

SAFETY DATA SHEET



n-Propyl acetate
10580

Version / Revision
Supersedes Version

4.01
4.00***

Revision Date
Issuing date

04-Dec-2020
04-Dec-2020

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

1.1. Product identifier

Identification of the
substance/preparation

n-Propyl acetate

Chemical Name Propyl acetate
CAS-No 109-60-4
EC No. 203-686-1
Registration number (REACH) 01-2119484620-39

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

Identified uses

Formulation
Distribution of substance
coatings
cleaning agent
Lubricants and lubricant additives
Metal working fluids / rolling oils
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

OQ Chemicals Corporation
15375 Memorial Drive
West Memorial Place I
Suite 300
Houston, TX 77079
USA

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

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

Flammable liquid Category 2, H225
Serious eye damage/eye irritation Category 2, H319
Target Organ Systemic Toxicant - Single exposure Category 3, H336

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



Signal word

Danger

Hazard statements

H225: Highly flammable liquid and vapour.
H319: Causes serious eye irritation.
H336: May cause drowsiness or dizziness.

Precautionary statements

P210: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233: Keep container tightly closed.
P261: Avoid breathing gas/mist/vapours.
P280: Wear protective gloves/protective clothing/eye protection/face protection.
P303 + P361 + P353: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
P304 + P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305 + P351 + P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P312: Call a POISON CENTRE/doctor if you feel unwell.
P403 + P235: Store in a well ventilated place. Keep cool.

Supplemental Hazard Information (EU)

EUH 066: Repeated exposure may cause skin dryness or cracking.

2.3. Other hazards

Vapours may form explosive mixture with air
Vapour is heavier than air and can travel considerable distance to a source of ignition and flashback
Components of the product may be absorbed into the body by inhalation and ingestion

PBT and vPvB assessment

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

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SECTION 3: Composition / information on ingredients

3.1. Substances

Component	CAS-No	RECh-No	1272/2008/EC	Concentration (%)
Propyl acetate	109-60-4	01-2119484620-39	Flam. Liq. 2; H225 Eye Irrit. 2; H319 STOT SE 3; H336 EU H066	> 99,5

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 soap and 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.

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

Main symptoms

dizziness, drowsiness, cough, unconsciousness.

Special hazard

central nervous system effects, Prolonged skin contact may defat the skin and produce dermatitis.

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.

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.

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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

Vapour is heavier than air and can travel considerable distance to a source of ignition and flashback

Vapours may form explosive mixture with air

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

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. Do not use compressed air for filling, discharging or

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handling.

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

oxidizing agents
bases
amines

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. Vapour is heavier than air and can travel considerable distance to a source of ignition and flashback. Vapours may form explosive mixture with air.

Technical measures/Storage conditions

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

Suitable material

stainless steel, mild steel

Unsuitable material

Attacks some forms of plastic and rubber

Temperature class

T2

7.3. Specific end use(s)

Formulation
Distribution of substance
coatings
cleaning agent
Lubricants and lubricant additives
Metal working fluids / rolling oils
laboratory chemicals

SECTION 8: Exposure controls / personal protection

8.1. Control parameters

Exposure limits India

No exposure limits established.

8.2. Exposure controls

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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.

Respiratory protection

Respirator with A/PA 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.

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	butyl-rubber
Evaluation	according to EN 374: level 4
Glove thickness	approx 0,3 mm
Break through time	approx 120 min

Suitable material	polyvinylchloride / nitrile rubber
Evaluation	according to EN 374: level 1
Glove thickness	approx 0,9 mm
Break through time	approx 15 min

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 emission 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.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	liquid
Colour	colourless
Odour	fruity

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Odour threshold No data available
pH No data available
Melting point/range < -90 °C
Boiling point/range 102 °C @ 1013 hPa
Flash point 12 °C
Method EU A.9***
Evaporation rate No data available
Flammability (solid, gas) Does not apply, the substance is a liquid
Lower explosion limit 2 Vol %
Upper explosion limit 8 Vol %

Vapour pressure

Values [hPa]	Values [kPa]	Values [atm]	@ °C	@ °F	Method
34	3,4	0,034	20	68	
151,5***	15,2	0,150	50	122	

Vapour density 3,5 (Air = 1) @ 20 °C (68 °F)

