

SAFETY DATA SHEET



Isopropylamine
10350

Version / Revision
Supersedes Version

5
4.01***

Revision Date
Issuing date

15-Mar-2022
15-Mar-2022

SECTION 1: Identification

1.1. Product identifier

Identification of the
substance/preparation

Isopropylamine

CAS-No 75-31-0

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

Use of the Substance /
Preparation Intermediate
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

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).

Acute oral toxicity Category 3, H301
Acute dermal toxicity Category 3, H311
Acute inhalation toxicity Category 3, H331
Skin corrosion/irritation Category 1A, H314
Serious eye damage/eye irritation Category 1, H318
Target Organ Systemic Toxicant - Single exposure Category 3, H335

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Flammable liquid Category 1, H224
Environmental hazard Aquatic Acute 3; H402

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

H224: Extremely flammable liquid and vapor.
H301: Toxic if swallowed.
H311: Toxic in contact with skin.
H331: Toxic if inhaled.
H314: Causes severe skin burns and eye damage.
H335: May cause respiratory irritation.
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.
P264: Wash hands thoroughly after handling.
P270: Do not eat, drink or smoke when using this product.
P271: Use only outdoors or in a well ventilated area.
P273: Avoid release to the environment.
P260: Do not breathe gas/mist/vapours.
P280: Wear protective gloves/protective clothing/eye protection/face protection.

Response

P301 + P330 + P331: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P321: Specific treatment: IF ON SKIN: Wash off with 3% acetic acid followed by large amounts of plain water for at least 5 min as a final step.
P361: Take off immediately all contaminated clothing and wash it before reuse.
P363: Wash contaminated clothing before reuse.

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P305 + P351 + P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P304 + P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P310: Immediately call a POISON CENTER/doctor.

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

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, ingestion and through the skin

SECTION 3: Composition / information on ingredients

3.1. Substances

Component	CAS-No	Concentration (%)
Isopropylamine	75-31-0	> 99,7

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation

Keep at rest. Aerate with fresh air. Call a physician immediately. Symptoms of poisoning may develop many hours after exposure.

Skin

Wash off with 3% acetic acid followed by large amounts of plain water for at least 5 min as a final step. Immediate medical treatment is necessary as untreated wounds from corrosion of the skin heal slowly and with difficulty.

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

shortness of breath, convulsions, cough, hypertensive effect, narcosis, unconsciousness, discomfort, nausea.

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Special hazard

Stomach perforation, Lung oedema, Pneumonia, 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 as an alkaline substance (similar to ammonia). If ingested, irrigate the stomach. Treat skin and mucous membranes with antihistamine and corticoids. In case of lung irritation, first treatment with cortisone spray. Symptoms may be delayed. Later control for pneumonia and lung oedema.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

alcohol-resistant 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)

nitrogen oxides (NO_x)

hydrogen cyanide (hydrocyanic acid)

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. Water run-off and vapor cloud may be corrosive. 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,

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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. DO NOT use combustible materials such as sawdust. 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 breathe vapours or spray mist. Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product. Do not use compressed air for filling, discharging or handling. Refill and handle product only in closed system. 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

acids
Halogenated hydrocarbon
strong oxidizing agents
acid anhydrides
acid chlorides

7.2. Conditions for safe storage, including any incompatibilities

Advice on protection against fire and explosion

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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. The pressure in sealed containers can increase under the influence of heat.

Technical measures/Storage conditions

Keep containers tightly closed in a cool, well-ventilated place. Handle and open container with care. Handle under nitrogen, protect from moisture. Containers, storage tanks or drums are having temperature dependent pressure. Vessels with higher temperature must be depressurised into vent gas systems or handled under ventilation.

Suitable material

mild steel, stainless steel

Unsuitable material

Aluminium, copper, zinc, Tin, lead, including their alloys

SECTION 8: Exposure controls / personal protection

8.1. Control parameters

Exposure limits United States of America

US ACGIH

Component	TWA (mg/m ³)	TWA (ppm)	STEL (mg/m ³)	STEL (ppm)
Isopropylamine CAS: 75-31-0		2 ***		5***

US OSHA Z-1

Component	Ceiling (mg/m ³)	Ceiling (ppm)	PEL (mg/m ³)	PEL (ppm)	Skin Designation
Isopropylamine CAS: 75-31-0			12	5	

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

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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 2
Glove thickness	approx 0,3 mm
Break through time	approx 20 min

Suitable material	polyvinylchloride
Evaluation	Information derived from practical experience
Glove thickness	approx 0,8 mm

