

# SAFETY DATA SHEET

This safety data sheet was created pursuant to the requirements of: US OSHA Hazard Communication Standard (29 CFR 1910.1200)



# spectrum®

Revision date 16-December-2024

Revision Number 3

## 1. Identification

### Product identifier

**Product Name** 1,3-Dioxolane, Anhydrous, Stabilized with 75 ppm BHT

### Other means of identification

**Product Code(s)** D2371

**UN number or ID number** UN1166

**Synonyms** 1,3-Dioxacyclopentane

### Recommended use of the chemical and restrictions on use

**Recommended use** No information available

**Restrictions on use** No information available

### Details of the supplier of the safety data sheet

#### Supplier Address

Spectrum Chemical Mfg. Corp.  
14422 South San Pedro St.  
Gardena, CA 90248  
(310) 516-8000

### Emergency telephone number

**Emergency Telephone** Chemtrec 1-800-424-9300

## 2. Hazard(s) identification

### Classification

Flammable liquids	Category 2
Serious eye damage/eye irritation	Category 2A
Reproductive toxicity	Category 1A

### Hazards not otherwise classified (HNOC)

Not applicable.

### Label elements



Danger

**Hazard statements**

Highly flammable liquid and vapor.  
Causes serious eye irritation.  
May damage fertility or the unborn child.

**Precautionary Statements - Prevention**

Obtain special instructions before use.  
Do not handle until all safety precautions have been read and understood.  
Wear protective gloves/clothing and eye/face protection.  
Wash face, hands and any exposed skin thoroughly after handling.  
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
Keep container tightly closed.  
Ground and bond container and receiving equipment.  
Use explosion-proof electrical/ ventilating / lighting/ .? / equipment.  
Use only non-sparking tools.  
Take action to prevent static discharges.

**Precautionary Statements - Response**

IF exposed or concerned: Get medical advice/attention.  
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
If eye irritation persists: Get medical advice/attention.  
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower.  
In case of fire: Use CO<sub>2</sub>, dry chemical, or foam to extinguish.

**Precautionary Statements - Storage**

Store locked up.  
Store in a well-ventilated place. Keep cool.

**Precautionary Statements - Disposal**

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

**Other information**

Causes mild skin irritation.

### 3. Composition/information on ingredients

**Substance**

**Synonyms** 1,3-Dioxacyclopentane.

Chemical name	CAS No.	Weight-%
1,3-Dioxolane	646-06-0	100

### 4. First-aid measures

**Description of first aid measures**

<b>General advice</b>	Show this safety data sheet to the doctor in attendance.
<b>Inhalation</b>	Remove to fresh air.
<b>Eye contact</b>	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Do not rub affected area. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.
<b>Skin contact</b>	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes.
<b>Ingestion</b>	Rinse mouth. Never give anything by mouth to an unconscious person. Do NOT induce vomiting. Call a physician.
<b>Self-protection of the first aider</b>	Remove all sources of ignition. Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Use personal protective equipment as required. See section 8 for more information. Avoid contact with skin, eyes or clothing.

**Most important symptoms and effects, both acute and delayed**

<b>Symptoms</b>	May cause redness and tearing of the eyes. Burning sensation. Prolonged contact may cause redness and irritation.
<b>Effects of Exposure</b>	No information available.

**Indication of any immediate medical attention and special treatment needed**

<b>Note to physicians</b>	Treat symptomatically.
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## 5. Fire-fighting measures

<b>Suitable Extinguishing Media</b>	Dry chemical. Carbon dioxide (CO <sub>2</sub> ). Water spray. Alcohol resistant foam.
<b>Unsuitable extinguishing media</b>	Do not scatter spilled material with high pressure water streams.
<b>Specific hazards arising from the chemical</b>	Risk of ignition. Keep product and empty container away from heat and sources of ignition. In the event of fire, cool tanks with water spray. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.
<b>Explosion data</b>	
<b>Sensitivity to mechanical impact</b>	None.
<b>Sensitivity to static discharge</b>	Yes.
<b>Special protective equipment and precautions for fire-fighters</b>	Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

## 6. Accidental release measures

**Personal precautions, protective equipment and emergency procedures**

<b>Personal precautions</b>	Evacuate personnel to safe areas. Use personal protective equipment as required. See section 8 for more information. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Keep people away from and upwind of spill/leak. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Pay attention to flashback. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Do not touch or walk through spilled material.
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**Other information** Ventilate the area. Refer to protective measures listed in Sections 7 and 8.

