

# SAFETY DATA SHEET



n-Butyl acetate  
10430

Version / Revision 4  
Supersedes Version 3.02

Revision Date 04-May-2020  
Issuing date 15-May-2020

## SECTION 1: Identification

### 1.1. Product identifier

Identification of the substance/preparation **n-Butyl acetate**

CAS-No 123-86-4

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

Use of the Substance / Preparation solvent

Uses advised against None

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

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

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

### 1.4. Emergency telephone number

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

## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

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

Target Organ Systemic Toxicant - Single exposure Category 3, H336

Flammable liquid Category 3, H226

Environmental hazard Aquatic Acute 3; H402

OSHA Specified Hazards Not applicable.

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## 2.2. Label elements

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

### Hazard symbol(s)



### Signal word

### Warning

### Hazard statements

H226: Flammable liquid and vapor.  
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 action to prevent static discharges.  
P261: Avoid breathing gas/mist/vapours.  
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.  
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.

### 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

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Components of the product may be absorbed into the body by inhalation  
Repeated exposure may cause skin dryness or cracking

## SECTION 3: Composition / information on ingredients

### 3.1. Substances

Component	CAS-No	Concentration (%)
n-Butyl acetate	123-86-4	> 99,0

## 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

cough, nausea, vomiting, headache, unconsciousness, shortness of breath, dizziness, narcosis.

#### Special hazard

Lung oedema, 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

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## Suitable extinguishing media

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

## Unsuitable Extinguishing Media

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

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

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

carbon monoxide (CO)

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

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

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).

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## 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 acids and strong bases  
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. 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, aluminium

#### Unsuitable material

copper, Attacks some forms of plastic and rubber

## SECTION 8: Exposure controls / personal protection

### 8.1. Control parameters

#### Exposure limits United States of America

##### US ACGIH

Component	TWA	TWA	STEL	STEL
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	(mg/m <sup>3</sup> )	(ppm)	(mg/m <sup>3</sup> )	(ppm)
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## US OSHA Z-1

Component	Ceiling (mg/m <sup>3</sup> )	Ceiling (ppm)	PEL (mg/m <sup>3</sup> )	PEL (ppm)	Skin Designation
n-Butyl acetate CAS: 123-86-4			710	150	

### 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 3  
**Glove thickness** approx 0,3 mm  
**Break through time** approx 60 min

**Suitable material** polyvinylchloride / nitrile rubber  
**Evaluation** according to EN 374: level 2  
**Glove thickness** approx 0,9 mm  
**Break through time** approx 30 min

### Skin and body protection

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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

<b>Appearance</b>	liquid				
<b>Colour</b>	colourless				
<b>Odour</b>	fruity				
<b>Odour threshold</b>	7 - 20 ppm				
<b>pH</b>	6,2 (5,3 g/l in water @ 20 °C (68 °F))				
<b>Melting point/range</b>	< -130 °F (< -90 °C) (Pour point)				
<b>Method</b>	DIN ISO 3016				
<b>Boiling point/range</b>	259 °F (126 °C) @ 1 atm (101,3 kPa)				
<b>Method</b>	OECD 103				
<b>Flash point</b>	81 °F (27 °C) @ 1 atm (101,3 kPa)				
<b>Method</b>	EU A.9				
<b>Evaporation rate</b>	1,0 (n-Butyl acetate = 1)				
<b>Flammability (solid, gas)</b>	Does not apply, the substance is a liquid				
<b>Lower explosion limit</b>	1,2 Vol %				
<b>Upper explosion limit</b>	7,5 Vol %				
<b>Vapour pressure</b>					
Values [hPa]	Values [kPa]	Values [atm]	@ °C	@ °F	Method
11,2	1,12	0,0112	20	68	OECD 104
57,9	5,79	0,0579	50	122	OECD 104
<b>Vapour density</b>	4,0 (Air = 1) @ 20 °C (68 °F)				
<b>Relative density</b>					
Values	@ °C	@ °F	Method		
0,881	20	68	DIN 51757		
<b>Solubility</b>	No data available				
<b>Water solubility</b>	5,3 g/l @ 68 °F (20 °C) OECD 105				
<b>log Pow</b>	2,3 (measured) OECD 117				
<b>Autoignition temperature</b>	779 °F (415 °C) @ 1 atm (101,3 kPa)				
<b>Method</b>	DIN 51794				
<b>Decomposition temperature</b>	No data available				
<b>Viscosity</b>	0,83 mPa*s @ 68 °F (20 °C)				
<b>Method</b>	OECD 114				

