

Section 1. Product and Company Identification

Product Name 1,3-Dioxolane
CAS Number 646-06-0

Parchem - fine & specialty chemicals
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EMERGENCY RESPONSE NUMBER
CHEMTEL

Toll Free US & Canada: 1 (800) 255-3924

All other Origins: 1 (813) 248-0585

Collect Calls Accepted

Section 2. Hazards Identification

Classification of the Substance or Mixture:

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Flammable liquids (Category 2), H225

GHS Label Elements, Including Precautionary Statements

Pictograms:



Signal Word: DANGER

Hazard and Precautionary Statements:

Hazard Statements

H225 Highly flammable liquid and vapor.

Precautionary Statements

P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

P233 Keep container tightly closed.

P240 Ground/bond container and receiving equipment.

P241 Use explosion-proof electrical/ ventilating/ lighting/ equipment.

P242 Use only non-sparking tools.

P243 Take precautionary measures against static discharge.

P280 Wear protective gloves/ eye protection/ face protection.

P303 + P361 + P353 IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.



P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.

P403 + P235 Store in a well-ventilated place. Keep cool.

P501 Dispose of contents/ container to an approved waste disposal plant.

Hazards not Otherwise Classified (HNOC) or not Covered by GHS: None

Section 3. Composition / Information on Ingredients

Common Name 1,3-Dioxolane
Synonym(s) Ethylene Glycol Methylene Ether; Formaldehyde Ethylene Acetal
Formula C₃H₆O₂
CAS Number 646-06-0

COMPONENT	CAS NUMBER	CONCENTRATION
1,3-Dioxolane	646-06-0	≤ 100%

Section 4. First Aid Measures

Description of First-aid Measures

General Advice: Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

Inhalation: If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

Skin Contact: Wash off with soap and plenty of water. Consult a physician.

Eye Contact: Flush eyes with water as a precaution.

Ingestion: Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

Most Important Symptoms and Effects, both Acute and Delayed: The most important known symptoms and effects are described in the labelling and/or in section 11.

Indication of any Immediate Medical Attention and Special Treatment Needed: No data available

Section 5. Firefighting Measures

Extinguishing Media

Suitable Extinguishing Media: Use water spray, alcohol-resistant foam, dry chemical, or carbon dioxide.

Special Hazards arising from the Substance or Mixture: Carbon oxides



Advice for Firefighters: Wear self-contained breathing apparatus for firefighting if necessary.

Further Information: Use water spray to cool unopened containers.

Section 6. Accidental Release Measures

Personal Precautions, Protective Equipment, and Emergency Procedures: Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas. For personal protection see section 8.

Environmental Precautions: Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

Methods and Materials for Containment and Cleaning up: Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13).

Reference to Other Sections: For disposal see section 13.

Section 7. Handling and Storage

Precautions for Safe Handling: Avoid inhalation of vapor or mist. Use explosion-proof equipment. Keep away from sources of ignition - No smoking. Take measures to prevent the build-up of electrostatic charge.

Conditions for Safe Storage, including any Incompatibilities: Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Store under inert gas. Storage class (TRGS 510): Flammable liquids

Section 8. Exposure Controls / Personal Protection

Control Parameters

Components with Workplace Control Parameters

Component	CAS Number	Value	Control Parameters	Basis
1,3-Dioxolane	646-06-0	TWA	20.000000 ppm	USA. ACGIH Threshold Limit Values (TLV)
	Remarks	Hematologic Effects		
		TWA	20 ppm	USA. ACGIH Threshold Limit Values (TLV)
		Hematologic Effects		



Exposure Controls

Appropriate Engineering Controls

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Personal Protective Equipment

Eye/Face Protection: Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin Protection: Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Body Protection: Impervious clothing. Flame retardant antistatic protective clothing. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory Protection: Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multipurpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of Environmental Exposure: Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

Section 9. Physical and Chemical Properties

Information on Basic Physical and Chemical Properties

Form: Clear, liquid

Color: Colorless

Odor: No data available

Odor Threshold: No data available

pH: No data available

Melting/Freezing Point: -95°C (-139°F) - lit.