#### **Methods and material for containment and cleaning up**

**Methods for containment** Stop leak if you can do it without risk. Do not touch or walk through spilled material. A vapor suppressing foam may be used to reduce vapors. Dike far ahead of spill to collect runoff water. Keep out of drains, sewers, ditches and waterways. Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal.

**Methods for cleaning up** Take precautionary measures against static discharges. Dam up. Soak up with inert absorbent material. Pick up and transfer to properly labeled containers.

**Prevention of secondary hazards** Clean contaminated objects and areas thoroughly observing environmental regulations.

### **7. Handling and storage**

#### **Precautions for safe handling**

**Technical Measures/Precautions:** Provide sufficient air exchange and/or exhaust in work rooms Remove all sources of ignition To avoid ignition of vapors by static electricity discharge, all metal parts of the equipment must be grounded Keep away from incompatible materials

**Advice on safe handling** Use personal protection equipment. Avoid breathing vapors or mists. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use grounding and bonding connection when transferring this material to prevent static discharge, fire or explosion. Use with local exhaust ventilation. Use spark-proof tools and explosion-proof equipment. Keep in an area equipped with sprinklers. Use according to package label instructions. Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Do not eat, drink or smoke when using this product. Remove contaminated clothing and shoes.

**General hygiene considerations** Do not eat, drink or smoke when using this product. Contaminated work clothing should not be allowed out of the workplace. Regular cleaning of equipment, work area and clothing is recommended. Wash hands before breaks and immediately after handling the product. Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection.

#### **Conditions for safe storage, including any incompatibilities**

**Storage Conditions** Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from heat, sparks, flame and other sources of ignition (i.e., pilot lights, electric motors and static electricity). Keep in properly labeled containers. Do not store near combustible materials. Keep in an area equipped with sprinklers. Store in accordance with the particular national regulations. Store in accordance with local regulations. Store locked up.

**Incompatible Materials:** Oxidizing agents Lithium Perchlorate

### **8. Exposure controls/personal protection**

#### **Control parameters**

**Exposure Limits** The following ingredients are the only ingredients of the product above the cut-off level (or level that contributes to the hazard classification of the mixture) which have an exposure limit applicable in the region for which this safety data sheet is intended or other recommended limit. At this time, the other relevant constituents have no known exposure limits from the sources listed here.

### Appropriate engineering controls

**Engineering controls**                      Showers  
    Eyewash stations  
    Ventilation systems.

### Individual protection measures, such as personal protective equipment

**Eye/face protection**                      Tight sealing safety goggles.

**Hand protection**                              Wear suitable gloves. Impervious gloves.

**Skin and body protection**                      Wear suitable protective clothing. Long sleeved clothing. Chemical resistant apron. Antistatic boots.

**Respiratory protection**                      Appropriate respiratory protection should be selected and used according to the chemical nature, hazards and use of this product and safety requirements of the local jurisdiction. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

## **9. Physical and chemical properties**

### Information on basic physical and chemical properties

**Physical state**                              Liquid  
**Appearance**                                Clear  
**Color**                                        Colorless  
**Odor**                                        Ether-like  
**Odor threshold**                              No information available

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
<b>pH</b>	No data available	None known
<b>pH (as aqueous solution)</b>		None known
<b>Melting point / freezing point</b>	-95 °C / -139 °F	None known
<b>Initial boiling point and boiling range</b>	74 - 78 °C / 165.2 - 172.4 °F	None known
<b>Flash point</b>	-3 °C / 26.6 °F	None known
<b>Evaporation rate</b>	no data available	None known
<b>Flammability</b>	no data available	None known
<b>Flammability Limit in Air</b>		None known
<b>Upper flammability or explosive limits</b>	20.5%	
<b>Lower flammability or explosive limits</b>	2.1%	
<b>Vapor pressure</b>	1060 @ 20°C (kPa)	None known
<b>Relative vapor density</b>	No data available	None known
<b>Relative density</b>	1.06	None known
<b>Water solubility</b>	Soluble in water	None known
<b>Solubility(ies)</b>	Soluble in Acetone Soluble in Ethanol Soluble in Ether	None known
<b>Partition coefficient</b>	-0.37	None known
<b>Autoignition temperature</b>	274 °C / 525.2 °F	None known
<b>Decomposition temperature</b>		None known
<b>Kinematic viscosity</b>	no data available	None known
<b>Dynamic viscosity</b>	No data available	None known

