

SAFETY DATA SHEET



TCD alcohol DM (packed)
10660

Version / Revision
Supersedes Version

3.01
3.00***

Revision Date
Issuing date

12-Jan-2021
12-Jan-2021

SECTION 1: Identification of the substance / mixture and of the company / undertaking

1.1. Product identifier

Identification of the
substance/preparation

TCD alcohol DM (packed)

Chemical Name

Tricyclodecanedimethanol / Octahydro-4,7-methano-1H-indenedimethanol

CAS-No

26896-48-0 / 26160-83-8

EC No.

248-096-5 / 247-488-3

Registration number (REACH)

01-2119615403-50

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

Identified uses

Formulation
cleaning agent
Intermediate
Polymerization
laboratory chemicals

Uses advised against

None

1.3. Details of the supplier of the safety data sheet

Company/Undertaking
Identification

OQ Chemicals GmbH
Rheinpromenade 4A
D-40789 Monheim
Germany***

Product Information

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

1.4. Emergency telephone number

Emergency telephone number +65 3158 1198 (available 24/7)
000800 100 7479 (for domestic shipments only)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

This substance is classified based on Directive 1272/2008/EC and its amendments (CLP Regulation)

Serious eye damage/eye irritation Category 2, H319

Additional information

For full text of Hazard- and EU Hazard-statements see SECTION 16.

2.2. Label elements

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Labelling according to Regulation 1272/2008/EC and its amendments (CLP Regulation).

Hazard pictograms



Signal word

Warning

Hazard statements

H319: Causes serious eye irritation.

Precautionary statements

P280: Wear protective gloves/protective clothing/eye protection/face protection.
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***

PBT and vPvB assessment

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

SECTION 3: Composition / information on ingredients

3.1. Substances

Component	CAS-No	REACH-No	1272/2008/EC	Concentration (%)
Tricyclodecanedimethanol	26896-48-0	01-2119615403-50	Eye Irrit. 2; H319	> 97

Remarks

CAS 26896-48-0 Tricyclodecanedimethanol
CAS 26160-83-8 Octahydro-4,7-methano-1H-indenedimethanol.
For full text of Hazard- and EU Hazard-statements see SECTION 16.

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.

Eyes

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

Skin

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

Ingestion

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

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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 (CO₂), 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 (CO₂)

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.

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

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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

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.

Temperature class

T3

7.3. Specific end use(s)

Formulation
cleaning agent
Intermediate
Polymerization

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laboratory chemicals

SECTION 8: Exposure controls / personal protection

8.1. Control parameters

Exposure limits India

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.

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.

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.

Suitable material	nitrile rubber
Reference substance	Di-(2-ethylhexyl)-phthalate
Evaluation	according to EN 374: level 6
Glove thickness	approx 0,55 mm
Break through time	> 480 min
Suitable material	polyvinylchloride
Reference substance	Di-(2-ethylhexyl)-phthalate
Evaluation	Information derived from practical experience
Glove thickness	approx 0.8 mm

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.

Equipment should conform to EN 166

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

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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

Appearance	Very viscous
Colour	colourless
Odour	mild
Odour threshold	No data available
pH	neutral
Melting point/range	18 °C (Pour point)
Boiling point/range	334,5 °C @ 1013 hPa
Flash point	191 °C @ 1013 hPa***
Method	ISO 2719
Evaporation rate	No data available
Flammability (solid, gas)	Does not apply, the substance is a liquid
Lower explosion limit	No data available
Upper explosion limit	No data available

Vapour pressure

Values [hPa]	Values [kPa]	Values [atm]	@ °C	@ °F	Method
< 1	< 0,1	< 0,001	20	68	

Vapour density No data available

Relative density

Values	@ °C	@ °F	Method
1,136	20	68	DIN 51757

Solubility 11 g/l @ 20 °C, in water, OECD 105

log Pow 1,2 - 2,1 (measured), OECD 117

Autoignition temperature 270 °C @ 1013 hPa***

Method EU A.15

Decomposition temperature No data available

Viscosity 52600 mPa*s @ 40 °C

14100000 mPa*s @ 20 °C

Method dynamic, OECD 114

Oxidizing properties Does not apply, substance is not oxidising. There are no chemical groups associated with oxidizing properties

Explosive properties Does not apply, substance is not explosive. There are no chemical groups associated with explosive properties

9.2. Other information

Molecular weight 196,28

Molecular formula C12 H20 O2

log Koc 1,226 calculated***

Refractive index 1,520 @ 50 °C

Surface tension 58,9 mN/m (1 g/l @ 20°C (68°F)), OECD 115

SECTION 10: Stability and Reactivity

10.1. Reactivity

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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

Likely routes of exposure Skin contact, Eye contact, Ingestion

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

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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)				
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

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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

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

Aspiration toxicity

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

Note

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

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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	

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.

Hazardous waste according to European Waste Catalogue (EWC)

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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

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

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

Regulation 1272/2008, Annex VI
not listed

International Inventories

Octahydro-4,7-methano-1H-indenedimethanol, CAS: 26160-83-8

DSL (CA)
IECSC (CN)
EC-No. 2474883 (EU)
ENCS (4)-641 (JP)
ISHL (4)-641 (JP)
PICCS (PH)
TCSI (TW)

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)

National regulatory information India

Hazardous Chemicals, Schedule 2: Threshold Quantities at an Isolated Storage

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not listed

Hazardous Chemicals, Schedule 3: Threshold Quantities in an Industrial Installation

not listed

For details and further information please refer to the original regulation.

SECTION 16: Other information

Full text of H-Statements referred to under sections 2 and 3

H319: Causes serious eye irritation.

Abbreviations

A table of terms and abbreviations can be found under the following link:

http://echa.europa.eu/documents/10162/13632/information_requirements_r20_en.pdf

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).

Disclaimer

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End of Safety Data Sheet