 24.60 C (76.3 F) C, pH: 7.10, Hardness: 52.50 MG/L.
Results:
Affected fish lost equilibrium prior to death.
- Acute Toxicities of Organic Chemicals to Fathead Minnows (Pimephales promelas), Vol. 1, Brooke, L.T., D.J. Call, D.L. Geiger, and C.E. Northcott, 1984

LC50, Fathead Minnow (Pimephales promelas), 6550000. UG/L, 96 H, Mortality, Water temperature: 24.60 C (76.3 F) C, pH: 7.90, Hardness: 44.00 MG/L.
Results:
Affected fish lost equilibrium prior to death.
- Acute Toxicities of Organic Chemicals to Fathead Minnows (Pimephales promelas), Vol. 1, Brooke, L.T., D.J. Call, D.L. Geiger, and C.E. Northcott, 1984

LC50, Fathead Minnow (Pimephales promelas), 9640000. UG/L, 96 H, Mortality, Water temperature: 24.40 C (75.9 F) C, pH: 7.80, Hardness: 48.30 MG/L.
Results:
Affected fish lost equilibrium prior to death.
- Acute Toxicities of Organic Chemicals to Fathead Minnows (Pimephales promelas), Vol. 1, Brooke, L.T., D.J. Call, D.L. Geiger, and C.E. Northcott, 1984

LC50, Fathead Minnow (Pimephales promelas), 10600000. UG/L, 24 H, Mortality, Water temperature: 24.00 C (75.2 F) - 25.30 C (77.5 F) C, pH: 7.20, Hardness: 52.70 MG/L.
Results:
No observed effect.
- Estimates of "No Effect" Concentrations of Selected Pesticides in Freshwater Organisms, Call, D.J., L.T. Brooke, and N. Ahmad, 1981

LC50, Fathead Minnow (Pimephales promelas), 10400000. UG/L, 48 H, Mortality, Water temperature: 24.00 C (75.2 F) - 25.30 C (77.5 F) C, pH: 7.20, Hardness: 52.70 MG/L.
Results:
No observed effect.
- Estimates of "No Effect" Concentrations of Selected Pesticides in Freshwater Organisms, Call, D.J., L.T. Brooke, and N. Ahmad, 1981

Effective concentration to 50% of test organisms., Fathead Minnow (Pimephales promelas), 9380000. UG/L, 24 H, Behavior, Water temperature: 24.00 C (75.2 F) - 25.30

C (77.5 F) C, pH: 7.20, Hardness: 52.70 MG/L.
Results:
No observed effect.
- Estimates of "No Effect" Concentrations of Selected Pesticides in Freshwater Organisms, Call, D.J., L.T. Brooke, and N. Ahmad, 1981

Effective concentration to 50% of test organisms., Fathead Minnow (Pimephales promelas), 10000000. UG/L, 48 H, Behavior, Water temperature: 24.00 C (75.2 F) - 25.30 C (77.5 F) C, pH: 7.20, Hardness: 52.70 MG/L.
Results:
No observed effect.
- Estimates of "No Effect" Concentrations of Selected Pesticides in Freshwater Organisms, Call, D.J., L.T. Brooke, and N. Ahmad, 1981

LC50, Bluegill (Lepomis macrochirus), 1400000. UG/L, 24 H, Mortality, Water temperature: 22.00 C (71.6 F) C.
Results:
No observed effect.
- Toxicity of CS-2 Decontamination Products, Wolverton, B.C., D.D. Harrison, and R.C. Voight, 1970

LC50, Bluegill (Lepomis macrochirus), 1400000. UG/L, 48 H, Mortality, Water temperature: 22.00 C (71.6 F) C.
Results:
No observed effect.
- Toxicity of CS-2 Decontamination Products, Wolverton, B.C., D.D. Harrison, and R.C. Voight, 1970

LC50, Bluegill (Lepomis macrochirus), 1400000. UG/L, 72 H, Mortality, Water temperature: 22.00 C (71.6 F) C.
Results:
No observed effect.
- Toxicity of CS-2 Decontamination Products, Wolverton, B.C., D.D. Harrison, and R.C. Voight, 1970

LC50, Bluegill (Lepomis macrochirus), 1400000. UG/L, 96 H, Mortality, Water temperature: 22.00 C (71.6 F) C.
Results:
No observed effect.
- Toxicity of CS-2 Decontamination Products, Wolverton, B.C., D.D. Harrison, and R.C. Voight, 1970

Lethal concentration to 0% of test organisms., Bluegill (Lepomis macrochirus), fingerling, 10000000. UG/L, 96 H, Mortality, Water temperature: 19.50 C (67.1 F) - 20.50 C (68.9 F) C.
Results:
No observed effect.
- Behavior of Organic Chemicals in the Aquatic Environment. Part II. - Behavior in Dilute Systems, Buzzell, J.C.,Jr., R.H.F. Young, and D.W. Ryckman, 1968

Not reported., Rainbow Trout (Oncorhynchus mykiss), 4800000. UG/L, 2 - 24 H, Accumulation.
Results:

No observed effect.
- Estimates of "No Effect" Concentrations of Selected Pesticides in Freshwater Organisms, Call, D.J., L.T. Brooke, and N. Ahmad, 1981

Effective concentration to 50% of test organisms., Water Flea (Daphnia magna), 159000. UMOL/L, 24 H, Intoxication,.
Results:
No observed effect.
- Comparative Acute Toxicity of the First 50 Multicentre Evaluation of In Vitro Cytotoxicity Chemicals to Aquatic Non-vertebrates, Calleja, M.C., G. Persoone, and P. Geladi, 1994

Effective concentration to 50% of test organisms., Water Flea (Daphnia magna), neonate, 114.0 MMOL/L, 24 H, Intoxication,, Water temperature: 21.00 C (69.8 F) C, pH: 7.60.
Results:
No observed effect.
- A Comparison of the Toxicity of 50 Reference Chemicals to Freshly Isolated Rainbow Trout Hepatocytes and Daphnia magna, Lilius, H., B. Isomaa, and T. Holmstrom, 1994

LC50, Water Flea (Daphnia magna), 10000. MG/L, 24 H, Intoxication,, Water temperature: 20.00 C (68.0 F) - 22.00 C (71.6 F) C, pH: 7.70, Hardness: 16.00 dH.
Results:
No observed effect.
- Results of the Damaging Effect of Water Pollutants on Daphnia magna (Befunde der Schadwirkung Wassergefahrdender Stoffe Gegen Daphnia magna), Bringmann, G., and R. Kuhn, 1977

Lethal concentration to 0% of test organisms., Water Flea (Daphnia magna), 5000. MG/L, 24 H, Intoxication,, Water temperature: 20.00 C (68.0 F) - 22.00 C (71.6 F) C, pH: 7.70, Hardness: 16.00 dH.
Results:
No observed effect.
- Results of the Damaging Effect of Water Pollutants on Daphnia magna (Befunde der Schadwirkung Wassergefahrdender Stoffe Gegen Daphnia magna), Bringmann, G., and R. Kuhn, 1977

Effective concentration to 0% of test organisms., Water Flea (Daphnia magna), 5102. MG/L, 24 H, Behavior, pH: =8.00.
Results:
No observed effect.
- Results of Toxic Action of Water Pollutants on Daphnia magna Straus Tested by an Improved Standardized Procedure, Bringmann, G., and R. Kuehn, 1982