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## 9.2. Other information

<b>Molecular weight</b>	116,16
<b>Molecular formula</b>	C6 H12 O2
<b>Oxidizing properties</b>	Does not apply, substance is not oxidising. There are no chemical groups associated with oxidizing properties
<b>Refractive Index</b>	1,393 @ 68 °F (20 °C)
<b>Explosive properties</b>	Does not apply, substance is not explosive. There are no chemical groups associated with explosive properties
<b>Surface tension</b>	61,3 mN/m (1 g/l @ 20°C (68°F)), OECD 115

## SECTION 10: Stability and Reactivity

### 10.1. Reactivity

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

### 10.2. Chemical stability

Stable under recommended storage conditions.

### 10.3. Possibility of hazardous reactions

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

strong acids and strong bases, 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** Ingestion, Inhalation, Eye contact, Skin contact

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#### Main symptoms

dizziness, narcosis, cough, nausea, vomiting, headache, unconsciousness, shortness of breath.

**Target Organ Systemic Toxicant - Single exposure**

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The available data lead to the classification given in section 2

## **Target Organ Systemic Toxicant - Repeated exposure**

Repeated exposure may cause skin dryness or cracking

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

STOT RE

<b>Acute toxicity</b>				
<b>n-Butyl acetate (123-86-4)</b>				
Routes of Exposure	Endpoint	Values	Species	Method
Oral	LD50	10760 mg/kg	rat, male/female	OECD 423
Dermal	LD50	> 14112 mg/kg	rabbit	OECD 402
Inhalative	LC50	> 20 mg/l (4h)		

## **n-Butyl acetate, CAS: 123-86-4**

### **Assessment**

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

Acute oral toxicity

Acute dermal toxicity

Acute inhalation toxicity

<b>Irritation and corrosion</b>				
<b>n-Butyl acetate (123-86-4)</b>				
Target Organ Effects	Species	Result	Method	
Skin	rabbit	No skin irritation	OECD 404	
Eyes	rabbit	No eye irritation	OECD 405	
Respiratory tract	human	Low irritating potential		

## **n-Butyl acetate, CAS: 123-86-4**

### **Assessment**

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

skin irritation/corrosion

eye irritation/corrosion

respiratory irritation

<b>Sensitization</b>				
<b>n-Butyl acetate (123-86-4)</b>				
Target Organ Effects	Species	Evaluation	Method	
Skin	mouse	not sensitizing		

## **n-Butyl acetate, CAS: 123-86-4**

### **Assessment**

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

Skin sensitization

For respiratory sensitization, no data are available

<b>Subacute, subchronic and prolonged toxicity</b>				
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Type	Dose	Species	Method	
90-day	NOAEC: 500 ppm	rat, male/female	EPA OTS 798.2450	Inhalation
90-day	NOAEL: 125 mg/kg/d	rat, male/female		Oral read across
90-day	LOAEL: 500 mg/kg/d	rat, male/female		Oral read across

## **n-Butyl acetate, CAS: 123-86-4**

### **Assessment**

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

<b>Carcinogenicity, Mutagenicity, Reproductive toxicity</b>					
<b>n-Butyl acetate (123-86-4)</b>					
Type	Dose	Species	Evaluation	Method	
Mutagenicity		Salmonella typhimurium	negative	OECD 471 (Ames)	
Mutagenicity		CHL (Chinese hamster lung cells)	negative (without metabolic activation)	Chromosomal Aberration	In vitro study
Mutagenicity		V79 cells, Chinese hamster	negative	OECD 476 (Mammalian Gene Mutation) HPRT	In vitro study read across
Mutagenicity		mouse	negative	OECD 474	in vivo read across
Reproductive toxicity	NOEC 9640 mg/m <sup>3</sup>	rat rabbit rat, male/female		OECD 416	
Developmental Toxicity	LOAEC: 7230 mg/m <sup>3</sup>	rat rabbit		OECD 414, Inhalative	Maternal toxicity Developmental toxicity

## **n-Butyl acetate, CAS: 123-86-4**

### **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  
Did not show mutagenic effects in animal experiments  
No developmental effects in the absence of maternal toxicity  
No cancer study was conducted  
In the absence of specific alerts no cancer testing is required

## **n-Butyl acetate, CAS: 123-86-4**

### **Other adverse effects**

Components of the product may be absorbed into the body by inhalation.

