

# SAFETY DATA SHEET



TCD alcohol DM (packed)  
10660

Version / Revision  
Supersedes Version

6.01  
6.00\*\*\*

Revision Date  
Issuing date

01-Dec-2020  
01-Dec-2020

## SECTION 1: Identification

### 1.1. Product identifier

Identification of the  
substance/preparation

**TCD alcohol DM (packed)**

Chemical Name  
CAS-No

Tricyclodecanedimethanol / Octahydro-4,7-methano-1H-indenedimethanol  
26896-48-0 / 26160-83-8

### 1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the Substance /  
Preparation  
Uses advised against

Intermediate  
None

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

Supplier

**OQ Chemicals Corporation**  
15375 Memorial Drive  
West Memorial Place I  
Suite 300  
Houston, TX 77079  
USA  
Phone +1 346 378 7300

Product Information

Product Stewardship  
FAX: +49 (0)208 693 2053  
email: sc.psq@oq.com

### 1.4. Emergency telephone number

Emergency telephone number NCEC +1 202 464 2554  
available 24/7

## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

This substance is classified in accordance with paragraph (d) of §1910.1200 (GHS-US classification).

Serious eye damage/eye irritation Category 2A, H319

OSHA Specified Hazards

Not applicable.

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## 2.2. Label elements

Labeling according to §1910.1200 (GHS-US labeling).

### Hazard symbol(s)



### Signal word

### Warning

### Hazard statements

H319: Causes serious eye irritation.

### Precautionary statements

### Prevention

P264: Wash hands thoroughly after handling.  
P280: Wear eye protection/face protection.

### Response

P305 + P351 + P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P337 + P313: If eye irritation persists: Get medical advice/ attention.

## 2.3. Other hazards

None known

## SECTION 3: Composition / information on ingredients

### 3.1. Substances

Component	CAS-No	Concentration (%)
Tricyclodecanedimethanol	26896-48-0	> 97

### Remarks

CAS 26896-48-0 Tricyclodecanedimethanol  
CAS 26160-83-8 Octahydro-4,7-methano-1H-indenedimethanol.

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

#### Inhalation

Keep at rest. Aerate with fresh air. When symptoms persist or in all cases of doubt seek medical advice.

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## **Skin**

Wash off immediately with plenty of water. When symptoms persist or in all cases of doubt seek medical advice.

## **Eyes**

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses. Immediate medical attention is required.

## **Ingestion**

Call a physician immediately. Do not induce vomiting without medical advice.

## **4.2. Most important symptoms and effects, both acute and delayed**

### **Main symptoms**

None known.

### **Special hazard**

Lung irritation.

## **4.3. Indication of any immediate medical attention and special treatment needed**

### **General advice**

Remove contaminated, soaked clothing immediately and dispose of safely. First aider needs to protect himself.

Treat symptomatically. If ingested, irrigate the stomach using activated charcoal.

## **SECTION 5: Firefighting measures**

### **5.1. Extinguishing media**

#### **Suitable extinguishing media**

foam, dry chemical, carbon dioxide (CO<sub>2</sub>), water spray

#### **Unsuitable Extinguishing Media**

Do not use a solid water stream as it may scatter and spread fire.

### **5.2. Special hazards arising from the substance or mixture**

Under conditions giving incomplete combustion, hazardous gases produced may consist of:

carbon monoxide (CO)

carbon dioxide (CO<sub>2</sub>)

Combustion gases of organic materials must in principle be graded as inhalation poisons

Vapours are heavier than air and may spread along floors

### **5.3. Advice for firefighters**

#### **Special protective equipment for firefighters**

Fire fighter protection should include a self-contained breathing apparatus (NIOSH-approved or EN 133) and full fire-fighting turn out gear.

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## Precautions for firefighting

Cool containers / tanks with water spray. Dike and collect water used to fight fire. Keep people away from and upwind of fire.

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel: For personal protective equipment see section 8. Avoid contact with skin and eyes. Avoid breathing vapors or mists. Keep people away from and upwind of spill/leak. Ensure adequate ventilation, especially in confined areas. Keep away from heat and sources of ignition.  
For emergency responders: Personal protection see section 8.