Effective concentration to 50% of test organisms., Water Flea (Daphnia magna), 9714. MG/L, 24 H, Behavior, pH: =8.00.
Results:
No observed effect.
- Results of Toxic Action of Water Pollutants on Daphnia magna Straus Tested by an Improved Standardized Procedure, Bringmann, G., and R. Kuehn, 1982

Effective concentration to 100% of test organisms., Water Flea (Daphnia magna), 10000. MG/L, 24 H, Behavior, pH: =8.00.
Results:

No observed effect.
- Results of Toxic Action of Water Pollutants on Daphnia magna Straus Tested by an Improved Standardized Procedure, Bringmann, G., and R. Kuehn, 1982

Effective concentration to 50% of test organisms., Water Flea (Daphnia pulex), 174.27 MMOL/L, 24 H, Intoxication,, Water temperature: 20.00 C (68.0 F) C, pH: 7.60.
Results:
No observed effect.
- A Comparison of the Toxicity of 30 Reference Chemicals to Daphnia magna and Daphnia pulex, Lilius, H., T. Hastbacka, and B. Isomaa, 1995

LC50, Common Shrimp, Sand Shrimp (Crangon crangon), 1400000. UG/L, 48 H, Mortality.
Results:
No observed effect.
- Toxicity of Oil-Sinking Agents, Blackman, R.A.A., 1974

LC50, Common Shrimp, Sand Shrimp (Crangon crangon), 1150000. UG/L, 96 H, Mortality.
Results:
No observed effect.
- Toxicity of Oil-Sinking Agents, Blackman, R.A.A., 1974

LC50, Harlequinfish, Red Rasbora (Rasbora heteromorpha), 7100000. UG/L, 24 H, Mortality, Water temperature: 20.00 C (68.0 F) C, pH: 8.10, Hardness: 20.00 MG/L.
Results:
Affected fish swam at or near surface.
Affected fish lost equilibrium prior to death.
- Acute Toxicity of 102 Pesticides and Miscellaneous Substances to Fish, Tooby, T.E., P.A. Hursey, and J.S. Alabaster, 1975

LC50, Harlequinfish, Red Rasbora (Rasbora heteromorpha), 4900000. UG/L, 48 H, Mortality, Water temperature: 20.00 C (68.0 F) C, pH: 8.10, Hardness: 20.00 MG/L.
Results:
Affected fish lost equilibrium prior to death.
- Acute Toxicity of 102 Pesticides and Miscellaneous Substances to Fish, Tooby, T.E., P.A. Hursey, and J.S. Alabaster, 1975

LC50, Harlequinfish, Red Rasbora (Rasbora heteromorpha), 4200000. UG/L, 96 H, Mortality, Water temperature: 20.00 C (68.0 F) C, pH: 8.10, Hardness: 20.00 MG/L.
Results:
Affected fish stopped schooling behavior.
Affected fish became hyperactive.
No loss of equilibrium observed.
- Acute Toxicity of 102 Pesticides and Miscellaneous Substances to Fish, Tooby, T.E., P.A. Hursey, and J.S. Alabaster, 1975

LC50, Western Mosquitofish (Gambusia affinis), 1400000. UG/L, 24 H, Mortality, Water temperature: 22.00 C (71.6 F) C.
Results:
No observed effect.
- Toxicity of CS-2 Decontamination Products, Wolverton, B.C., D.D. Harrison, and R.C. Voight, 1970

LC50, Western Mosquitofish (Gambusia affinis), 1400000. UG/L, 48 H, Mortality, Water temperature: 22.00 C (71.6 F) C.
Results:
No observed effect.
- Toxicity of CS-2 Decontamination Products, Wolverton, B.C., D.D. Harrison, and R.C. Voight, 1970

LC50, Western Mosquitofish (Gambusia affinis), 1400000. UG/L, 72 H, Mortality, Water temperature: 22.00 C (71.6 F) C.
Results:
No observed effect.
- Toxicity of CS-2 Decontamination Products, Wolverton, B.C., D.D. Harrison, and R.C. Voight, 1970

LC50, Western Mosquitofish (Gambusia affinis), 1400000. UG/L, 96 H, Mortality, Water temperature: 22.00 C (71.6 F) C.
Results:
No observed effect.
- Toxicity of CS-2 Decontamination Products, Wolverton, B.C., D.D. Harrison, and R.C. Voight, 1970

Lethal concentration to 0% of test organisms., Creek Chub (Semotilus atromaculatus), 900000. UG/L, 24 H, Mortality, Water temperature: 15.00 C (59.0 F) - 21.00 C (69.8 F) C, pH: 8.30, Hardness: 98.00 MG/L.
Results:
No observed effect.
- Appraisal of a Chemical Waste Problem by Fish Toxicity Tests, Gillette, L.A., D.L. Miller, and H.E. Redman, 1952

Lethal concentration to 100% of test organisms., Creek Chub (Semotilus atromaculatus), 1100000. UG/L, 24 H, Mortality, Water temperature: 15.00 C (59.0 F) - 21.00 C (69.8 F) C, pH: 8.30, Hardness: 98.00 MG/L.
Results:
No observed effect.
- Appraisal of a Chemical Waste Problem by Fish Toxicity Tests, Gillette, L.A., D.L. Miller, and H.E. Redman, 1952

LC50, Goldfish (Carassius auratus), 5000000. UG/L, 24 H, Mortality, Water temperature: 20.00 C (68.0 F) C, pH: 7.00.
Results:
No observed effect.
- The Acute Toxicity of Some Petrochemicals to Goldfish, Bridie, A.L., C.J.M. Wolff, and M. Winter, 1979

LC50, Yellow Fever Mosquito (Aedes aegypti), larva(e), 3.200 % V/V, 4 H, Mortality, Water temperature: 22.00 C (71.6 F) - 24.00 C (75.2 F) C.
Results:
Age Effects.
- Relative Toxicity of Organic Solvents to Aedes aegypti Larvae, Kramer, V.C., D.J. Schnell, and K.W. Nickerson, 1983

Not reported., Cryptomonad (Chilomonas paramecium), 104000. UG/L, 48 H, Population,

Water temperature: 20.00 C (68.0 F) C, pH: 6.90.
Results:
No observed effect.
- Determination of the Biological Effect From Water Pollutants to Protozoa. III. Saprozoic Flagellates (Bestimmung der Biologischen Schadwirkung Wassergefahrdender Stoffe Gegen Protozoen III. Saprozoische Flagellaten), Bringmann, G., R. Kuhn, and A. Winter, 1980

Not reported., Cryptomonad (Chilomonas paramecium), 104000. UG/L, Population.
Results:
Affected fish stopped schooling behavior.
Affected fish became hyperactive.
No loss of equilibrium observed.
- Comparison of the Effect of Toxic Substances on the Flagellate Organisms Such as Ciliates and the Holozoic Bacteria-Devouring Organisms Such as Saprozoic Protozoans (Vergleich der Wirkung von Schadstoffen auf Flagellate, Bringmann, G., and R. Kuhn, 1981