Initial Boiling Point/Range: 75 - 76°C (167 - 169°F) at 1,013 hPa (760 mmHg)

Flash point (Closed Cup): -2.99°C (26.62°F)

Evaporation Rate: No data available

Flammability (solid, gas): No data available

Upper/Lower Flammability or Explosive Limits: No data available

Vapor Pressure: 93 hPa (70 mmHg) at 20°C (68°F)

Vapor Density: 2.56 - (Air = 1.0)

Relative Density: 1.06 g/cm³ at 25°C (77°F)

Water Solubility: Soluble

Partition Coefficient (n-Octanol/Water): log Pow: 0.37

Auto-Ignition Temperature: No data available

Decomposition Temperature: No data available



Viscosity: No data available
Explosive Properties: No data available
Oxidizing Properties: No data available

Other Safety Information

Relative Vapor Density: 2.56 - (Air = 1.0)

Section 10. Stability and Reactivity

Reactivity: No data available
Chemical Stability: Stable under recommended storage conditions.
Contains the following stabilizer(s): BHT (75 ppm)
Possibility of Hazardous Reactions: Vapors may form explosive mixture with air.
Conditions to Avoid: Heat, flames, and sparks.
Incompatible Materials: Strong oxidizing agents
Hazardous Decomposition Products: No data available
In the event of fire: see section 5

Section 11. Toxicological Information

Information on Toxicological Effects

Acute Toxicity

LD50 Oral - Rat: 3,000 mg/kg
LC50 Inhalation - Rat (4 h): 20,650 mg/m³
LD50 Dermal - Rat: 15,000 mg/kg

Skin Corrosion/Irritation: No data available
Serious Eye Damage/Eye Irritation: No data available
Respiratory or Skin Sensitization: No data available

Germ Cell Mutagenicity

Rat
DNA damage

Carcinogenicity

IARC: No component of this product, present at levels greater than or equal to 0.1%, is identified as probable, possible or confirmed human carcinogen by IARC.
ACGIH: No component of this product, present at levels greater than or equal to 0.1%, is identified as a carcinogen or potential carcinogen by ACGIH.
NTP: No component of this product, present at levels greater than or equal to 0.1%, is identified as a known or anticipated carcinogen by NTP.
OSHA: No component of this product, present at levels greater than or equal to 0.1%, is identified as a carcinogen or potential carcinogen by OSHA.



Reproductive Toxicity: No data available

Specific Target Organ Toxicity - Single Exposure: No data available

Specific Target Organ Toxicity - Repeated Exposure: No data available

Aspiration Hazard: No data available

Additional Information

RTECS: JH6760000

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Stomach - Irregularities - Based on Human Evidence

Section 12. Ecological Information

Toxicity

Toxicity to fish LC50 - *Cyprinodon variegatus* (sheepshead minnow) - 8,294 - 12,057 mg/l - 96h

Toxicity to daphnia and other aquatic invertebrates

EC50 - *Daphnia magna* (Water flea) - 6,203 - 7,787 mg/L - 48 h

Persistence and Degradability: No data available

Bioaccumulative Potential: No data available

Mobility in Soil: No data available

Results of PBT and vPvB Assessment: PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

Other Adverse Effects: No data available

Section 13. Disposal Considerations

Waste Treatment Methods: Dispose of product and contaminated packaging in accordance with all local, state, and federal environmental control regulations.

Section 14. Transport Information

DOT (US)

UN Number: 1166

Class: 3

Packing Group: II

Proper Shipping Name: Dioxolane

Poison Inhalation Hazard: No



IMDG

UN Number: 1166

Class: 3

Packing Group: II

EMS-No: F-E, S-D

Proper Shipping Name: DIOXOLANE

IATA

UN Number: 1166

Class: 3

Packing Group: II

Proper Shipping Name: Dioxolane

Section 15. Regulatory Information

SARA 302 Components: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

SARA 311/312 Hazards: Fire Hazard, Chronic Health Hazard

Massachusetts Right to Know Components

1,3-Dioxolane (CAS-No. 646-06-0)

Revision Date: 1993-04-24

Pennsylvania Right to Know Components

1,3-Dioxolane (CAS-No. 646-06-0)

Revision Date: 1993-04-24

New Jersey Right to Know Components

1,3-Dioxolane (CAS-No. 646-06-0)

Revision Date: 1993-04-24

California Prop. 65 Components: This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

HMIS Rating

Health: 1*

Flammability: 3

Reactivity: 0



NFPA Rating

Health: 0

Flammability: 3

Reactivity: 0

Section 16. Other Information

Disclaimer: The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product.

