

n-Propyl acetate
10580
Version / Revision
Supersedes Version

5.01 5.00*** Revision Date Issuing date 04-Dec-2020 04-Dec-2020

SECTION 1: Identification

1.1. Product identifier

Identification of the substance/preparation	n-Propyl acetate			
Chemical Name CAS-No	Propyl acetate 109-60-4			
1.2. Relevant identified us	es of the substance or mixture and uses advised against			
Use of the Substance /	solvent			
Preparation Uses advised against	None			
1.3. Details of the supplier	r 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 2B, H320 Target Organ Systemic Toxicant - Single exposure Category 3, H336 Flammable liquid Category 2, H225 Environmental hazard Aquatic Acute 3; H402

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OSHA Specified Hazards Not applicable.

2.2. Label elements

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

Hazard symbol(s)



Signal word	Danger
Hazard statements	H225: Highly flammable liquid and vapor. H320: Causes eye irritation H336: May cause drowsiness or dizziness. H402: Harmful to aquatic life
Precautionary statements	
Prevention	 P210: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P233: Keep container tightly closed. P240: Ground and bond container and receiving equipment. P241: Use explosion-proof electrical/ ventilating/ lighting equipment. P242: Use non-sparking tools. P243: Take precautionary measures against static discharge. P261: Avoid breathing gas/mist/vapours. P264: Wash hands thoroughly after handling. P271: Use only outdoors or in a well ventilated area. P273: Avoid release to the environment. P280: Wear protective gloves/eye protection/face protection.***
Response	 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.
Storage	P403 + P235: Store in a well ventilated place. Keep cool. P405: Store locked up.

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Disposal

P501: Dispose of contents/container in accordance with local regulation.

2.3. Other hazards

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

SECTION 3: Composition / information on ingredients

3.1. Substances

Component	CAS-No	Concentration (%)
Propyl acetate	109-60-4	> 99,5

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

Wash off immediately with soap and 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

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.

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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 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.



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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 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

SECTION 8: Exposure controls / personal protection



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8.1. Control parameters

Exposure limits United States of America

US ACGIH

Component	TWA	TWA	STEL	STEL
	(mg/m³)	(ppm)	(mg/m³)	(ppm)
Propyl acetate CAS: 109-60-4		100 ***		150***

US OSHA Z-1

Component	Ceiling (mg/m³)	Ceiling (ppm)	PEL (mg/m³)	PEL (ppm)	Skin Designation
Propyl acetate			840	200	
CAS: 109-60-4					

Note

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

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.

Suitable material	butyl-rubber
Evaluation	according to EN 374: level 4
Glove thickness	approx 0,3 mm



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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

Skin and body protection

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

Respiratory protection

Respirator with filter for organic vapour. Use the indicated respiratory protection if the occupational exposure limit is exceeded and/or in case of product release (vapor or mist). Equipment should conform to NIOSH.***

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.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance Colour Odour Odour threshold pH Melting point/range Method Boiling point/range Method Flash point Method Evaporation rate Flammability (solid, gas) Lower explosion limit Upper explosion limit	OECD 103*** 53,6 °F (12 ° EU A.9*** No data avail	able -90 °C) 6*** 2 °C) @ 1 atn C) able	n (101,3 kPa) ance is a liquid	
Vapour pressure Values [hPa] 34 151,5*** Vapour density Relative density Values 0,888	Pa] Values [atm] 0,034 0,150 3,5 (Air = 1) @ °C 20	@°C 20 50 @ 20°C (68 @°F 68	@ °F 68 122 °F) Method DIN 51757	Method

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Solubility	18,7 g/l @ 20 °C (68 °F)
log Pow	1,4 @ 25 °C (77 °F) OECD 117***
Autoignition temperature Method	716 °F (380 °C) @ 1 atm (101,3 kPa)*** DIN 51794
Decomposition temperature Viscosity Method	No data available 0,58 mPa*s @ 68 °F (20 °C) ASTM D445, dynamic***
9.2. Other information	
Molecular weight Molecular formula log Koc	102,13 C5 H10 O2 1008 calculated***
Oxidizing properties	Does not apply, substance is not oxidising. There are no chemical groups associated with oxidizing properties
Refractive Index	1,384 @ 68 °F (20 °C)
Explosive properties	Does not apply, substance is not explosive. There are no chemical groups associated with explosive properties
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.

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

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11.1. Information on toxicological effects

Likely routes of exposure Ingestion, Inhalation, Eye contact, Skin contact

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

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	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

Subacute, subchronic and prolonged toxicity

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Propyl acetate (109-60-4)				
Туре	Dose	Species	Method	
Subchronic toxicity	NOAEL: 2,35 mg/l	rat, male/female		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 $\ensuremath{\mathsf{RE}}$

Carcinogenicity, Mutag	genicity, Reprodu	ctive toxicity			
Propyl acetate (109-60					
Туре	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***	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

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	toxicity, Teratogenicity***
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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

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

Acule aqualic loxicity			
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)				
Туре	Species	Dose	Method	
Aquatic toxicity***	Pseudokirchneriella	NOEC: 83,2 mg/l	OECD 201***	
	subcapitata***	(3d)***		

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*** Image: Colspan="2">Colspan="2">Method

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

12.3. Bioaccumulative potential

Propyl acetate (109-60-4)		
Туре	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)		
Туре	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.

Uncleaned empty packaging

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

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SECTION 14: Transport information

D.O.T. (49CFR)

 14.1. UN number 14.2. UN proper shipping name 14.3. Transport hazard class(es) 14.4. Packing group 14.5. Environmental hazards 14.6. Special precautions for user Emergency Response Guide 	UN 1276 n-Propyl acetate 3 II no 129
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
<u>IMDG</u>	
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	
EmS	F-E, S-D
14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code	
Product name	n-Propyl acetate
Ship type Pollution category	3 Y
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SECTION 15: Regulatory information

Federal and State Regulations



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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

State Regulations

Propyl acetate, CAS: 109-60-4

CA Hazardous Substances (Director's) List MA RTK List MN Hazardous Substances List NY RTK List PA RTK List RI RTK List

International Inventories

Propyl acetate, CAS: 109-60-4

AICS (AU) DSL (CA) IECSC (CN) EC-No. 2036861 (EU) ENCS (2)-727 (JP) ISHL (2)-727 (JP) KECI KE-29778 (KR) INSQ (MX) PICCS (PH) TSCA (US) NZIOC (NZ) TCSI (TW)

SECTION 16: Other information

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Hazard Rating Systems	

NFPA (National Fire Pro	tection Association)
Health Hazard	1
Fire Hazard	3
Reactivity	0
HMIS (Hazardous Mater	ial Information System)
	A
Health Hazard	1
Health Hazard Flammability	1 3

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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).

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