Not reported., Green Algae (Chlorella sp.), 79000. UG/L, 11 - 20 D, Population.
Results:
No observed effect.
- Naturally Occurring Organic Compounds and Algal Growth in a Eutrophic Lake, Adams, V.D., R.R. Renk, P.A. Cowan, and D.B. Porcella, 1975

Not reported., Green Algae (Chlamydomonas reinhardtii), 79000. UG/L, 11 - 17 D, Population.
Results:
No observed effect.
- Naturally Occurring Organic Compounds and Algal Growth in a Eutrophic Lake, Adams, V.D., R.R. Renk, P.A. Cowan, and D.B. Porcella, 1975

LC50, Rotifer (Brachionus plicatilis), Post-hatch, 519000. UMOL/L, 24 H, Mortality, Water temperature: 25.00 C (77.0 F) C.
Results:
Affected fish lost equilibrium prior to death.
- Cyst-Based Toxicity Tests. IV. The Potential of Ecotoxicological Tests for the Prediction of Acute Toxicity in Man as Evaluated on the First Ten Chemicals of the MEIC Programme, Calleja, M.C., and G. Persoone, 1992

LC50, Brine Shrimp (Artemia salina), nauplii, 10000000. UG/L, 24 H, Mortality, Water temperature: 24.00 C (75.2 F) C.
Results:
No observed effect.
- Brine Shrimp Bioassay and Seawater BOD of Petrochemicals, Price, K.S., G.T. Waggy, and R.A. Conway, 1974

LC50, Brine Shrimp (Artemia salina), 278000. UMOL/L, 24 H, Mortality.
Results:
No observed effect.
- Comparative Acute Toxicity of the First 50 Multicentre Evaluation of In Vitro Cytotoxicity Chemicals to Aquatic Non-vertebrates, Calleja, M.C., G. Persoone, and P. Geladi, 1994

LC50, Brine Shrimp (Artemia salina), larva(e), 278000. UMOL/L, 24 H, Mortality.

Results:
Affected fish lost equilibrium prior to death.
- Cyst-Based Toxicity Tests. IV. The Potential of Ecotoxicological Tests for the Prediction of Acute Toxicity in Man as Evaluated on the First Ten Chemicals of the MEIC Programme, Calleja, M.C., and G. Persoone, 1992

Not reported., Algae (Algae), 79000. UG/L, 11 - 14 D, Population.
Results:
No observed effect.
- Naturally Occurring Organic Compounds and Algal Growth in a Eutrophic Lake, Adams, V.D., R.R. Renk, P.A. Cowan, and D.B. Porcella, 1975

Inhibition concentration to 50% of test organisms, Ciliate (Tetrahymena pyriformis), 97.06 MMOL/L, 2 D, Population.
Results:
No observed effect.
- Structure-Toxicity Relationships for Unsaturated Alcohols to Tetrahymena pyriformis: C5 and C6 Analogs and Primary Propargylic Alcohols, Schultz, T.W., and M. Tichy, 1993

Not reported., Ciliate (Tetrahymena pyriformis), 1.000 M, 1 M, Intoxication,.
Results:
Age Effects.
- Computerized In Vitro Test for Chemical Toxicity Based on Tetrahymena Swimming Patterns, Noever, D.A., H.C. Matsos, R.J. Cronise, L.L. Looger, R.A. Relwani, and J.U. Johnson, 1994

Not reported., Green Algae (Scenedesmus quadricauda), 1800000. UG/L, Population, Water temperature: 27.00 C (80.6 F) C, pH: 7.00.
Results:
No observed effect.
- Limiting Values for the Damaging Action of Water Pollutants to Bacteria (Pseudomonas putida) and Green Algae (Scenedesmus quadricauda) in the Cell Multiplication Inhibition Test, Bringmann, G., and R. Kuhn, 1977

Not reported., Green Algae (Scenedesmus quadricauda), 1800000. UG/L, 7 D, Population, Water temperature: 27.00 C (80.6 F) C.
Results:
Affected fish swam at or near surface.
Affected fish lost equilibrium prior to death.
- Comparison of the Toxicity Thresholds of Water Pollutants to Bacteria, Algae, and Protozoa in the Cell Multiplication Inhibition Test, Bringmann, G., and R. Kuhn, 1980

Not reported., Green Algae (Scenedesmus quadricauda), 1800000. UG/L, 8 D, Population, Water temperature: 27.00 C (80.6 F) C.
Results:
Affected fish stopped schooling behavior.
Affected fish swam at or near surface.
- Testing of Substances for Their Toxicity Threshold: Model Organisms Microcystis (Diplocystis) aeruginosa and Scenedesmus quadricauda, Bringmann, G., and R. Kuhn, 1978

Not reported., Green Algae (Scenedesmus quadricauda), 1800000. UG/L, Population.
Results:

No observed effect.
- Comparison of Toxic Limiting Concentrations of Water Contaminants Toward Bacteria, Algae and Protozoa in the Cell-Growth Inhibition Test (Vergleich der Toxischen Grenzkonzentrationen Wassergefahrdender Stoffe Gegen Bakte, Bringmann, G., and R. Kuhn, 1979

Effective concentration to {0} % of test organisms, Green Algae (Scenedesmus quadricauda), 1800000. UG/L, Population.
Results:
No observed effect.
- Limiting Values for the Noxious Effects of Water Pollutant Material to Blue Algae (Microcystis aeruginosa) and Green Algae (Scenedesmus quadricauda) in Cell Propagation Inhibition Tests (Grenzwerte der Schadwirkung Wasse, Bringmann, G., and R. Kuhn, 1978

LC50, Fairy Shrimp (Streptocephalus proboscideus), 193000. UMOL/L, 24 H, Mortality.
Results:
No observed effect.
- Comparative Acute Toxicity of the First 50 Multicentre Evaluation of In Vitro Cytotoxicity Chemicals to Aquatic Non-vertebrates, Calleja, M.C., G. Persoone, and P. Geladi, 1994

LC50, Fairy Shrimp (Streptocephalus proboscideus), larva(e), 193000. UMOL/L, 24 H, Mortality, Water temperature: 25.00 C (77.0 F) C.
Results:
No observed effect.
- Cyst-Based Toxicity Tests. IV. The Potential of Ecotoxicological Tests for the Prediction of Acute Toxicity in Man as Evaluated on the First Ten Chemicals of the MEIC Programme, Calleja, M.C., and G. Persoone, 1992

LC50, Midge (Chironomus riparius), larva(e), 12500000. UG/L, 48 H, Mortality, Water temperature: 21.00 C (69.8 F) C, pH: 8.20, Hardness: 210.00 MG/L.
Results:
No observed effect.
- A QSAR for Base-Line Toxicity to the Midge Chironomus riparius, Roghair, C.J., A. Buijze, E.S.E. Yedema, and J.L.M. Hermens, 1994

Effective concentration to {0} % of test organisms, Midge (Chironomus riparius), larva(e), 3000000. UG/L, 48 H, Mortality, Water temperature: 21.00 C (69.8 F) C, pH: 8.20, Hardness: 210.00 MG/L.
Results:
No observed effect.
- A QSAR for Base-Line Toxicity to the Midge Chironomus riparius, Roghair, C.J., A. Buijze, E.S.E. Yedema, and J.L.M. Hermens, 1994

