

TCD Alcohol DM

11630

Version / Revision4Revision Date25-Jun-2021Supersedes Version3.01***Issuing date25-Jun-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

Chemical Name

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

CAS-No EC No. 26896-48-0 / 26160-83-8 248-096-5 / 247-488-3

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

Identified uses Transported isolated intermediate (1907/2006)

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 +44 (0) 1235 239 670 (UK)

available 24/7

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

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

Hazard pictograms



TCD Alcohol DM 11630

Version / Revision

4



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

Caution Hot!

Contact with product at elevated temperatures can result in thermal burns

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	1272/2008/EC	Concentration (%)
Tricyclodecanedimethanol	26896-48-0	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.

Skin

Contact with product at elevated temperatures can result in thermal burns. Wash off immediately with plenty of water. When symptoms persist or in all cases of doubt seek medical advice.

Eves

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.



TCD Alcohol DM 11630

Version / Revision

4

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

Main symptoms

None known.

Special hazard

Lung irritation, Contact with product at elevated temperatures can result in thermal burns.

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



TCD Alcohol DM 11630

Version / Revision

4

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

Do not handle hot or molten material without appropriate protective equipment. Do not exceed recommended process temperatures to minimize release of decomposition products. 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.

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. Keep at temperatures between 80 and 130 °C (176 and 266 °F).

Temperature class

T3

7.3. Specific end use(s)

Transported isolated intermediate (1907/2006)

SECTION 8: Exposure controls / personal protection



TCD Alcohol DM 11630

Version / Revision

4

low hazard

8.1. Control parameters

Exposure limits European Union

No exposure limits established

Exposure limits UK

No exposure limits established.

DNEL & PNEC

<u>Tricyclodecanedimethanol, CAS: 26896-48-0</u> Workers

DN(M)EL - long-term exposure - systemic effects - Inhalation No hazard identified DN(M)EL - acute / short-term exposure - systemic effects - Inhalation No hazard identified Hazard unknown (no further DN(M)EL - long-term exposure - local effects - Inhalation information necessary) No hazard identified DN(M)EL - acute / short-term exposure - local effects - Inhalation DN(M)EL - long-term exposure - systemic effects - Dermal No hazard identified DN(M)EL - acute / short-term exposure - systemic effects - Dermal No hazard identified DN(M)EL - long-term exposure - local effects - Dermal Hazard unknown (no further information necessary) DN(M)EL - acute / short-term exposure - local effects - Dermal No hazard identified

General population

DN(M)EL - local effects - eyes

No hazard identified DN(M)EL - long-term exposure - systemic effects - Inhalation DN(M)EL - acute / short-term exposure - systemic effects - Inhalation No hazard identified DN(M)EL - long-term exposure - local effects - Inhalation Hazard unknown (no further information necessary) DN(M)EL - acute / short-term exposure - local effects - Inhalation No hazard identified DN(M)EL - long-term exposure - systemic effects - Dermal No hazard identified DN(M)EL - acute / short-term exposure - systemic effects - Dermal No hazard identified DN(M)EL - long-term exposure - local effects - Dermal Hazard unknown (no further information necessary) No hazard identified DN(M)EL - acute / short-term exposure - local effects - Dermal No hazard identified DN(M)EL - long-term exposure - systemic effects - Oral No hazard identified DN(M)EL - acute / short-term exposure - systemic effects - Oral DN(M)EL - local effects - eyes low hazard

Environment

PNEC aqua - freshwater 100,3 μ g/l PNEC aqua - marine water 10,03 μ g/l PNEC aqua - intermittent releases 1,003 mg/l PNEC STP 44 mg/l PNEC sediment - freshwater 529,68 μ g/kg dw



TCD Alcohol DM 11630

Version / Revision

4

PNEC sediment - marine water PNEC Air PNEC soil Secondary poisoning 52,97 mg/kg dw No hazard identified 47 µg/kg dw No potential for bioaccumulation

8.2. Exposure controls

Special adaptations (REACh)

Not applicable.

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.

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

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

Skin and body protection

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

Heat resistant gloves

Respiratory protection

Respirator with A filter. Full mask with above mentioned filter according to producers using requirements or self-contained breathing apparatus. Equipment should conform to EN 136 or EN 140 and EN 143.

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. Observe the exposure limits, clean exhaust air if needed. 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.

Additional advice

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.