Skin and body protection

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

Respiratory protection

Respirator with filter for ammonia vapour and ammonia derivatives (K Filter). 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

Use product only in closed system. 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	liquid
Colour	colourless
Odour	ammonia-like
Odour threshold	1,2 ppm
pH	13,1 (50 g/l in water @ 25 °C (77 °F)) DIN 19268
Melting point/range	< -130 °F (< -90 °C) (Pour point)
Method	DIN ISO 3016

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Boiling point/range 89,6 °F (32 °C) @ 1 atm (101,3 kPa)
Method OECD 103
Flash point <= -13 °F (<= -25 °C)
Method closed cup, ISO 2719
Evaporation rate No data available
Flammability (solid, gas) Does not apply, the substance is a liquid
Lower explosion limit 2 Vol %
Upper explosion limit 11,5 Vol %

Vapour pressure

Values [hPa]	Values [kPa]	Values [atm]	@ °C	@ °F	Method
631	63,1	0,623	20	68	DIN EN 13016-2
770	77,3	0,763	25	77	DIN EN 13016-2

Vapour density 2,04 (Air = 1) @ 20 °C (68 °F)

Relative density

Values	@ °C	@ °F	Method
0,6871	20	68	DIN 51757

Solubility miscible, in water, OECD 105
log Pow -0,5 @ 25 °C (77 °F) OECD 117
Autoignition temperature 671 °F (355 °C) @ 1016 hPa
Method DIN 51794
Decomposition temperature No data available
Viscosity 0,47 mm²/s @ 68 °F (20 °C)
Method OECD 114, kinematic

9.2. Other information

Molecular weight 59,11
Molecular formula C₃ H₉ N
log Koc 1,64 OECD 106 read across
Dissociation constant pKa 10,8 @ 23,5 °C (74,3 °F) OECD 112
Oxidizing properties Does not apply, substance is not oxidising. There are no chemical groups associated with oxidizing properties
Refractive Index 1,373 @ 68 °F (20 °C)
Explosive properties Does not apply, substance is not explosive. There are no chemical groups associated with explosive properties
Surface tension 68,5 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

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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

acids, strong oxidizing agents, halogenated hydrocarbon, acid anhydrides, acid chlorides.

10.6. Hazardous decomposition products

No decomposition if stored and applied as directed. If heated to thermal decomposition the following decomposition products may occur depending on the conditions. carbon monoxide (CO). nitrogen oxides (NOx). cyanides. nitric acid. nitriles.

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

shortness of breath, convulsions, cough, hypertensive effect, narcosis, unconsciousness, discomfort, nausea.

Target Organ Systemic Toxicant - Single exposure

STOT SE

respiratory system

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				
Isopropylamine (75-31-0)				
Routes of Exposure	Endpoint	Values	Species	Method
Oral	LD50	< 173 mg/kg	rat, male	OECD 425
Dermal	LD50	> 400 mg/kg	rat, male/female	OECD 402
Inhalative	LC50	8,7 mg/l (4h)	rat, male/female	OECD 403

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Assessment

The available data lead to the classification given in section 2

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Irritation and corrosion				
Isopropylamine (75-31-0)				
Target Organ Effects	Species	Result	Method	
Skin	rabbit	corrosive	OECD 404	3 min
Eyes	rabbit	corrosive	OECD 405	24h
Respiratory tract	mouse	RD50: 157 ppm	ASTM 981-84	15 min

Isopropylamine, CAS: 75-31-0

Assessment

The available data lead to the classification given in section 2

Sensitization				
Isopropylamine (75-31-0)				
Target Organ Effects	Species	Evaluation	Method	
Skin	guinea pig	not sensitizing	OECD 406	10 %, aqueous solution

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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				
Isopropylamine (75-31-0)				
Type	Dose	Species	Method	
Subchronic toxicity	NOAEC: 500 mg/m ³ (90 d)	rat, male/female	OECD 413	Inhalation

Isopropylamine, CAS: 75-31-0

Assessment

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

STOT RE

Carcinogenicity, Mutagenicity, Reproductive toxicity					
Isopropylamine (75-31-0)					
Type	Dose	Species	Evaluation	Method	
Developmental Toxicity	NOAEC: 1000 mg/m ³	rat		OECD 414	Teratogenicity Inhalation
Developmental Toxicity	NOAEC: 500 mg/m ³	rat		OECD 414	Maternal toxicity Inhalation
Mutagenicity		mouse lymphoma cells	negative (with metabolic activation)	OECD 476 (Mammalian Gene Mutation)	In vitro study
Mutagenicity		mouse lymphoma cells	negative (without metabolic activation)	OECD 476 (Mammalian Gene Mutation)	In vitro study
Mutagenicity		Salmonella	negative (with	OECD 471	In vitro study