Effective concentration to {0} % of test organisms, Midge (Chironomus riparius), larva(e), 18000000. UG/L, 48 H, Mortality, Water temperature: 21.00 C (69.8 F) C, pH: 8.20, Hardness: 210.00 MG/L.
Results:
No observed effect.
- A QSAR for Base-Line Toxicity to the Midge Chironomus riparius, Roghair, C.J., A. Buijze, E.S.E. Yedema, and J.L.M. Hermens, 1994

Not reported., Flagellate Euglenoid (Entosiphon sulcatum), 4930000. UG/L, 72 H,

Population, Water temperature: 25.00 C (77.0 F) C.
Results:
Affected fish lost equilibrium prior to death.
- Comparison of the Toxicity Thresholds of Water Pollutants to Bacteria, Algae, and Protozoa in the Cell Multiplication Inhibition Test, Bringmann, G., and R. Kuhn, 1980

Not reported., Flagellate Euglenoid (Entosiphon sulcatum), 4930000. UG/L, 72 H, Population, Water temperature: 25.00 C (77.0 F) C, pH: 6.90.
Results:
No observed effect.
- Investigation of Biological Harmful Effects of Chemical Substances Which are Classified as Dangerous for Water on Protozoa, Bringmann, G., 1978

Not reported., Flagellate Euglenoid (Entosiphon sulcatum), 4930000. UG/L, Population.
Results:
No observed effect.
- Comparison of the Effect of Toxic Substances on the Flagellate Organisms Such as Ciliates and the Holozoic Bacteria-Devouring Organisms Such as Saprozoic Protozoans (Vergleich der Wirkung von Schadstoffen auf Flagellate, Bringmann, G., and R. Kuhn, 1981

Not reported., Flagellate Euglenoid (Entosiphon sulcatum), 4930000. UG/L, Population.
Results:
No observed effect.
- Comparison of Toxic Limiting Concentrations of Water Contaminants Toward Bacteria, Algae and Protozoa in the Cell-Growth Inhibition Test (Vergleich der Toxischen Grenzkonzentrationen Wassergefahrdender Stoffe Gegen Bakte, Bringmann, G., and R. Kuhn, 1979

Not reported., Blue-Green Algae (Anacystis aeruginosa), 1000000. UG/L, 8 D, Population, Water temperature: 27.00 C (80.6 F) C.
Results:
Age Effects.
- Testing of Substances for Their Toxicity Threshold: Model Organisms Microcystis (Diplocystis) aeruginosa and Scenedesmus quadricauda, Bringmann, G., and R. Kuhn, 1978

LC50, Rotifer (Brachionus calyciflorus), 476000. UMOL/L, 24 H, Mortality.
Results:
No observed effect.
- Comparative Acute Toxicity of the First 50 Multicentre Evaluation of In Vitro Cytotoxicity Chemicals to Aquatic Non-vertebrates, Calleja, M.C., G. Persoone, and P. Geladi, 1994

LC50, Rotifer (Brachionus calyciflorus), Post-hatch, 476000. UMOL/L, 24 H, Mortality, Water temperature: 25.00 C (77.0 F) C.
Results:
Affected fish lost equilibrium prior to death.
- Cyst-Based Toxicity Tests. IV. The Potential of Ecotoxicological Tests for the Prediction of Acute Toxicity in Man as Evaluated on the First Ten Chemicals of the MEIC Programme, Calleja, M.C., and G. Persoone, 1992

Effective concentration to 50% of test organisms., Inflated Duckweed (Lemna gibba), 75.54 MMOL/L, 7 D, Population, Water temperature: 27.50 C (81.5 F) C.

Results:
Age Effects.
- Physiological Effects of Ethylene Glycol-Induced Cribriform Frond Structure in Lemna gibba, Thomas, D.A., 1998

Effective concentration to 10% of test organisms., Inflated Duckweed (Lemna gibba), 12.44 MMOL/L, 7 D, Population, Water temperature: 27.50 C (81.5 F) C.
Results:
Age Effects.
- Physiological Effects of Ethylene Glycol-Induced Cribriform Frond Structure in Lemna gibba, Thomas, D.A., 1998

Not reported., Iberian Ribbed Newt (Pleurodeles waltl), larva(e), 1500. UG/L, 12 D, Genetics, Water temperature: 20.00 C (68.0 F) C.
Results:
No observed effect.
- Evaluation of the Genotoxicity of N-Nitrosoatrazine, N-Nitrosodiethanolamine and Their Precursors In Vivo Using the Newt Micronucleus Test, L'Haridon, J., M. Fernandez, V. Ferrier, and J. Bellan, 1993

Effective concentration to {0} % of test organisms, Sand Goby (Pomatoschistus minutus), juvenile(s), 20.00 UG/L, 8 M, Mortality, Water temperature: 6.40 C (43.5 F) - 11.50 C (52.7 F) C.
Results:
Affected fish stopped schooling behavior.
Affected fish became hyperactive.
No loss of equilibrium observed.
- Bioindicators and Reproductive Effects of Prolonged 17beta-Oestradiol Exposure in a Marine Fish, the Sand Goby (Pomatoschistus minutus), Robinson, C.D., E. Brown, J.A. Craft, I.M. Davies, C. Megginson, C. Miller, and C.F. Moffat, 2007

Effective concentration to {0} % of test organisms, Sand Goby (Pomatoschistus minutus), juvenile(s), 20.00 UG/L, 8 M, Biochemistry, Water temperature: 6.40 C (43.5 F) - 11.50 C (52.7 F) C.
Results:
Affected fish stopped schooling behavior.
Affected fish became hypoactive.
Affected fish swam at or near bottom.
No loss of equilibrium observed.
- Bioindicators and Reproductive Effects of Prolonged 17beta-Oestradiol Exposure in a Marine Fish, the Sand Goby (Pomatoschistus minutus), Robinson, C.D., E. Brown, J.A. Craft, I.M. Davies, C. Megginson, C. Miller, and C.F. Moffat, 2007

Effective concentration to {0} % of test organisms, Sand Goby (Pomatoschistus minutus), juvenile(s), 20.00 UG/L, 8 M, Development, Water temperature: 6.40 C (43.5 F) - 11.50 C (52.7 F) C.
Results:
Age Effects.
- Bioindicators and Reproductive Effects of Prolonged 17beta-Oestradiol Exposure in a Marine Fish, the Sand Goby (Pomatoschistus minutus), Robinson, C.D., E. Brown, J.A. Craft, I.M. Davies, C. Megginson, C. Miller, and C.F. Moffat, 2007

Effective concentration to {0} % of test organisms, Sand Goby (Pomatoschistus minutus),

juvenile(s), 20.00 UG/L, 8 M, Genetics, Water temperature: 6.40 C (43.5 F) - 11.50 C (52.7 F) C.
Results:
Age Effects.
- Bioindicators and Reproductive Effects of Prolonged 17beta-Oestradiol Exposure in a Marine Fish, the Sand Goby (Pomatoschistus minutus), Robinson, C.D., E. Brown, J.A. Craft, I.M. Davies, C. Megginson, C. Miller, and C.F. Moffat, 2007

