

Safety Data Sheet

Oxygen Sensor for Carbon Dioxide Containing Gases

SDS Revision Date:

10/05/2016

1. Identification

1.1. Product identifier

Product Identity

Oxygen Sensor for Carbon Dioxide Containing Gases

Alternate Names

Oxygen Sensor for Carbon Dioxide Containing Gases

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

Intended use

See Technical Data Sheet.

Application Method

See Technical Data Sheet.

1.3. Details of the supplier of the safety data sheet

Company Name

Teledyne Instruments/Analytical Instruments
16830 Chestnut Street
Industry, CA 91748. USA

Emergency

CHEMTREC (USA)

(800) 424-9300

Customer Service: Teledyne Instruments/Analytical Instruments

626-934-1500
Technical Support: 626-934-1673
Environment, Health and Safety: 626-934-1592

2. Hazard(s) identification

2.1. Classification of the substance or mixture

Skin Irrit. 3;H316

Causes mild skin irritation. (Not adopted by US OSHA)

Carc. 1A;H350

May cause cancer.

Aquatic Acute 1;H400

Very toxic to aquatic life.

2.2. Label elements

Using the Toxicity Data listed in section 11 and 12 the product is labeled as follows.



Danger

H316 Causes mild skin irritation.

H350 May cause cancer.

H400 Very toxic to aquatic life.

[Prevention]:

P201 Obtain special instructions before use.

P202 Do not handle until all safety precautions have been read and understood.

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P260 Do not breathe mist / vapors / spray.

P262 Do not get in eyes, on skin, or on clothing.

P273 Avoid release to the environment.

P281 Use personal protective equipment as required.

[Response]:

P301+310 IF SWALLOWED: Immediately call a POISON CENTER or doctor / physician.

P308+313 IF exposed or concerned: Get medical advice / attention.

P331 Do NOT induce vomiting.

P332+313 If skin irritation occurs: Get medical advice / attention.

P391 Collect spillage.

[Storage]:

P405 Store locked up.

[Disposal]:

P501 Dispose of contents / container in accordance with local / national regulations.

3. Composition/information on ingredients

This product contains the following substances that present a hazard within the meaning of the relevant State and Federal Hazardous Substances regulations.

Ingredient/Chemical Designations	Weight %	GHS Classification	Notes
Lead Compounds (as Pb) CAS Number: 0007439-92-1	25 - 50	Carc. 1A;H350 Aquatic Acute 1;H400	[1][2]
Acetic acid CAS Number: 0000064-19-7	1.0 - 10	Flam. Liq. 3;H226 Skin Corr. 1A;H314 Eye Irrit. 2;H319	[1][2]
Potassium acetate CAS Number: 0000127-08-2	1.0 - 10	Not Classified	[1]

In accordance with paragraph (i) of §1910.1200, the specific chemical identity and/or exact percentage (concentration) of composition has been withheld as a trade secret.

[1] Substance classified with a health or environmental hazard.

[2] Substance with a workplace exposure limit.

[3] PBT-substance or vPvB-substance.

*The full texts of the phrases are shown in Section 16.

4. First aid measures

4.1. Description of first aid measures

General

In all cases of doubt, or when symptoms persist, seek medical attention.

Never give anything by mouth to an unconscious person.

Inhalation

Remove to fresh air, keep patient warm and at rest. If breathing is irregular or stopped, give artificial respiration. If unconscious place in the recovery position and obtain immediate medical attention. Give nothing by mouth.

Eyes

Irrigate copiously with clean water for at least 15 minutes, holding the eyelids apart and seek medical attention.

Skin

Remove contaminated clothing. Wash skin thoroughly with soap and water or use a

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recognized skin cleanser.

Ingestion

If swallowed obtain immediate medical attention. Keep at rest. Do NOT induce vomiting.

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

Overview

No specific symptom data available.

Possible cancer hazard. Contains an ingredient which may cause cancer based on animal data (See Section 3 and Section 15 for each ingredient). Risk of cancer depends on duration and level of exposure.

See section 2 for further details.

Skin

Causes mild skin irritation.

5. Fire-fighting measures

5.1. Extinguishing media

Recommended extinguishing media; alcohol resistant foam, CO₂, powder, water spray.

5.2. Special hazards arising from the substance or mixture

Hazardous decomposition: No hazardous decomposition data available.

Do not breathe mist / vapors / spray.

Do not get in eyes, on skin, or on clothing.

5.3. Advice for fire-fighters

None

ERG Guide No. ----

6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Put on appropriate personal protective equipment (see section 8).

6.2. Environmental precautions

Do not allow spills to enter drains or waterways.

Use good personal hygiene practices. Wash hands before eating, drinking, smoking or using toilet. Promptly remove soiled clothing and wash thoroughly before reuse.

6.3. Methods and material for containment and cleaning up

Ventilate the area and avoid breathing vapors. Take the personal protective measures listed in section 8.

Contain and absorb spillage with non-combustible materials e.g. sand, earth, and vermiculite. Place in closed containers outside buildings and dispose of according to the Waste Regulations. (See section 13).