#### Other information

Explosive properties	No information available
Oxidizing properties	No information available
Softening point	No information available
Molecular weight	74.08
VOC content	No information available
Liquid Density	No information available
Bulk density	No information available

### 10. Stability and reactivity

Reactivity	No information available.
Chemical stability	Stable under recommended storage conditions.
Possibility of hazardous reactions	None under normal processing.
Conditions to avoid	Heat, flames and sparks.
Incompatible materials	None known based on information supplied.
Hazardous decomposition products	Spontaneous polymerisation.

### 11. Toxicological information

#### Information on likely routes of exposure

##### Product Information

Inhalation	Specific test data for the substance or mixture is not available. May cause irritation of respiratory tract.
Eye contact	Specific test data for the substance or mixture is not available. Causes serious eye irritation. (based on components). May cause redness, itching, and pain.
Skin contact	Specific test data for the substance or mixture is not available. May cause irritation. Prolonged contact may cause redness and irritation. Causes mild skin irritation.
Ingestion	Specific test data for the substance or mixture is not available. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

#### Symptoms related to the physical, chemical and toxicological characteristics

Symptoms	May cause redness and tearing of the eyes. Prolonged contact may cause redness and irritation.
Acute toxicity	No information available.
Numerical measures of toxicity	No information available

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
1,3-Dioxolane 646-06-0	= 3 g/kg ( Rat )	= 15 g/kg ( Rat ) = 8480 mg/kg ( Rabbit )	= 20650 mg/m <sup>3</sup> ( Rat ) 4 h

#### Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation	May cause skin irritation. Classification based on data available for ingredients.
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<b>Serious eye damage/eye irritation</b>	Classification based on data available for ingredients. Causes serious eye irritation.
<b>Respiratory or skin sensitization</b>	No information available.
<b>Germ cell mutagenicity</b>	No information available.
<b>Carcinogenicity</b>	No information available.
<b>Reproductive toxicity</b>	Contains a known or suspected reproductive toxin. Classification based on data available for ingredients. May damage fertility or the unborn child.
<b>STOT - single exposure</b>	No information available.
<b>STOT - repeated exposure</b>	No information available.
<b>Aspiration hazard</b>	No information available.
<b>Other adverse effects</b>	No information available.
<b>Interactive effects</b>	No information available.

## 12. Ecological information

### Ecotoxicity

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
1,3-Dioxolane 646-06-0	-	12000 (9871-14588) mg/l LC50 48 hours Cyprinodon variegatus (Sheepshead minnow) 10000 (8294-12057) mg/l LC50 96 hours Cyprinodon variegatus (Sheepshead minnow)	-	7650 (6955-8414) mg/l EC50 24 hours Daphnia magna 6950 (6203-7787) mg/l EC50 48 hours Daphnia magna

**Persistence and degradability** No information available.

**Bioaccumulation** There is no data for this product.

### Component Information

Chemical name	Partition coefficient
1,3-Dioxolane 646-06-0	-0.37

**Other adverse effects** No information available.

### 13. Disposal considerations

#### Disposal methods

Waste from residues/unused products	Should not be released into the environment. Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.
Contaminated packaging	Empty containers pose a potential fire and explosion hazard. Do not cut, puncture or weld containers.