Not reported., Sand Goby (Pomatoschistus minutus), juvenile(s), 20.00 UG/L, 8 M, Reproduction, Water temperature: 6.40 C (43.5 F) - 11.50 C (52.7 F) C.
Results:
Loss of equilibrium.
- Bioindicators and Reproductive Effects of Prolonged 17beta-Oestradiol Exposure in a Marine Fish, the Sand Goby (Pomatoschistus minutus), Robinson, C.D., E. Brown, J.A. Craft, I.M. Davies, C. Megginson, C. Miller, and C.F. Moffat, 2007

Not reported., White Sturgeon (Acipenser transmontanus), 1000. - 10000. UG/L, 96 H, Mortality, Water temperature: 15.00 C (59.0 F) C, pH: 7.90, Hardness: <=34.10 MG/L.
Results:
No observed effect.
- Acute Toxicity Testing with Juvenile White Sturgeon (Acipenser transmontanus), Bennett, W.R., and A.P. Farrell, 1998

Not reported., Blue-Green Algae (Microcystis aeruginosa), 1000000. UG/L, 8 D, Population, pH: 7.00.
Results:
No observed effect.
- Determination of the Biologically Harmful Effect of Water Pollutants by Means of the Retardation of Cell Proliferation of the Blue Algae Microcystis, Bringmann, G., 1975

Effective concentration to {0} % of test organisms, Blue-Green Algae (Microcystis aeruginosa), 1000000. UG/L, Population.
Results:
No observed effect.
- Limiting Values for the Noxious Effects of Water Pollutant Material to Blue Algae (Microcystis aeruginosa) and Green Algae (Scenedesmus quadricauda) in Cell Propagation Inhibition Tests (Grenzwerte der Schadwirkung Wasse, Bringmann, G., and R. Kuhn, 1978

LC50, Nematode (Caenorhabditis elegans), larva(e), 6.550 % V/V, 24 H, Mortality.
Results:
Age Effects.
- Toxicity of Short-Chain Alcohols to the Nematode Caenorhabditis elegans: A Comparison of Endpoints, Thompson, G., and D.I. De Pomerai, 2005

LC50, Nematode (Caenorhabditis elegans), larva(e), 6.700 % V/V, 24 H, Mortality.
Results:
No observed effect.
- Toxicity of Short-Chain Alcohols to the Nematode Caenorhabditis elegans: A Comparison of Endpoints, Thompson, G., and D.I. De Pomerai, 2005

Effective concentration to 50% of test organisms., Green Algae (Chlorella fusca ssp. vacuolata), 0.190 UMOL/L, 24 H, Population, Water temperature: 28.00 C (82.4 F) C, pH:

6.90.
Results:
Loss of equilibrium.
- What Contributes to the Combined Effect of a Complex Mixture?, Altenburger, R., H. Walter, and M. Grote, 2004

Lethal concentration to 0% of test organisms., Carp (Leuciscus idus ssp. melanotus), 7020. MG/L, 48 H, Mortality.
Results:
Affected fish stopped schooling behavior.
Affected fish became hypoactive.
Affected fish swam at or near bottom.
No loss of equilibrium observed.
- Results of the Investigation of 200 Chemical Compounds for Acute Fish Toxicity with the Golden Orfe Test (Ergebnisse der Untersuchung von 200 Chemischen Verbindungen auf Akute Fischtoxizitat mit dem Goldorfentest), Juhnke, I., and D. Luedemann, 1978

LC50, Carp (Leuciscus idus ssp. melanotus), 8970. MG/L, 48 H, Mortality.
Results:
No observed effect.
- Results of the Investigation of 200 Chemical Compounds for Acute Fish Toxicity with the Golden Orfe Test (Ergebnisse der Untersuchung von 200 Chemischen Verbindungen auf Akute Fischtoxizitat mit dem Goldorfentest), Juhnke, I., and D. Luedemann, 1978

Lethal concentration to 100% of test organisms., Carp (Leuciscus idus ssp. melanotus), 10920. MG/L, 48 H, Mortality.
Results:
No observed effect.
- Results of the Investigation of 200 Chemical Compounds for Acute Fish Toxicity with the Golden Orfe Test (Ergebnisse der Untersuchung von 200 Chemischen Verbindungen auf Akute Fischtoxizitat mit dem Goldorfentest), Juhnke, I., and D. Luedemann, 1978

Lethal concentration to 0% of test organisms., Carp (Leuciscus idus ssp. melanotus), 8190. MG/L, 48 H, Mortality.
Results:
Affected fish stopped schooling behavior.
- Results of the Investigation of 200 Chemical Compounds for Acute Fish Toxicity with the Golden Orfe Test (Ergebnisse der Untersuchung von 200 Chemischen Verbindungen auf Akute Fischtoxizitat mit dem Goldorfentest), Juhnke, I., and D. Luedemann, 1978

LC50, Carp (Leuciscus idus ssp. melanotus), 9280. MG/L, 48 H, Mortality.
Results:
No observed effect.
- Results of the Investigation of 200 Chemical Compounds for Acute Fish Toxicity with the Golden Orfe Test (Ergebnisse der Untersuchung von 200 Chemischen Verbindungen auf Akute Fischtoxizitat mit dem Goldorfentest), Juhnke, I., and D. Luedemann, 1978

Lethal concentration to 100% of test organisms., Carp (Leuciscus idus ssp. melanotus), 9750. MG/L, 48 H, Mortality.
Results:
No observed effect.
- Results of the Investigation of 200 Chemical Compounds for Acute Fish Toxicity with the Golden Orfe Test (Ergebnisse der Untersuchung von 200 Chemischen Verbindungen

auf Akute Fischtoxizitat mit dem Goldorfentest), Juhnke, I., and D. Luedemann, 1978

Effective concentration to {0} % of test organisms, Ciliate Protozoa (Tetrahymena thermophila), Stationary Growth Phase, 754.0 MG/L, 48 H, Population, Water temperature: 32.00 C (89.6 F) C.
Results:
No observed effect.
- A Case for the Inclusion of a Protozoan Test in Aquatic Toxicity Assessment Using Tetrahymena, Pauli, W., S. Berger, L. Jaskulka, and S. Schmitz, 1993

Effective concentration to 50% of test organisms., Ciliate Protozoa (Tetrahymena thermophila), Stationary Growth Phase, 8130. MG/L, 48 H, Population, Water temperature: 32.00 C (89.6 F) C.
Results:
No observed effect.
- A Case for the Inclusion of a Protozoan Test in Aquatic Toxicity Assessment Using Tetrahymena, Pauli, W., S. Berger, L. Jaskulka, and S. Schmitz, 1993

Effective concentration to 20% of test organisms., Ciliate Protozoa (Tetrahymena thermophila), Stationary Growth Phase, 3142. MG/L, 48 H, Population, Water temperature: 32.00 C (89.6 F) C.
Results:
No observed effect.
- A Case for the Inclusion of a Protozoan Test in Aquatic Toxicity Assessment Using Tetrahymena, Pauli, W., S. Berger, L. Jaskulka, and S. Schmitz, 1993

Effective concentration to 0% of test organisms., Ciliate Protozoa (Tetrahymena thermophila), Exponential Growth Phase, 250000. UG/L, 90 M, Avoidance, Water temperature: 32.00 C (89.6 F) C.
Results:
No observed effect.
- Chemosensory Responses of Ciliates: A Sensitive End Point in Xenobiotic Hazard Assessment, Pauli, W., S. Berger, S. Schmitz, and L. Jaskulka, 1994