TCD Alcohol DM

11630 Version / Revision 4

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance Hot viscous liquid

Colour colourless
Odour mild

Odour threshold No data available

pH neutral

Melting point/range 18 °C (Pour point) @ 1013 hPa

Method DIN ISO 3016 Boiling point/range 334,5 °C @ 1013 hPa

MethodOECD 103Flash point191 °CMethodISO 2719

Evaporation rate No data available

Flammability (solid, gas) Does not apply, the substance is a liquid

Lower explosion limit
Upper explosion limit
No data available
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 Method EU A.15

Decomposition temperatureNo data availableViscosity52600 mPa*s @ 40 °C14100000 mPa*s @ 20 °C

Method dynamic, OECD 114

Explosive propertiesDoes not apply, substance is not explosive. There are no chemical groups

associated with explosive properties

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

associated with oxidizing properties

9.2. Other information

Molecular weight196,28Molecular formulaC12 H20 O2log Koc1,226 calculatedRefractive index1,520 @ 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

The reactivity of the product corresponds to the typical reactivity shown by the substance group as described in

7 / 14 Great Britain (E-GB) /EN



TCD Alcohol DM 11630

Version / Revision

4

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, Inhalation

Acute toxicity				
Tricyclodecanedimethan	ol (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



TCD Alcohol DM 11630

Version / Revision

4

Sensitization				
Tricyclodecanedimeth	anol (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 Tricyclodecanedimet		•		
Туре	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, Muta	Carcinogenicity, Mutagenicity, Reproductive toxicity				
Tricyclodecanedimeth	anol (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		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

9/14



TCD Alcohol DM 11630

Version / Revision

4

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 (26	896-48-0)				
Species	Exposure time	Dose	Method		
Oncorhynchus mykiss (rainbow	96h	LC50: 100,3 mg/l	OECD 203		
trout)					
Daphnia magna (Water flea)	48h	EC50: > 100 mg/l	OECD 202		
Pseudokirchneriella subcapitata	72h	EC50: > 100 mg/l (Growth	OECD 201		
-		rate)			
Activated sludge (bacteriae)	3 h	EC50: 2400 mg/l	OECD 209		

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

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

12.2. Persistence and degradability



TCD Alcohol DM 11630

Version / Revision

4

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)				
Туре	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)		
Туре	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)

11 / 14



TCD Alcohol DM 11630

11630 Version / Revision 4

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

ADR/RID

14.1. UN number UN 3257

14.2. UN proper shipping name Elevated temperature liquid, n.o.s.

(Tricyclodecanedimethanol)

14.3. Transport hazard class(es)
9
14.4. Packing group
14.5. Environmental hazards

14.6. Special precautions for user

Marking Elevated temperature substance

ADR Tunnel restriction code (D)
Classification Code M9
Hazard Number 99

ADN ADN Container

14.1. UN number UN 3257

14.2. UN proper shipping name Elevated temperature liquid, n.o.s.

(Tricyclodecanedimethanol)

14.3. Transport hazard class(es) 9
14.4. Packing group III
14.5. Environmental hazards

14.6. Special precautions for user

Marking Elevated temperature substance

Classification Code M9
Hazard Number 99

ICAO-TI / IATA-DGR forbidden

IMDG

14.1. UN number UN 3257

14.2. UN proper shipping name Elevated temperature liquid, n.o.s.

(Tricyclodecanedimethanol)

14.3. Transport hazard class(es) 9
14.4. Packing group III
14.5. Environmental hazards

14.6. Special precautions for user

EmS F-A, S-P

14.7. Transport in bulk according to Annex not applicable

II of MARPOL and the IBC Code



TCD Alcohol DM 11630

Version / Revision

4

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

DI 2012/18/EU (Seveso III)

Category

not subject

DI 1999/13/EC (VOC Guideline)

Component	Status
Tricyclodecanedimethanol	not subject
CAS: 26896-48-0	·

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 Great Britain

Releases to air (Pollution Inventory Substances)

not subject

Releases to water (Pollution Inventory Substances)

not subject

Releases to sewer (Pollution Inventory Substances)

not subject



TCD Alcohol DM 11630

Version / Revision

4

The REACH etc. (Amendment etc.) (EU Exit) Regulations 2019 No. 758 ***

Component	Status
Tricyclodecanedimethanol	The substance will not be pre-regristed.***
CAS: 26896-48-0	, ,

For details and further information please refer to the original regulation

15.2. Chemical safety assessment

The Chemical Safety Report (CSR) is not required.

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.og.com).

The annex is not required because the substance is registered as an intermediate under REACh

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