### 14. Transport information

#### DOT

UN number or ID number	UN1166
Proper shipping name	Dioxolane
Transport hazard class(es)	3
Special Provisions	II
Special Provisions	IB2, T4, TP1
DOT Marine Pollutant	NP
Description	UN1166, Dioxolane, 3, II

#### TDG

UN/ID no.	UN1166
Proper shipping name	Dioxolane
Transport hazard class(es)	3
Packing Group	II
Description	UN1166, Dioxolane, 3, II

#### MEX

UN-No	UN1166
Proper Shipping Name	Dioxolane
Transport hazard class(es)	3
Packing Group	II
Description	UN1166, Dioxolane, 3, II

#### ICAO (air)

UN/ID no.	UN1166
Proper shipping name	Dioxolane
Transport hazard class(es)	3
Packing Group	II
Description	UN1166, Dioxolane, 3, II

#### IATA

UN number or ID number	UN1166
Proper shipping name	Dioxolane
Transport hazard class(es)	3
Packing group	II
Description	UN1166, Dioxolane, 3, II

#### IMDG

UN number or ID number	UN1166
Proper shipping name	Dioxolane
Transport hazard class(es)	3
Packing group	II F-E
Description	UN1166, Dioxolane, 3, II, (-3°C c.c.)



**ADR**

UN number or ID number	1166
Proper shipping name	Dioxolane
Transport hazard class(es)	3
Packing group	II
Description	1166, Dioxolane, 3, II, (D/E)

**RID**

UN number or ID number	UN1166
Proper shipping name	Dioxolane
Transport hazard class(es)	3
Subsidiary Risk:	3
Packing group	II
Description	UN1166, Dioxolane, 3, II

## 15. Regulatory information

### International Inventories

**TSCA** Complies

<b>DSL/NDSL</b>	Complies
<b>EINECS/ELINCS</b>	Complies
<b>ENCS</b>	This product complies with ENCS:
<b>IECSC</b>	This product complies with China:
<b>KECL</b>	Complies
<b>PICCS</b>	Complies
<b>AIC</b>	This product does not comply with AICS
<b>NZIoC</b>	Does not comply
<b>TCSI</b>	Does not comply

**Legend:**

**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory

**DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List

**EINECS/ELINCS** - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

**ENCS** - Japan Existing and New Chemical Substances

**IECSC** - China Inventory of Existing Chemical Substances

**KECL** - Korean Existing and Evaluated Chemical Substances

**PICCS** - Philippines Inventory of Chemicals and Chemical Substances

**NZIoC** - New Zealand Inventory of Chemicals

**TCSI** - Taiwan Chemical Substance Inventory

### US Federal Regulations

#### **SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

#### **SARA 311/312 Hazard Categories**

Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications.

#### **CWA (Clean Water Act)**

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

**CAA (Clean Air Act)**

This product does not contain any substances regulated as pollutants pursuant to Clean Air Act (CAA).

**CERCLA**

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

**US State Regulations****California Proposition 65**

This product does not contain any Proposition 65 chemicals.

**U.S. State Right-to-Know Regulations**

This product does not contain any substances regulated under applicable state right-to-know regulations

**U.S. EPA Label Information**

**EPA Pesticide Registration Number** Not applicable

**International Inventories**

Chemical name	CAS No.	U.S. TSCA	KOREA KECL	Philippines (PICCS)	Japan ENCS	IECSC	AIIC	EINECS-No.
	646-06-0	PresentACTIVE	PresentKE-12027	Present	Present (5)-500	X	Not listed	Present211-463-5

**U.S. Regulations**

Chemical name	Massachusetts	M.A. EHS:	New Jersey	New Jersey - Environmental Hazardous Substances	N.J.- Discharge Prevention:	New Jersey TCPA - EHS:	Pennsylvania	P.A. RTK - Environmental Hazard	P.A. RTK - Special Hazardous
1,3-Dioxolane	Present		0791				Present		

**California Prop. 65: Safe Drinking Water and Toxic Enforcement Act of 1986.****Chemicals Known to the State of California to Cause Cancer:**

This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

**Chemicals Known to the State of California to Cause Reproductive Toxicity:**

This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

Chemical name	CAS No.	Carcinogen	Developmental Toxicity	Male Reproductive Toxicity	Female Reproductive Toxicity:
	646-06-0	Not Listed	Not Listed	Not Listed	Not Listed

**CERCLA/SARA**

CERCLA

## TSCA

Chemical name	CAS No.	Hazardous Substances RQs	TPQ	Section 302 Extremely Hazardous Substances and RQs	Section 313 - Chemical Category
	646-06-0			None	None

## U.S. TSCA

Chemical name	CAS No.	TSCA Section 5(a)2 - Chemicals With Significant New Use Rules (SNURS)	TSCA 8(d) -Health and Safety Reporting
	646-06-0	Not Applicable	01/03/1983 01/03/1993

## Canada

## WHMIS 2015 - GHS Classifications

WHMIS 2015 Hazard Classification Information:

Not a dangerous product according to HPR classification criteria.