Effective concentration to 10% of test organisms., Ciliate Protozoa (Tetrahymena thermophila), Exponential Growth Phase, 470000. UG/L, 90 M, Avoidance, Water temperature: 32.00 C (89.6 F) C.
Results:
No observed effect.
- Chemosensory Responses of Ciliates: A Sensitive End Point in Xenobiotic Hazard Assessment, Pauli, W., S. Berger, S. Schmitz, and L. Jaskulka, 1994

Effective concentration to 20% of test organisms., Ciliate Protozoa (Tetrahymena thermophila), Stationary Growth Phase, 4595. MG/L, 48 H, Population, Water temperature: 32.00 C (89.6 F) C.
Results:
No observed effect.
- A Case for the Inclusion of a Protozoan Test in Aquatic Toxicity Assessment Using Tetrahymena, Pauli, W., S. Berger, L. Jaskulka, and S. Schmitz, 1993

Effective concentration to {0} % of test organisms, Ciliate Protozoa (Tetrahymena thermophila), 754.0 MG/L, 48 H, Population.
Results:

No observed effect.
- Validation of Toxicological Endpoints with Tetrahymena. Membrane Functions, Chemotaxis, Cell Rotation in Electric Fields (Validierung Toxikologischer Prufparameter an Tetrahymena: Membranfunktionen, Chemotaxis, Rotation, Pauli, W., S. Berger, S. Schmitz, L. Jaskulka, and K. Stadtlander, 1993

Effective concentration to 10% of test organisms., Ciliate Protozoa (Tetrahymena thermophila), 1830. MG/L, 48 H, Population.
Results:
No observed effect.
- Validation of Toxicological Endpoints with Tetrahymena. Membrane Functions, Chemotaxis, Cell Rotation in Electric Fields (Validierung Toxikologischer Prufparameter an Tetrahymena: Membranfunktionen, Chemotaxis, Rotation, Pauli, W., S. Berger, S. Schmitz, L. Jaskulka, and K. Stadtlander, 1993

Effective concentration to 20% of test organisms., Ciliate Protozoa (Tetrahymena thermophila), 4595. MG/L, 48 H, Population.
Results:
No observed effect.
- Validation of Toxicological Endpoints with Tetrahymena. Membrane Functions, Chemotaxis, Cell Rotation in Electric Fields (Validierung Toxikologischer Prufparameter an Tetrahymena: Membranfunktionen, Chemotaxis, Rotation, Pauli, W., S. Berger, S. Schmitz, L. Jaskulka, and K. Stadtlander, 1993

Effective concentration to 50% of test organisms., Ciliate Protozoa (Tetrahymena thermophila), 8130. MG/L, 48 H, Population.
Results:
No observed effect.
- Validation of Toxicological Endpoints with Tetrahymena. Membrane Functions, Chemotaxis, Cell Rotation in Electric Fields (Validierung Toxikologischer Prufparameter an Tetrahymena: Membranfunktionen, Chemotaxis, Rotation, Pauli, W., S. Berger, S. Schmitz, L. Jaskulka, and K. Stadtlander, 1993

Effective concentration to 10% of test organisms., Ciliate Protozoa (Tetrahymena thermophila), 1200. MG/L, 48 H, Population.
Results:
No observed effect.
- Validation of Toxicological Endpoints with Tetrahymena. Membrane Functions, Chemotaxis, Cell Rotation in Electric Fields (Validierung Toxikologischer Prufparameter an Tetrahymena: Membranfunktionen, Chemotaxis, Rotation, Pauli, W., S. Berger, S. Schmitz, L. Jaskulka, and K. Stadtlander, 1993

Effective concentration to 20% of test organisms., Ciliate Protozoa (Tetrahymena thermophila), 3142. MG/L, 48 H, Population.
Results:
No observed effect.
- Validation of Toxicological Endpoints with Tetrahymena. Membrane Functions, Chemotaxis, Cell Rotation in Electric Fields (Validierung Toxikologischer Prufparameter an Tetrahymena: Membranfunktionen, Chemotaxis, Rotation, Pauli, W., S. Berger, S. Schmitz, L. Jaskulka, and K. Stadtlander, 1993

Effective concentration to 50% of test organisms., Ciliate Protozoa (Tetrahymena thermophila), 7462. MG/L, 48 H, Population.

Results:
Affected fish swam at or near surface.
Affected fish lost equilibrium prior to death.
- Validation of Toxicological Endpoints with Tetrahymena. Membrane Functions, Chemotaxis, Cell Rotation in Electric Fields (Validierung Toxikologischer Prufparameter an Tetrahymena: Membranfunktionen, Chemotaxis, Rotation, Pauli, W., S. Berger, S. Schmitz, L. Jaskulka, and K. Stadtlander, 1993

Effective concentration to {0} % of test organisms, Zebra Danio (Danio rerio), adult(s), 1.000 MG/ML, 1 W, Biochemistry, Water temperature: 28.00 C (82.4 F) C.
Results:
Affected fish stopped schooling behavior.
Affected fish became hypoactive.
Affected fish swam at or near bottom.
No loss of equilibrium observed.
- Short-Term Exposure to Low Concentrations of the Synthetic Androgen Methyltestosterone Affects Vitellogenin and Steroid Levels in Adult male Zebrafish (Danio rerio), Andersen, L., R. Goto-Kazeto, J.M. Trant, J.P. Nash, B. Korsgaard, and P. Bjerregaard, 2006

Effective concentration to {0} % of test organisms, Zebra Danio (Danio rerio), adult(s), 1.000 MG/ML, 1 W, Hormone(s), Water temperature: 28.00 C (82.4 F) C.
Results:
Age Effects.
- Short-Term Exposure to Low Concentrations of the Synthetic Androgen Methyltestosterone Affects Vitellogenin and Steroid Levels in Adult male Zebrafish (Danio rerio), Andersen, L., R. Goto-Kazeto, J.M. Trant, J.P. Nash, B. Korsgaard, and P. Bjerregaard, 2006

Effective concentration to {0} % of test organisms, Zebra Danio (Danio rerio), adult(s), 1.000 MG/ML, 1 W, Hormone(s), Water temperature: 28.00 C (82.4 F) C.
Results:
Loss of equilibrium.
- Short-Term Exposure to Low Concentrations of the Synthetic Androgen Methyltestosterone Affects Vitellogenin and Steroid Levels in Adult male Zebrafish (Danio rerio), Andersen, L., R. Goto-Kazeto, J.M. Trant, J.P. Nash, B. Korsgaard, and P. Bjerregaard, 2006

Effective concentration to {0} % of test organisms, Zebra Danio (Danio rerio), adult(s), 1.000 MG/ML, 1 W, Enzyme(s), Water temperature: 28.00 C (82.4 F) C.
Results:
Loss of equilibrium.
- Short-Term Exposure to Low Concentrations of the Synthetic Androgen Methyltestosterone Affects Vitellogenin and Steroid Levels in Adult male Zebrafish (Danio rerio), Andersen, L., R. Goto-Kazeto, J.M. Trant, J.P. Nash, B. Korsgaard, and P. Bjerregaard, 2006