### 6.2. Environmental precautions

Prevent further leakage or spillage. Do not discharge product into the aquatic environment without pretreatment (biological treatment plant).

### 6.3. Methods and material for containment and cleaning up

#### Methods for containment

Stop the flow of material, if possible without risk. Dike spilled material, where this is possible.

#### Methods for cleaning up

Soak up with inert absorbent material. Keep in suitable, closed containers for disposal. If liquid has been spilt in large quantities clean up promptly by scoop or vacuum. Dispose of in accordance with local regulations. Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapours).

### 6.4. Reference to other sections

For personal protective equipment see section 8.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

#### Advice on safe handling

Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product. Provide sufficient air exchange and/or exhaust in work rooms.

#### Hygiene measures

When using, do not eat, drink or smoke. Take off all contaminated clothing immediately. Wash hands before breaks and immediately after handling the product.

#### Advice on the protection of the environment

See Section 8: Environmental exposure controls.

#### Incompatible products

strong oxidizing agents

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## 7.2. Conditions for safe storage, including any incompatibilities

### Advice on protection against fire and explosion

Keep away from sources of ignition - No smoking. Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapours). In case of fire, emergency cooling with water spray should be available. Ground and bond containers when transferring material.

### Technical measures/Storage conditions

Keep containers tightly closed in a cool, well-ventilated place. Handle and open container with care.

## SECTION 8: Exposure controls / personal protection

### 8.1. Control parameters

#### Exposure limits United States of America

No exposure limits established.

### 8.2. Exposure controls

#### Appropriate Engineering controls

General or dilution ventilation is frequently insufficient as the sole means of controlling employee exposure. Local ventilation is usually preferred. Explosion-proof equipment (for example fans, switches, and grounded ducts) should be used in mechanical ventilation systems.

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

##### General industrial hygiene practice

Avoid contact with skin, eyes and clothing. Do not breathe vapours or spray mist. Ensure that eyewash stations and safety showers are close to the workstation location.

##### Hygiene measures

When using, do not eat, drink or smoke. Take off all contaminated clothing immediately. Wash hands before breaks and immediately after handling the product.

##### Eye protection

Tightly fitting safety goggles. In addition to goggles, wear a face shield if there is a reasonable chance for splash to the face.

##### Hand protection

Wear protective gloves. Recommendations are listed below. Other protective material may be used, depending on the situation, if adequate degradation and permeation data is available. If other chemicals are used in conjunction with this chemical, material selection should be based on protection for all chemicals present.

<b>Suitable material</b>	nitrile rubber
<b>Reference substance</b>	Di-(2-ethylhexyl)-phthalate
<b>Evaluation</b>	according to EN 374: level 6
<b>Glove thickness</b>	approx 0,55 mm

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<b>Break through time</b>	> 480 min
<b>Suitable material</b>	polyvinylchloride
<b>Reference substance</b>	Di-(2-ethylhexyl)-phthalate
<b>Evaluation</b>	Information derived from practical experience
<b>Glove thickness</b>	approx 0.8 mm

## Skin and body protection

Impervious clothing. Wear face-shield and protective suit for abnormal processing problems.

## Environmental exposure controls

If possible use in closed systems. If leakage can not be prevented, the substance needs to be suck off at the emersion point, if possible without danger. If recycling is not practicable, dispose of in compliance with local regulations. Inform the responsible authorities in case of leakage into the atmosphere, or of entry into waterways, soil or drains.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