### **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>.

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## SECTION 12: Ecological information

### 12.1. Toxicity

<b>Acute aquatic toxicity</b>			
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Species	Exposure time	Dose	Method
Pimephales promelas (fathead minnow)	96h	LC50: 18 mg/l	OECD 203
Selenastrum capricornutum (green algae)	72h	EC50: 397 mg/l	OECD 201 Growth rate
Tetrahymena pyriformis	40 h	IC50: 356 mg/l	
Daphnia magna (Water flea)	48h	EC50: 44 mg/l	OECD 202

<b>Long term toxicity</b>				
<b>n-Butyl acetate (123-86-4)</b>				
Type	Species	Dose	Method	
Aquatic toxicity	Selenastrum capricornutum (green algae)	NOEC: 196 mg/l	OECD 201 Growth rate	
Aquatic toxicity Reproductive toxicity	Daphnia magna (Water flea)	EC50: 34,2 mg/l/21d	OECD 211	read across
Aquatic toxicity Reproductive toxicity	Daphnia magna (Water flea)	NOAEC: 23,2 mg/l (21d)	OECD 211	read across

### 12.2. Persistence and degradability

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#### Biodegradation

83 % (28 d), aerobic, Readily biodegradable, OECD 301 D.

<b>Abiotic Degradation</b>		
<b>n-Butyl acetate (123-86-4)</b>		
Type	Result	Method
Hydrolysis	t <sub>1/2</sub> (pH 7): 2,14 yr @ 25°C	
Photolysis	No data available	

### 12.3. Bioaccumulative potential

<b>n-Butyl acetate (123-86-4)</b>		
Type	Result	Method
BCF	15	calculated
log Pow	2,3	measured, OECD 117

### 12.4. Mobility in soil

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n-Butyl acetate (123-86-4)		
Type	Result	Method
Surface tension	61,3 mN/m (1 g/l @ 20°C (68°F))	OECD 115
Adsorption/Desorption	log Koc: 1,27 @ 25 °C	calculated
Distribution to environmental compartments	no data available	

## 12.5. Results of PBT and vPvB assessment

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### 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

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No data available

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

#### Product Information

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

#### Uncleaned empty packaging

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

## SECTION 14: Transport information

### D.O.T. (49CFR)

14.1. UN number	UN 1123
14.2. UN proper shipping name	Butyl acetates
14.3. Transport hazard class(es)	3
14.4. Packing group	III
14.5. Environmental hazards	no
14.6. Special precautions for user	
Reportable Quantity (RQ)	5000 lb/ 2270 kg (Butyl acetate)
Emergency Response Guide	129

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## ICAO-TI / IATA-DGR

14.1. UN number	UN 1123
14.2. UN proper shipping name	Butyl acetates
14.3. Transport hazard class(es)	3
14.4. Packing group	III
14.5. Environmental hazards	no
14.6. Special precautions for user	no data available

## IMDG

14.1. UN number	UN 1123
14.2. UN proper shipping name	Butyl acetates
14.3. Transport hazard class(es)	3
14.4. Packing group	III
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	Butyl acetate
Ship type	3
Pollution category	Y

## **SECTION 15: Regulatory information**

### **Federal and State Regulations**

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

#### **Federal Regulations**

This product is listed on the TSCA inventory

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CERCLA Hazardous Substance

CERCLA RQ

5000 LBS

#### **State Regulations**

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CA Hazardous Substances (Director's) List  
IL Chemical Safety Act  
MA Hazardous Substances List  
MA RTK List  
MN Hazardous Substances List  
NY RTK List  
PA RTK List  
RI RTK List

## International Inventories

### **n-Butyl acetate, CAS: 123-86-4**

AICS (AU)  
DSL (CA)  
IECSC (CN)  
EC-No. 2046581 (EU)  
ENCS (2)-731 (JP)  
ISHL (2)-731 (JP)  
ISHL 2-(6)-226 (JP)  
KECI KE-04179 (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 Protection Association)**

Health Hazard	2
Fire Hazard	3
Reactivity	0

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

Health Hazard	2
Flammability	3
Physical Hazard	0

### **Training advice**

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

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

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

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## Further information for the safety data sheet

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

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

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**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**