Not reported., Zebra Danio (Danio rerio), adult(s), 1.000 MG/ML, 1 W, Growth, Water temperature: 28.00 C (82.4 F) C.
Results:
Age Effects.
- Short-Term Exposure to Low Concentrations of the Synthetic Androgen Methyltestosterone Affects Vitellogenin and Steroid Levels in Adult male Zebrafish (Danio

rerio), Andersen, L., R. Goto-Kazeto, J.M. Trant, J.P. Nash, B. Korsgaard, and P. Bjerregaard, 2006

Effective concentration to {0} % of test organisms, Zebra Danio (Danio rerio), adult(s), 1.000 MG/ML, 1 W, Hormone(s), Water temperature: 28.00 C (82.4 F) C.
Results:
Age Effects.
- Short-Term Exposure to Low Concentrations of the Synthetic Androgen Methyltestosterone Affects Vitellogenin and Steroid Levels in Adult male Zebrafish (Danio rerio), Andersen, L., R. Goto-Kazeto, J.M. Trant, J.P. Nash, B. Korsgaard, and P. Bjerregaard, 2006

Not reported., Zebra Danio (Danio rerio), juvenile(s), 0.100 0/00, 40 D, Mortality, Water temperature: 29.20 C (84.6 F) C.
Results:
Age Effects.
- Evaluation of a 40 day Assay for Testing Endocrine Disrupters: Effects of an Anti-Estrogen and an Aromatase Inhibitor on Sex Ratio and Vitellogenin Concentrations in Juvenile Zebrafish (Danio rerio), Andersen, L., K. Kinnberg, H. Holbech, B. Korsgaard, and P. Bjerregaard, 2004

Not reported., Zebra Danio (Danio rerio), juvenile(s), 0.100 0/00, 40 D, Population, Water temperature: 29.20 C (84.6 F) C.
Results:
Age Effects.
- Evaluation of a 40 day Assay for Testing Endocrine Disrupters: Effects of an Anti-Estrogen and an Aromatase Inhibitor on Sex Ratio and Vitellogenin Concentrations in Juvenile Zebrafish (Danio rerio), Andersen, L., K. Kinnberg, H. Holbech, B. Korsgaard, and P. Bjerregaard, 2004

Not reported., Zebra Danio (Danio rerio), juvenile(s), 0.100 0/00, 18 D, Biochemistry, Water temperature: 29.20 C (84.6 F) C.
Results:
Age Effects.
- Evaluation of a 40 day Assay for Testing Endocrine Disrupters: Effects of an Anti-Estrogen and an Aromatase Inhibitor on Sex Ratio and Vitellogenin Concentrations in Juvenile Zebrafish (Danio rerio), Andersen, L., K. Kinnberg, H. Holbech, B. Korsgaard, and P. Bjerregaard, 2004

Effective concentration to {0} % of test organisms, Zebra Danio (Danio rerio), adult(s), 1.000 MG/ML, 1 W, Genetics, Water temperature: 28.00 C (82.4 F) C.
Results:
Age Effects.
- Short-Term Exposure to Low Concentrations of the Synthetic Androgen Methyltestosterone Affects Vitellogenin and Steroid Levels in Adult male Zebrafish (Danio rerio), Andersen, L., R. Goto-Kazeto, J.M. Trant, J.P. Nash, B. Korsgaard, and P. Bjerregaard, 2006

Not reported., Zebra Danio (Danio rerio), juvenile(s), 0.100 0/00, 18 - 40 D, Growth, Water temperature: 29.20 C (84.6 F) C.
Results:
Age Effects.
- Evaluation of a 40 day Assay for Testing Endocrine Disrupters: Effects of an

Anti-Estrogen and an Aromatase Inhibitor on Sex Ratio and Vitellogenin Concentrations in Juvenile Zebrafish (Danio rerio), Andersen, L., K. Kinnberg, H. Holbech, B. Korsgaard, and P. Bjerregaard, 2004

Not reported., Ciliate (Uronema parduczi), 3425000. UG/L, Population.
Results:
No observed effect.
- Comparison of the Effect of Toxic Substances on the Flagellate Organisms Such as Ciliates and the Holozoic Bacteria-Devouring Organisms Such as Saprozoic Protozoans (Vergleich der Wirkung von Schadstoffen auf Flagellate, Bringmann, G., and R. Kuhn, 1981

Not reported., Ciliate (Uronema parduczi), 3425000. UG/L, 20 H, Population, Water temperature: 0.00 C (32.0 F) C, pH: 6.90.
Results:
No observed effect.
- Determination of the Biological Effect of Water Pollutants in Protozoa. II. Bacteriovorous Ciliates (Bestimmung der Biologischen Schadwirkung Wassergefahrdender Stoffe Gegen Protozoen. II. Bakterienfressende Ciliaten, Bringmann, G., and R. Kuhn, 1980

Effective concentration to 10% of test organisms., Green Algae Order (Chlorococcales), 680.0 MG/L, 24 H, Physiology.
Results:
Affected fish lost equilibrium prior to death.
- Bestimmung der Biologischen Schadwirkung Wassergefahrdender Stoffe im Assimilations-Zehrungs-Test (A-Z-Test), Krebs, F., 1991

Effective concentration to 50% of test organisms., Green Algae Order (Chlorococcales), 1000. MG/L, 24 H, Physiology.
Results:
Affected fish stopped schooling behavior.
Affected fish swam at or near surface.
- Bestimmung der Biologischen Schadwirkung Wassergefahrdender Stoffe im Assimilations-Zehrungs-Test (A-Z-Test), Krebs, F., 1991

Effective concentration to 50% of test organisms., Protozoa (Spirostomum ambiguum), 116.0 MMOL/L, 24 H, Development, Water temperature: 25.00 C (77.0 F) C, pH: 7.40, Hardness: 2.80 MG/L.
Results:
No observed effect.
- Spirotox - A new Tool for Testing the Toxicity of Volatile Compounds, Nalecz-Jawecki, G., and J. Sawicki, 1999

LC50, Protozoa (Spirostomum ambiguum), 369.0 MMOL/L, 24 H, Mortality, Water temperature: 25.00 C (77.0 F) C, pH: 7.40, Hardness: 2.80 MG/L.
Results:
No observed effect.
- Spirotox - A new Tool for Testing the Toxicity of Volatile Compounds, Nalecz-Jawecki, G., and J. Sawicki, 1999

Effective concentration to 50% of test organisms., Protozoa (Spirostomum ambiguum), 119.0 MMOL/L, 48 H, Development, Water temperature: 25.00 C (77.0 F) C, pH: 7.40,

Hardness: 2.80 MG/L.
Results:
No observed effect.
- Spirotox - A new Tool for Testing the Toxicity of Volatile Compounds, Nalecz-Jawecki, G., and J. Sawicki, 1999

LC50, Protozoa (Spirostomum ambiguum), 354.0 MMOL/L, 48 H, Mortality, Water temperature: 25.00 C (77.0 F) C, pH: 7.40, Hardness: 2.80 MG/L.
Results:
No observed effect.
- Spirotox - A new Tool for Testing the Toxicity of Volatile Compounds, Nalecz-Jawecki, G., and J. Sawicki, 1999