Relative density

Values	@ °C	@ °F	Method
0,888	20	68	DIN 51757

Solubility 18,7 g/l @ 20 °C, in water
log Pow 1,4 @ 25 °C (77 °F), OECD 117***
Autoignition temperature 380 °C @ 1013 hPa***
Method DIN 51794

Decomposition temperature No data available
Viscosity 0,58 mPa*s @ 20 °C
Method ASTM D445, dynamic***

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 102,13
Molecular formula C5 H10 O2
log Koc 1008 calculated***
Refractive index 1,384 @ 20 °C
Surface tension 67,5 mN/m @ 20,1 °C (68,2 °F) @ 1000 mg/l, 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

Vapours may form explosive mixture with air.

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10.4. Conditions to avoid

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

10.5. Incompatible materials

oxidizing agents, amines, bases.

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 Ingestion, Inhalation, Eye contact, Skin contact

Acute toxicity				
Propyl acetate (109-60-4)				
Routes of Exposure	Endpoint	Values	Species	Method
Oral	LD50	~ 8700 mg/kg	rat, male	
Dermal	LD50	> 17800 mg/kg	rabbit male***	
Inhalative	LC50	~ 32 mg/l (4h)	rat	(vapour)***

Propyl acetate, CAS: 109-60-4

Assessment

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

Acute oral toxicity

Acute dermal toxicity

Acute inhalation toxicity

Irritation and corrosion				
Propyl acetate (109-60-4)				
Target Organ Effects	Species	Result	Method	
Skin	rabbit	No skin irritation		in vivo***
Eyes	rabbit	irritating		in vivo***

Propyl acetate, CAS: 109-60-4

Assessment

The available data lead to the classification given in section 2

Sensitization				
Propyl acetate (109-60-4)				
Target Organ Effects	Species	Evaluation	Method	
Skin	guinea pig	not sensitizing	Maximisation Test	read across

Propyl acetate, CAS: 109-60-4

Assessment

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

Skin sensitization

For respiratory sensitization, no data are available

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Subacute, subchronic and prolonged toxicity				
Propyl acetate (109-60-4)				
Type	Dose	Species	Method	
Subchronic toxicity	NOAEL: 2,35 mg/l	rat, male/female	EPA OTS 798.2450	Inhalation read across***
Subchronic toxicity***	NOAEC: >= 6,48 mg/l (90d) systemic effects***	rat, male/female***	OECD 413***	Inhalation***
Subchronic toxicity***	NOAEC: 0,63 mg/l (90d) Local effects***	rat, male/female***	OECD 413***	Inhalation***
Subchronic toxicity***	LOAEC: 2,14 mg/l (90 d) Local effects***	rat, male/female***	OECD 413***	Inhalation***

Propyl acetate, CAS: 109-60-4

Assessment

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

Carcinogenicity, Mutagenicity, Reproductive toxicity					
Propyl acetate (109-60-4)					
Type	Dose	Species	Evaluation	Method	
Mutagenicity		Salmonella typhimurium	negative	OECD 471 (Ames)	In vitro study
Mutagenicity		CHO (Chinese Hamster Ovary) cells	negative	OECD 476 (Mammalian Gene Mutation)	
Mutagenicity		V79 cells, Chinese hamster	negative	Chromosomal Aberration	read across
Reproductive toxicity	LOAEC: 750 ppm	rat, parental male/female***		OECD 416 Inhalation***	read across Local effects***
Developmental Toxicity	LOAEL: 7,05 mg/l	rat	Maternal toxicity	Inhalation	read across
Developmental Toxicity	NOAEL 7,05 mg/l	rat	Teratogenicity	Inhalation	read across
Developmental Toxicity	NOAEL 7,05 mg/l	rabbit	Maternal toxicity	Inhalation	read across
Developmental Toxicity	NOAEL 7,05 mg/l	rabbit	Teratogenicity	Inhalation	read across
Mutagenicity***		human lymphoblastoid cells (TK6)***	negative***	OECD 487 micronucleus test***	In vitro study***
Reproductive toxicity***	NOAEC: 750 ppm***	rat, parental male/female***		OECD 416 Inhalation***	Developmental toxicity read across***
Reproductive toxicity***	NOAEC: 2000 ppm***	rat, parental male/female***		OECD 416 Inhalation***	Fertility read across***
Reproductive toxicity***	NOAEC: 750 ppm***	rat, 1. Generation, male/female rat 2. Generation, male/female***		OECD 416 Inhalation***	read across***
Developmental Toxicity***	NOAEL 1000 mg/kg/d***	rat rabbit***		OECD 414, Oral***	Maternal toxicity Developmental toxicity, Teratogenicity***

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Propyl acetate, CAS: 109-60-4

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

Propyl acetate, CAS: 109-60-4

Main symptoms

dizziness, drowsiness, cough, unconsciousness.