Clean, preferably with a detergent. Do not use solvents.

Do not allow spills to enter drains or watercourses.

If drains, sewers, streams or lakes are contaminated, inform the local water company immediately. In the case of contamination of rivers, streams or lakes the Environmental Protection Agency should also be informed.

7. Handling and storage

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7.1. Precautions for safe handling

See section 2 for further details. - [Prevention]:

7.2. Conditions for safe storage, including any incompatibilities

Handle containers carefully to prevent damage and spillage.

Incompatible materials: No data available.

See section 2 for further details. - [Storage]:

7.3. Specific end use(s)

No data available.

8. Exposure controls and personal protection

8.1. Control parameters

Exposure

CAS No.	Ingredient	Source	Value
0000064-19-7	Acetic acid	OSHA	TWA 10 ppm (25 mg/m3)
		ACGIH	TWA: 10 ppm STEL: 15 ppm
		NIOSH	TWA 10 ppm (25 mg/m3) ST 15 ppm (37 mg/m3)
		Supplier	No Established Limit
0000127-08-2	Potassium acetate	OSHA	No Established Limit
		ACGIH	No Established Limit
		NIOSH	No Established Limit
		Supplier	No Established Limit
0007439-92-1	Lead Compounds (as Pb)	OSHA	[1910.1025] TWA 0.050 mg/m3
		ACGIH	TWA: 0.05 mg/m3R, 2B, 2A
		NIOSH	TWA (8-hour) 0.050 mg/m3
		Supplier	No Established Limit

Carcinogen Data

CAS No.	Ingredient	Source	Value
0000064-19-7	Acetic acid	OSHA	Select Carcinogen: No
		NTP	Known: No; Suspected: No
		IARC	Group 1: No; Group 2a: No; Group 2b: No; Group 3: No; Group 4: No;
0000127-08-2	Potassium acetate	OSHA	Select Carcinogen: No
		NTP	Known: No; Suspected: No
		IARC	Group 1: No; Group 2a: No; Group 2b: No; Group 3: No; Group 4: No;
0007439-92-1	Lead Compounds (as Pb)	OSHA	Select Carcinogen: Yes
		NTP	Known: No; Suspected: Yes
		IARC	Group 1: No; Group 2a: No; Group 2b: Yes; Group 3: No; Group 4: No;

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8.2. Exposure controls

Respiratory	If workers are exposed to concentrations above the exposure limit they must use the appropriate, certified respirators.
Eyes	Protective safety glasses recommended
Skin	Wear protective clothing to keep skin contact to a minimum. Chemical impervious gloves recommended.
Engineering Controls	Provide adequate ventilation. Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction. If these are not sufficient to maintain concentrations of particulates and any vapor below occupational exposure limits suitable respiratory protection must be worn.
Other Work Practices	Use good personal hygiene practices. Wash hands before eating, drinking, smoking or using toilet. Promptly remove soiled clothing and wash thoroughly before reuse.

See section 2 for further details. - [Prevention]:

9. Physical and chemical properties

Appearance	Clear, Colorless Liquid
Odor	Strong, Vinegar-like
Odor threshold	Not Measured
pH	4.4 - 4.9
Melting point / freezing point	Not Measured
Initial boiling point and boiling range	118 C/244 F
Flash Point	Not Measured
Evaporation rate (Ether = 1)	0.97 (for glacial acetic acid)
Flammability (solid, gas)	Not Applicable
Upper/lower flammability or explosive limits	Lower Explosive Limit: Not Measured Upper Explosive Limit: Not Measured
Vapor pressure	11 mmHg @ 20 C/68 F (for glacial acetic acid)
Vapor Density	2.1 (for glacial acetic acid)
Specific Gravity	1.05 (for glacial acetic acid)
Solubility in Water	Complete
Partition coefficient n-octanol/water (Log Kow)	Not Measured
Auto-ignition temperature	Not Measured
Decomposition temperature	Not Measured
Viscosity (cSt)	Not Measured

9.2. Other information

No other relevant information.

10. Stability and reactivity

10.1. Reactivity

Hazardous Polymerization will not occur.

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10.2. Chemical stability

Stable under normal circumstances.

10.3. Possibility of hazardous reactions

No data available.

10.4. Conditions to avoid

No data available.

10.5. Incompatible materials

No data available.

10.6. Hazardous decomposition products

No hazardous decomposition data available.

11. Toxicological information

Acute toxicity

Ingredient	Oral LD50, mg/kg	Skin LD50, mg/kg	Inhalation Vapor LC50, mg/L/4hr	Inhalation Dust/Mist LC50, mg/L/4hr	Inhalation Gas LC50, ppm
Lead Compounds (as Pb) - (7439-92-1)	No data available	No data available	No data available	No data available	No data available
Acetic acid - (64-19-7)	3,310.00, Rat - Category: 5	1,112.00, Rabbit - Category: 4	11.40, Rat - Category: 4	No data available	16,000.00, Rat - Category: NA
Potassium acetate - (127-08-2)	3,250.00, Rat - Category: 5	No data available	No data available	No data available	No data available

Note: When no route specific LD50 data is available for an acute toxin, the converted acute toxicity point estimate was used in the calculation of the product's ATE (Acute Toxicity Estimate).