<b>Appearance</b>	Very viscous				
<b>Colour</b>	colourless				
<b>Odour</b>	mild				
<b>Odour threshold</b>	No data available				
<b>pH</b>	neutral				
<b>Melting point/range</b>	64,4 °F (18 °C) (Pour point)				
<b>Method</b>	DIN ISO 3016				
<b>Boiling point/range</b>	634,1 °F (334,5 °C) @ 1 atm (101,3 kPa)				
<b>Method</b>	OECD 103				
<b>Flash point</b>	375,8 °F (191 °C) @ 1 atm (101,3 kPa)***				
<b>Method</b>	ISO 2719				
<b>Evaporation rate</b>	No data available				
<b>Flammability (solid, gas)</b>	Does not apply, the substance is a liquid				
<b>Lower explosion limit</b>	No data available				
<b>Upper explosion limit</b>	No data available				
<b>Vapour pressure</b>					
Values [hPa]	Values [kPa]	Values [atm]	@ °C	@ °F	Method
< 1	< 0,1	< 0,001	20	68	
<b>Vapour density</b>	No data available				
<b>Relative density</b>					
Values	@ °C	@ °F	Method		
1,136	20	68	DIN 51757		
<b>Solubility</b>	No data available				
<b>Water solubility</b>	11 g/l @ 68 °F (20 °C) OECD 105				
<b>log Pow</b>	1,2 - 2,1 (measured) OECD 117				
<b>Autoignition temperature</b>	518 °F (270 °C) @ 1 atm (101,3 kPa)***				
<b>Method</b>	EU A.15				

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**Decomposition temperature** No data available  
**Viscosity** 52600 mPa\*s @ 104 °F (40 °C)  
14100000 mPa\*s @ 68 °F (20 °C)  
**Method** dynamic, OECD 114

## 9.2. Other information

**Molecular weight** 196,28  
**Molecular formula** C12 H20 O2  
**log Koc** 1,226 calculated\*\*\*  
**Oxidizing properties** Does not apply, substance is not oxidising. There are no chemical groups associated with oxidizing properties  
**Refractive Index** 1,520 @ 122 °F (50 °C)  
**Explosive properties** Does not apply, substance is not explosive. There are no chemical groups associated with explosive properties  
**Surface tension** 58,9 mN/m (1 g/l @ 20°C (68°F)), OECD 115

## SECTION 10: Stability and Reactivity

### 10.1. Reactivity

The reactivity of the product corresponds to the typical reactivity shown by the substance group as described in any text book on organic chemistry.

### 10.2. Chemical stability

Stable under recommended storage conditions.

### 10.3. Possibility of hazardous reactions

Hazardous polymerisation does not occur.

### 10.4. Conditions to avoid

Avoid contact with heat, sparks, open flame and static discharge. Avoid any source of ignition.

### 10.5. Incompatible materials

strong oxidizing agents.

### 10.6. Hazardous decomposition products

No decomposition if stored and applied as directed.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

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Likely routes of exposure Skin contact, Eye contact, Ingestion

## Tricyclodecanedimethanol, CAS: 26896-48-0

### Target Organ Systemic Toxicant - Single exposure

Based on available data, the classification criteria are not met for:  
STOT SE

### Target Organ Systemic Toxicant - Repeated exposure

Based on available data, the classification criteria are not met for:  
STOT RE

Acute toxicity				
Tricyclodecanedimethanol (26896-48-0)				
Routes of Exposure	Endpoint	Values	Species	Method
Oral	LD50	2250 mg/kg	rat, female	OECD 401
Dermal	LD50	> 10000 mg/kg	rat, male/female	OECD 402

## Tricyclodecanedimethanol, CAS: 26896-48-0

### Assessment

Based on available data, the classification criteria are not met for:

Acute oral toxicity

Acute dermal toxicity

For acute inhalation toxicity, no data are available

Irritation and corrosion				
Tricyclodecanedimethanol (26896-48-0)				
Target Organ Effects	Species	Result	Method	
Skin	rabbit	No skin irritation	US Fed. Reg. 187	24h
Eyes	rabbit	irritating	US Fed. Reg. 187	24h***

## Tricyclodecanedimethanol, CAS: 26896-48-0

### Assessment

The available data lead to the classification given in section 2

Based on available data, the classification criteria are not met for:

skin irritation/corrosion

For respiratory irritation, no data are available

Sensitization				
Tricyclodecanedimethanol (26896-48-0)				
Target Organ Effects	Species	Evaluation	Method	
Skin	guinea pig	not sensitizing	OECD 406	in vivo***

## Tricyclodecanedimethanol, CAS: 26896-48-0

### Assessment

Based on available data, the classification criteria are not met for:

Skin sensitization

For respiratory sensitization, no data are available

Subacute, subchronic and prolonged toxicity				
Tricyclodecanedimethanol (26896-48-0)				

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Type	Dose	Species	Method	
Subacute toxicity	NOAEL: 600 mg/kg/d (28d)	rat, male/female	OECD 422	Oral
Subchronic toxicity	NOAEL: 1000 mg/kg/d (90d)	rat, male/female	OECD 408	Oral

## **Tricyclodecanedimethanol, CAS: 26896-48-0**

### **Assessment**

Based on available data, the classification criteria are not met for:

STOT RE

## **Carcinogenicity, Mutagenicity, Reproductive toxicity**

### **Tricyclodecanedimethanol (26896-48-0)**

Type	Dose	Species	Evaluation	Method	
Mutagenicity		CHO (Chinese Hamster Ovary) cells	negative	OECD 473 (Chromosomal Aberration)	In vitro study
Mutagenicity		CHO (Chinese Hamster Ovary) cells	negative	OECD 476 (Mammalian Gene Mutation)	In vitro study
Mutagenicity		Salmonella typhimurium	negative	OECD 471 (Ames)	In vitro study
Reproductive toxicity	NOAEL 600 mg/kg/d	rat, parental		OECD 422, Oral	
Reproductive toxicity	NOAEL 600 mg/kg/d	rat, 1. Generation, male/female		OECD 422, Oral	
Developmental Toxicity	NOAEL 600 mg/kg/d	rat, parental		OECD 422, Oral	
Developmental Toxicity	NOAEL 600 mg/kg/d	rat, 1. Generation, male/female		OECD 422, Oral	
Developmental Toxicity	NOAEL 500 mg/kg/d	rat		OECD 414, Oral	Maternal toxicity
Developmental Toxicity	NOAEL 1000 mg/kg/d	rat		OECD 414, Oral	Developmental toxicity

## **Tricyclodecanedimethanol, CAS: 26896-48-0**

### **CMR Classification**

The available data on CMR properties are summarized in the table above. They do not indicate a classification into categories 1A or 1B

### **Evaluation**

In vitro tests did not show mutagenic effects

Animal testing did not show any effects on fertility

In the absence of specific alerts no cancer testing is required

## **Tricyclodecanedimethanol, CAS: 26896-48-0**

### **Aspiration toxicity**

Due to the viscosity, this product does not present an aspiration hazard

### **Note**

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Handle in accordance with good industrial hygiene and safety practice. Further details on substance data can be found in the registration dossier under the following link:  
<http://echa.europa.eu/information-on-chemicals/registered-substances>.

## SECTION 12: Ecological information

### 12.1. Toxicity

Acute aquatic toxicity			
Tricyclodecanedimethanol (26896-48-0)			
Species	Exposure time	Dose	Method
Oncorhynchus mykiss (rainbow trout)***	96h	LC50: 100,3 mg/l	OECD 203
Daphnia magna (Water flea)	48h	EC50: > 100 mg/l	OECD 202
Pseudokirchneriella subcapitata	72h	EC50: > 100 mg/l (Growth rate)	OECD 201
Activated sludge (bacteriae)	3 h	EC50: 2400 mg/l	OECD 209

Long term toxicity				
Tricyclodecanedimethanol (26896-48-0)				
Type	Species	Dose	Method	
Aquatic toxicity	Pseudokirchneriella subcapitata	NOEC: 100 mg/l***	OECD 201	

Terrestrial toxicity				
Tricyclodecanedimethanol (26896-48-0)				
Species	Exposure time	Dose	Type	Method
Eisenia fetida / Eisenia andrej	28 d	LC50: > 1000 mg/kg soil dw	Parental mortality	OECD 222
Eisenia fetida / Eisenia andrej	56 d	NOEC: 59 mg/kg soil dw	Reproduction	OECD 222
Eisenia fetida / Eisenia andrej	56 d	EC10: 39 mg/kg soil dw	Reproduction	OECD 222
Soil microorganism	28 d	NOEC: 320 mg/kg soil dw	Nitrogen transformation	OECD 216