Target Organ Systemic Toxicant - Single exposure

The available data lead to the classification given in section 2

Target Organ Systemic Toxicant - Repeated exposure

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

STOT RE

Other adverse effects

Components of the product may be absorbed into the body by inhalation and ingestion. Dries out the skin.

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			
Propyl acetate (109-60-4)			
Species	Exposure time	Dose	Method
Pimephales promelas (fathead minnow)	96h	LC50: 60 mg/l	
Daphnia magna (Water flea)	48h	EC50: 91,5 mg/l	OECD 202
Pseudokirchneriella subcapitata	72h	EC50: 672 mg/l (Growth rate)	OECD 201
Pseudomonas putida	16 h	TTC: 170 mg/l	DIN 38412, part 8

Long term toxicity				
Propyl acetate (109-60-4)				
Type	Species	Dose	Method	
Aquatic toxicity***	Pseudokirchneriella subcapitata***	NOEC: 83,2 mg/l (3d)***	OECD 201***	

12.2. Persistence and degradability

Propyl acetate, CAS: 109-60-4

Biodegradation

62 % (5 d), Sewage, domestic, non-adapted, aerobic, OECD 301 D.

Abiotic Degradation		
Propyl acetate (109-60-4)		
Type	Result	Method
Hydrolysis***	not expected***	

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Photolysis***	Half-life (DT50): 3,2 days***	SRC AOP v1.92***
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12.3. Bioaccumulative potential

Propyl acetate (109-60-4)		
Type	Result	Method
log Pow	1,4 @ 25 °C (77 °F)***	measured, OECD 117
BCF***	not expected***	

12.4. Mobility in soil

Propyl acetate (109-60-4)		
Type	Result	Method
Surface tension***	no data available 67,5 mN/m @ 20,1 °C (68,2 °F) @ 1000 mg/l***	OECD 115***
Adsorption/Desorption***	Koc: 10,17***	calculated SRC PCKOCWIN v2.00***
Distribution to environmental compartments***	no data available***	

12.5. Results of PBT and vPvB assessment

Propyl acetate, CAS: 109-60-4

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

Propyl acetate, CAS: 109-60-4

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)

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

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ICAO-TI / IATA-DGR

14.1. UN number	UN 1276
14.2. UN proper shipping name	n-Propyl acetate
14.3. Transport hazard class(es)	3
14.4. Packing group	II
14.5. Environmental hazards	no
14.6. Special precautions for user	no data available

IMDG

14.1. UN number	UN 1276
14.2. UN proper shipping name	Propyl acetate
14.3. Transport hazard class(es)	3
14.4. Packing group	II
14.5. Environmental hazards	no
14.6. Special precautions for user	F-E, S-D
EmS	
14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code	
Product name	n-Propyl acetate
Ship type	3
Pollution category	Y

SECTION 15: Regulatory information

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

Regulation 1272/2008, Annex VI

Propyl acetate, CAS: 109-60-4

Classification	Flam. Liq. 2; H225 Eye Irrit. 2; H319 STOT SE 3; H336
Hazard pictograms	GHS02 Flame GHS07 Exclamation mark
Signal word	Danger
Hazard statements	H225 H319 H336 EUH066

International Inventories

Propyl acetate, CAS: 109-60-4

AICS (AU)
DSL (CA)
IECSC (CN)
EC-No. 2036861 (EU)

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ENCS (2)-727 (JP)
ISHL (2)-727 (JP)
KECI KE-29778 (KR)
INSQ (MX)
PICCS (PH)
TSCA (US)
NZIoC (NZ)
TCSI (TW)

National regulatory information India

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

H225: Highly flammable liquid and vapour.

H319: Causes serious eye irritation.

H336: May cause drowsiness or dizziness.

EUH 066: Repeated exposure may cause skin dryness or cracking.

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

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