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		typhimurium	metabolic activation)	(Ames)	
Mutagenicity		Salmonella typhimurium	negative (without metabolic activation)	OECD 471 (Ames)	In vitro study
Mutagenicity		human lymphocytes	negative (with metabolic activation)	OECD 473 (Chromosomal Aberration)	In vitro study
Mutagenicity		human lymphocytes	negative (without metabolic activation)	OECD 473 (Chromosomal Aberration)	In vitro study
Reproductive toxicity	NOAEC: 500 mg/m ³	rat, parental		OECD 415	Inhalation
Reproductive toxicity	NOAEC: 500 mg/m ³	rat, 1. Generation, male/female		OECD 415	Inhalation

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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
Animal testing did not show any effects on fertility
In the absence of specific alerts no cancer testing is required

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Other adverse effects

Components of the product may be absorbed into the body by inhalation, ingestion and through 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			
Isopropylamine (75-31-0)			
Species	Exposure time	Dose	Method
Daphnia magna (Water flea)	48h	EC50: 47,4 mg/l	79/831/EEC.C2
Desmodesmus subspicatus	72h	EC50: 18,9 mg/l (Growth rate)	DIN 38412, part 9
Oncorhynchus mykiss (rainbow trout)	96h	LC50: 40 mg/l	OECD 203
Activated sludge (domestic)	30 min	EC50: >1000 mg/l (Growth inhibition)	OECD 209

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Long term toxicity				
Isopropylamine (75-31-0)				
Type	Species	Dose	Method	
Aquatic toxicity	Desmodesmus subspicatus	NOEC: 1,25 mg/l (3d) Growth inhibition	DIN 38412 / part 9	

12.2. Persistence and degradability

Isopropylamine, CAS: 75-31-0

Biodegradation

70 - 80 % (28 d), activated sludge, aerobic, domestic, OECD 301 F.

Abiotic Degradation			
Isopropylamine (75-31-0)			
Type	Result	Method	
Hydrolysis	not expected		
Photolysis	No data available		

12.3. Bioaccumulative potential

Isopropylamine (75-31-0)		
Type	Result	Method
log Pow	-0,5 @ 25 °C (77 °F)	measured, OECD 117
BCF	not expected	

12.4. Mobility in soil

Isopropylamine (75-31-0)		
Type	Result	Method
Surface tension	68,5 mN/m (1 g/l @ 20°C (68°F))	OECD 115
Adsorption/Desorption	Koc: 43,2	OECD 106 read across
Distribution to environmental compartments	no data available	

12.5. Results of PBT and vPvB assessment

Isopropylamine, CAS: 75-31-0

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

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No data available

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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 1221
14.2. UN proper shipping name	Isopropylamine
14.3. Transport hazard class(es)	3
Subsidiary Risk	8
14.4. Packing group	I
14.5. Environmental hazards	no
14.6. Special precautions for user	
Emergency Response Guide	132

ICAO-TI / IATA-DGR

14.1. UN number	UN 1221
14.2. UN proper shipping name	Isopropylamine
14.3. Transport hazard class(es)	3
Subsidiary Risk	8
14.4. Packing group	I
14.5. Environmental hazards	no
14.6. Special precautions for user	no data available

IMDG

14.1. UN number	UN 1221
14.2. UN proper shipping name	Isopropylamine
14.3. Transport hazard class(es)	3

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Subsidiary Risk	8
14.4. Packing group	1
14.5. Environmental hazards	no
14.6. Special precautions for user	
EmS	F-E, S-C

14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code

Product name	Isopropylamine
Ship type	2
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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Clean Air Act Section 112(r)	
112(r) Threshold	10000 LBS
CERCLA Hazardous Substance	
CERCLA RQ	100 LBS

State Regulations

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

International Inventories

Isopropylamine, CAS: 75-31-0

AICS (AU)
DSL (CA)
IECSC (CN)
EC-No. 2008609 (EU)

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ENCS (2)-131 (JP)
ISHL (2)-131 (JP)
KECI KE-29257 (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	3
Fire Hazard	4
Reactivity	0

HMIS (Hazardous Material Information System)

Health Hazard	3
Flammability	4
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.

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.

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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 Chemicals 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