Classification	Category	Hazard Description
Acute toxicity (oral)	---	Not Applicable
Acute toxicity (dermal)	---	Not Applicable
Acute toxicity (inhalation)	---	Not Applicable
Skin corrosion/irritation	3	Causes mild skin irritation. (Not adopted by US OSHA)
Serious eye damage/irritation	---	Not Applicable
Respiratory sensitization	---	Not Applicable
Skin sensitization	---	Not Applicable
Germ cell mutagenicity	---	Not Applicable
Carcinogenicity	1A	May cause cancer.
Reproductive toxicity	---	Not Applicable
STOT-single exposure	---	Not Applicable
STOT-repeated exposure	---	Not Applicable

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Aspiration hazard

Not Applicable

12. Ecological information

12.1. Toxicity

Very toxic to aquatic life.

No additional information provided for this product. See Section 3 for chemical specific data.

Aquatic Ecotoxicity

Ingredient	96 hr LC50 fish, mg/l	48 hr EC50 crustacea, mg/l	ErC50 algae, mg/l
Lead Compounds (as Pb) - (7439-92-1)	0.44, Cyprinus carpio	4.40, Daphnia magna	0.25 (72 hr), Scenedesmus subspicatus
Acetic acid - (64-19-7)	79.00, Pimephales promelas	65.00, Daphnia magna	73.40 (96 hr), Navicula seminulum
Potassium acetate - (127-08-2)	Not Available	Not Available	Not Available

12.2. Persistence and degradability

There is no data available on the preparation itself.

12.3. Bioaccumulative potential

Not Measured

12.4. Mobility in soil

No data available.

12.5. Results of PBT and vPvB assessment

This product contains no PBT/vPvB chemicals.

12.6. Other adverse effects

No data available.

13. Disposal considerations

13.1. Waste treatment methods

Observe all federal, state and local regulations when disposing of this substance.

14. Transport information

	DOT (Domestic Surface Transportation)	IMO / IMDG (Ocean Transportation)	ICAO/IATA
14.1. UN number	Not Applicable	Not Regulated	Not Regulated

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14.2. UN proper shipping name	Not Regulated	Not Regulated	Not Regulated
14.3. Transport hazard class(es)	DOT Hazard Class: Not Applicable	IMDG: Not Applicable Sub Class: Not Applicable	Air Class: Not Applicable
14.4. Packing group	Not Applicable	Not Applicable	Not Applicable
14.5. Environmental hazards			
IMDG	Marine Pollutant: Yes (Lead Compounds (as Pb))		
14.6. Special precautions for user	No further information		

15. Regulatory information

Regulatory Overview	The regulatory data in Section 15 is not intended to be all-inclusive, only selected regulations are represented.		
Toxic Substance Control Act (TSCA)	All components of this material are either listed or exempt from listing on the TSCA Inventory.		
WHMIS Classification	D2A		
US EPA Tier II Hazards	Fire: No Sudden Release of Pressure: No Reactive: No Immediate (Acute): Yes Delayed (Chronic): Yes		
EPCRA 311/312 Chemicals and RQs (lbs):	Acetic acid (5,000.00) Lead Compounds (as Pb) (10.00)		
EPCRA 302 Extremely Hazardous:	To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.		
EPCRA 313 Toxic Chemicals:	Lead Compounds (as Pb)		
Proposition 65 - Carcinogens (>0.0%):	Lead Compounds (as Pb)		
Proposition 65 - Developmental Toxins (>0.0%):	Lead Compounds (as Pb)		
Proposition 65 - Female Repro Toxins (>0.0%):	Lead Compounds (as Pb)		
Proposition 65 - Male Repro Toxins (>0.0%):	Lead Compounds (as Pb)		
New Jersey RTK Substances (>1%):	Acetic acid Lead Compounds (as Pb)		

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Pennsylvania RTK Substances (>1%):

Acetic acid

Lead Compounds (as Pb)

16. Other information

The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind, expressed or implied, is made with respect to the information contained herein. We accept no responsibility and disclaim all liability for any harmful effects which may be caused by exposure to our products. Customers/users of this product must comply with all applicable health and safety laws, regulations, and orders.

The full text of the phrases appearing in section 3 is:

H226 Flammable liquid and vapor.

H314 Causes severe skin burns and eye damage.

H319 Causes serious eye irritation.

H350 May cause cancer.

H400 Very toxic to aquatic life.

This is the first version in the GHS SDS format. Listings of changes from previous versions in other formats are not applicable.

All chemicals may pose unknown hazards and should be used with caution. While the information contained in this Material Safety Data Sheet is believed to be correct and is offered for your information, consideration and investigation, Teledyne Analytical Instruments assumes no responsibility of the completeness or accuracy of the information contained herein.

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