Inhibition concentration to 50% of test organisms, Fungus (Geotrichum candidum), 660.0 MMOL/L, 4 H, Physiology, Water temperature: 28.00 C (82.4 F) C, pH: 6.50.
Results:
No observed effect.
- Acute Toxicity of 16 Water-Soluble Chemicals to the Fungus Geotrichum candidum Measured by Reduction in Glucose Uptake, Jacobsen, T., 1995

Effective concentration to {0} % of test organisms, Coastal Cutthroat Trout (Oncorhynchus clarkii ssp. clarkii), 0.010 % V/V, 10 S, Physiology.
Results:
No observed effect.
- Behavioral Impairment and Increased Predation Mortality in Cutthroat Trout Exposed to Carbaryl, Labenia, J.S., D.H. Baldwin, B.L. French, J.W. Davis, and N.L. Scholz, 2007

Effective concentration to {0} % of test organisms, Coastal Cutthroat Trout (Oncorhynchus clarkii ssp. clarkii), 0.010 %, 6 H, Behavior.
Results:
Affected fish swam at or near surface.
Affected fish lost equilibrium prior to death.
- Behavioral Impairment and Increased Predation Mortality in Cutthroat Trout Exposed to Carbaryl, Labenia, J.S., D.H. Baldwin, B.L. French, J.W. Davis, and N.L. Scholz, 2007

Effective concentration to {0} % of test organisms, Coastal Cutthroat Trout (Oncorhynchus clarkii ssp. clarkii), 0.010 %, 6 H, Enzyme(s).
Results:
Affected fish swam at or near surface.
Affected fish lost equilibrium prior to death.
- Behavioral Impairment and Increased Predation Mortality in Cutthroat Trout Exposed to Carbaryl, Labenia, J.S., D.H. Baldwin, B.L. French, J.W. Davis, and N.L. Scholz, 2007

Effective concentration to {0} % of test organisms, Coastal Cutthroat Trout (Oncorhynchus clarkii ssp. clarkii), 0.010 %, 6 H, Enzyme(s).
Results:
Affected fish lost equilibrium prior to death.
- Behavioral Impairment and Increased Predation Mortality in Cutthroat Trout Exposed to Carbaryl, Labenia, J.S., D.H. Baldwin, B.L. French, J.W. Davis, and N.L. Scholz, 2007

13. Disposal Considerations

Waste Disposal Method: Dispose of contents/container in accordance with local/regional/national/international regulation.

14. Transport Information

LAND TRANSPORT (US DOT):

DOT Proper Shipping Name: Aerosols, 2.1, Ltd. Qty.
DOT Hazard Class: 2.1 FLAMMABLE GAS
UN/NA Number: UN1950

LAND TRANSPORT (European ADR/RID):

ADR/RID Shipping Name: Aerosols, 2.1, Ltd. Qty.
UN Number: 1950
Hazard Class: 2.1 - FLAMMABLE GAS **ADR Classification:** 2.1

MARINE TRANSPORT (IMDG/IMO):

IMDG/IMO Shipping Name: Aerosols, 2.1, Ltd. Qty.
UN Number: 1950 **Packing Group:**
Hazard Class: 2.1 - FLAMMABLE GAS **IMDG Classification:** 2.1
IMDG MFAG Number:
IMDG EMS Page: **Marine Pollutant:** No

AIR TRANSPORT (ICAO/IATA):

ICAO/IATA Shipping Name: Aerosols, flammable, 2.1, Ltd Qty
UN Number: 1950
Hazard Class: 2.1 - FLAMMABLE GAS **IATA Classification:** 2.1

15. Regulatory Information

EPA SARA (Superfund Amendments and Reauthorization Act of 1986) Lists

CAS #	Hazardous Components (Chemical Name)	S. 302 (EHS)	S. 304 RQ	S. 313 (TRI)
67-64-1	Acetone	No	Yes 5000 LB	No
78-93-3	Methyl ethyl ketone	No	Yes 5000 LB	No
74-98-6	Propane	No	No	No
106-97-8	Butane	No	No	No
67-63-0	Isopropyl alcohol	No	No	Yes

CAS #	Hazardous Components (Chemical Name)	Other US EPA or State Lists
67-64-1	Acetone	CAA HAP,ODC: No; CWA NPDES: No; TSCA: Yes - Inventory; CA PROP.65: No; CA TAC, Title 8: Title 8; MA Oil/HazMat: Yes; MI CMR, Part 5: Part 5; NC TAP: No; NJ EHS: No; NY Part 597: Yes; PA HSL: Yes - E; SC TAP: No; WI Air: Yes
78-93-3	Methyl ethyl ketone	CAA HAP,ODC: No; CWA NPDES: No; TSCA: Yes - Inventory; CA PROP.65: No; CA TAC, Title 8: TAC, Title 8; MA Oil/HazMat: Yes; MI CMR, Part 5: Part 5; NC TAP: Yes; NJ EHS: No; NY Part 597: Yes; PA HSL: Yes - E; SC TAP: Yes; WI Air: Yes
74-98-6	Propane	CAA HAP,ODC: No; CWA NPDES: No; TSCA: Yes - Inventory; CA PROP.65: No; CA TAC, Title 8: No; MA Oil/HazMat: Yes; MI CMR, Part 5: No; NC TAP: No; NJ EHS: Yes - 1594; NY Part 597: No; PA HSL: Yes - 1; SC TAP: No; WI Air: No
106-97-8	Butane	CAA HAP,ODC: No; CWA NPDES: No; TSCA: Yes - Inventory; CA PROP.65: No; CA TAC, Title 8: Title 8; MA

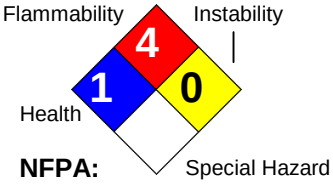
		Oil/HazMat: Yes; MI CMR, Part 5: No; NC TAP: No; NJ EHS: Yes - 0273; NY Part 597: No; PA HSL: Yes - 1; SC TAP: No; WI Air: No
67-63-0	Isopropyl alcohol	CAA HAP,ODC: No; CWA NPDES: No; TSCA: Yes - Inventory; CA PROP.65: No; CA TAC, Title 8: TAC, Title 8; MA Oil/HazMat: No; MI CMR, Part 5: No; NC TAP: No; NJ EHS: Yes - 1076; NY Part 597: No; PA HSL: Yes - E; SC TAP: No; WI Air: No

CAS #	Hazardous Components (Chemical Name)	International Regulatory Lists
67-64-1	Acetone	Canadian DSL: Yes; Canadian NDSL: No; Taiwan TCSCA: Yes
78-93-3	Methyl ethyl ketone	Canadian DSL: Yes; Canadian NDSL: No; Taiwan TCSCA: Yes
74-98-6	Propane	Canadian DSL: Yes; Canadian NDSL: No; Taiwan TCSCA: Yes
106-97-8	Butane	Canadian DSL: Yes; Canadian NDSL: No; Taiwan TCSCA: Yes
67-63-0	Isopropyl alcohol	Canadian DSL: Yes; Canadian NDSL: No; Taiwan TCSCA: Yes

16. Other Information

Revision Date: 09/26/2017

Hazard Rating System:



Additional Information About This Product: No data available.

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