Component  
1,3-Dioxolane  
646-06-0 ( 100 )

WHMIS 2015 Hazard Classification  
Flammable liquids - Category 2: H225 Highly flammable liquid and vapour.; Serious Eye Damage/Eye Irritation - Category 2: H319 Causes serious eye irritation.

**Canada Hazardous Products Regulation** This product has been classified according to the hazard criteria of the HPR (Hazardous Products Regulation) and the SDS contains all of the information required by the HPR

Chemical name	CAS No.	Canada (DSL)	Canada (NDSL)
	646-06-0	Present	Not Listed

Chemical name	CAS No.	CEPA Schedule I - Toxic Substances
	646-06-0	Not listed
Chemical name	CAS No.	CEPA - 2010 Greenhouse Gases Subject to Mandatory Reporting
	646-06-0	Not listed

Chemical name	CAS No.	EU GHS - SV - CLP (1272/2008)
	646-06-0	Flammable liquids - Flam. Liq. 2: H225 Highly flammable liquid and vapour.605-017-00-2

**R-Phrases**

R11 - Highly flammable

**S -phrase(s)**

S 9 - Keep container in a well-ventilated place.  
S16 - Keep away from sources of ignition - No smoking  
S33 - Take precautionary measures against static discharges

Chemical name	CAS No.	Classification according to	Concentration Limits:	Safety Phrases
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		<b>Directive 67/548/EEC or 1999/45/EC</b>		
1,3-Dioxolane	646-06-0	F; R11	No information	

The product is classified in accordance with Annex VI to Directive 67/548/EEC

#### Indication of danger:

F - Highly flammable

## 16. Other information

<b>NFPA</b>	<b>Health hazards</b> 2	<b>Flammability</b> 3	<b>Instability</b> 0	<b>Special hazards</b> -
<b>HMIS</b>	<b>Health hazards</b> 2 *	<b>Flammability</b> 3	<b>Physical hazards</b> 0	<b>Personal protection</b> X

*Chronic Hazard Star Legend*      \* = Chronic Health Hazard

#### Key or legend to abbreviations and acronyms used in the safety data sheet

##### Legend

SVHC: Substances of Very High Concern for Authorization:  
PBT: Persistent, Bioaccumulative, and Toxic (PBT) Substances  
vPvB: Very Persistent and very Bioaccumulative (vPvB) Substances  
STOT: Specific Target Organ Toxicity  
ATE: Acute Toxicity Estimate  
LC50: 50% Lethal Concentration  
LD50: 50% Lethal Dose

#### Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value	Sk*	Skin designation
+	Sensitizers		

#### Key literature references and sources for data used to compile the SDS

Agency for Toxic Substances and Disease Registry (ATSDR)  
U.S. Environmental Protection Agency ChemView Database  
European Food Safety Authority (EFSA)  
Environmental Protection Agency  
Acute Exposure Guideline Level(s) (AEGl(s))  
U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act  
U.S. Environmental Protection Agency High Production Volume Chemicals  
Food Research Journal  
Hazardous Substance Database  
International Uniform Chemical Information Database (IUCLID)  
National Institute of Technology and Evaluation (NITE)  
Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)  
NIOSH (National Institute for Occupational Safety and Health)  
National Library of Medicine's ChemID Plus (NLM CIP)  
National Library of Medicine's PubMed database (NLM PUBMED)  
U.S. National Toxicology Program (NTP)  
New Zealand's Chemical Classification and Information Database (CCID)  
Organization for Economic Co-operation and Development Environment, Health, and Safety Publications  
Organization for Economic Co-operation and Development High Production Volume Chemicals Program  
Organization for Economic Co-operation and Development Screening Information Data Set  
World Health Organization

#### Revision date

16-December-2024

#### Revision Note

No information available.

#### Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

**End of Safety Data Sheet**