### 12.2. Persistence and degradability

**Tricyclodecanedimethanol, CAS: 26896-48-0**

#### Biodegradation

0 % (28 d), activated sludge (domestic), non-adapted, aerobic, OECD 301 B, Not readily biodegradable.\*\*\*

Abiotic Degradation		
Tricyclodecanedimethanol (26896-48-0)		
Type	Result	Method
Hydrolysis	not expected	
Photolysis	No data available	

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## 12.3. Bioaccumulative potential

Tricyclodecanedimethanol (26896-48-0)		
Type	Result	Method
log Pow	1,2 - 2,1	measured, OECD 117
BCF	5,866	calculated

## 12.4. Mobility in soil

Tricyclodecanedimethanol (26896-48-0)		
Type	Result	Method
Adsorption/Desorption	Koc: 16,81 ***	calculated
Surface tension	58,9 mN/m (1 g/l @ 20°C (68°F))	OECD 115
Distribution to environmental compartments	no data available	

## 12.5. Results of PBT and vPvB assessment

### Tricyclodecanedimethanol, CAS: 26896-48-0

#### PBT and vPvB assessment

This substance is not considered to be persistent, bioaccumulating nor toxic (PBT), nor very persistent nor very bioaccumulating (vPvB)

## 12.6. Other adverse effects

### Tricyclodecanedimethanol, CAS: 26896-48-0

No data available

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

#### Product Information

Disposal required in compliance with all waste management related state and local regulations. The choice of the appropriate method of disposal depends on the product composition by the time of disposal as well as the local statutes and possibilities for disposal.

#### Uncleaned empty packaging

Contaminated packaging should be emptied as far as possible and after appropriate cleansing may be taken for reuse.

## SECTION 14: Transport information

### Section 14.1 - 14.6

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D.O.T. (49CFR) Not restricted

ICAO-TI / IATA-DGR Not restricted

IMDG Not restricted

**14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code** not applicable

## SECTION 15: Regulatory information

### Federal and State Regulations

Components of the product are listed in the quoted regulations. For details please refer to the regulations directly. This list is not exhaustive, please check for other applicable regulations.

#### Federal Regulations

This product is listed on the TSCA inventory

### International Inventories

#### Tricyclodecanedimethanol, CAS: 26896-48-0

AICS (AU)  
DSL (CA)  
IECSC (CN)  
EC-No. 2480965 (EU)  
ENCS (4)-641 (JP)  
ISHL (4)-641 (JP)  
KECI 2001-3-1986 (KR)  
PICCS (PH)  
TSCA (US)  
NZIoC-NZ May be used as single component chemical  
TCSI (TW)

## SECTION 16: Other information

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## Hazard Rating Systems

### **NFPA (National Fire Protection Association)**

Health Hazard	2
Fire Hazard	1
Reactivity	0

### **HMIS (Hazardous Material Information System)**

Health Hazard	1
Flammability	1
Physical Hazard	0

### **Training advice**

For effective first-aid, special training / education is needed.

### **Sources of key data used to compile the datasheet**

Information contained in this safety data sheet is based on OQ owned data and public sources deemed valid or acceptable. The absence of data elements required by OSHA, ANSI or Annex II, Regulation 1907/2006/EC indicates, that no data meeting these requirements is available.

### **Further information for the safety data sheet**

Changes against the previous version are marked by \*\*\*. Observe national and local legal requirements. For more information, other material safety data sheets or technical data sheets please consult the OQ homepage ([www.chemicals.oq.com](http://www.chemicals.oq.com)).

The use of a comma in section 3 and section 7 to 12 is the same as a period.

### **Disclaimer**

**For industrial use only.** The information contained herein is accurate to the best of our knowledge. We do not suggest or guarantee that any hazards listed herein are the only ones which exist. OQ makes no warranty of any kind, express or implied, concerning the safe use of this material in your process or in combination with other substances. User has the sole responsibility to determine the suitability of the materials for any use and the manner of use contemplated. User must meet all applicable safety and health standards.

**End of Safety Data Sheet**