Product Safety Information Sheet

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1. Identification of the substance/preparation and of the company/undertaking

1.1 Identification of the substance or preparation:

Trade name: **DrägerSensors® (not classified as hazardous material)**
Part nos.: various

1.2 Use of the substance/preparation:

Detection of gases, measuring of gas concentrations.

1.3 Company/undertaking name:

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New Zealand Poisons Information Centre
No. 0800 764 766 (0800 POISON)

1.5 Relevant products:

Part No.	Trade name	Part No.	Trade name
6800530	DrägerSensor® XXS O_2 PR	6810350	DrägerSensor LC M
6800040	DrägerSensor® XXS CO/HCN	6810675	DrägerSensor LC NPT
6800055	DrägerSensor® NH3 TH	6811340	DrägerSensor® NH_3 S
6807120	DrägerSensor® Alcotest EC	6811410	DrägerSensor® XXS H_2S/CO
6807220	DrägerSensor® Alcotest 7410	6811525	DrägerSensor® XXS H_2S LC
6807629	Probenahmeeinheit Alcotest 7410	6811530	DrägerSensor® XXS OV
6808455	DrägerSensor® Alcotest B	6811535	DrägerSensor® XXS OV-A
6808582	DrägerSensor® XS EC $COCl_2$	6811540	DrägerSensor® XXS Ozon
6808680	DrägerSensor® Alcotest P	6811545	DrägerSensor® XXS NO
6808799	DrägerSensor® Alcotest BS	6811950	DrägerSensor® XXS CO H_2-CP
6809140	DrägerSensor® XS HF/HCl	6812005	DrägerSensor® XXS Phosgen
6809145	DrägerSensor® XS EC NH_3	6812010	DrägerSensor® XXS CO HC
6809165	DrägerSensor® XS EC Cl_2	6812015	DrägerSensor® XXS H_2S HC
6809175	DrägerSensor® XS EC CO_2	6812020	DrägerSensor® XXS PH_3 HC
6809190	DrägerSensor® XS EC Hydrazin	6812025	DrägerSensor® XXS H_2 HC
6809360	DrägerSensor HF/HCl L	6812211	DrägerSensor® XXS E O_2
6809370	DrägerSensor CL_2 L	6812212	DrägerSensor® XXS E CO
6809545	DrägerSensor® XS EC Amine	6812213	DrägerSensor® XXS E H_2S
6809645	DrägerSensor® NH_3 HC	6812370	DrägerSensor® XXS H_2
6809665	DrägerSensor® Cl_2	6812385	DrägerSensor® XXS O_2 100
6809680	DrägerSensor® NH_3 LC	6812535	DrägerSensor® XXS Odorant
6809930	DrägerSensor® $COCl_2$	6812545	DrägerSensor® XXS Amine
6809980	DrägerSensor® Hydride SC	6812600	DrägerSensor® XXS NO_2 LC
6810180	DrägerSensor® N_2H_4	6812745	DrägerSensor® MEC Cl_2
6810216	DrägerSensor® XS NH_3 V	6812750	DrägerSensor® MEC NH_3
6810290	DrägerSensor® O_3	6812765	DrägerSensor® MEC HF/HCl

6810295	DrägerSensor® XS Hydrazin		
6810360	Dräger Alcotest Sensor 18	6812960	Sensor Alcotest 18A
6810500	DrägerSensor® DS PFC	6813080	DrägerSensor CatEx 125 PR-Gas
6810595	DrägerSensor® AC	6813095	DrägerSensor® NH_3 TL
6810755	DrägerSensor® $COCl_2$	6814137	DrägerSensor® XXS O_2/H_2S LC
6810881	DrägerSensor® XXS O_2	6813165	DrägerSensor® XXS HCN PC
6810882	DrägerSensor® XXS CO	6813200	DrägerSensor® HCN LC
6810883	DrägerSensor® XXS H_2S	6813205	DrägerSensor® NO_2 LC
6810884	DrägerSensor® XXS NO_2	6813210	DrägerSensor® XXS CO LC
6810885	DrägerSensor® XXS SO_2	6813260	DrägerSensor® NH_3 FL
6810886	DrägerSensor® XXS PH_3	6813275	DrägerSensor® XXS CO/O2
6810887	DrägerSensor® XXS HCN	6813280	DrägerSensor® XXS CO LC/ H2S LC
6810888	DrägerSensor® XXS NH_3	6813430	DrägerSensor Alcotest 18D
6810889	DrägerSensor® XXS CO_2	6814005	DrägerSensor® Ozone
6810890	DrägerSensor® XXS Cl_2	6850900	BIO_2-Sensor (DW)
6811044	100 x DrägerSensor® Alcotest B	6850930	O_2 Sensor (Knopf)
6811120	DrägerSensor® XS PFC	6872500	O_2 Sensor Oxycell
6812950	DrägerSensor CatEx 125 PR	6809790	DrägerSensor PR NPT
6851900	DrägerSensor CatEx SR	6809755	DrägerSensor PR NPT
6812970	DrägerSensor Smart CatEx (HC PR)	6812380	DrägerSensor PR NPT DD
6812980	DrägerSensor Smart CatEx (PR)	6814140	DrägerSensor PR M DQ
6812975	DrägerSensor Smart CatEx (FR PR)	6814145	DrägerSensor HT M DQ
6812251	DrägerSensor CatEx 125 VG	6814150	DrägerSensor PR NPT DQ

2. Hazards identification

2.1 Electrochemical DrägerSensors™ or other listed CatEX DrägerSensors™ are products which are not subject to classification. The requirements of the EC regulations 1907/2006 (Reach) and 1272/2008 (GHS/CLP) do not apply to such products. Hence the following information is purely voluntary.

2.2 Classification:
Nature of hazard: n/a

2.3 Particular hazards for man and environment:
Improper handling, destruction of and/or damage to the electrochemical DrägerSensors™ may release very small amounts of organic solvents or inorganic salts/solutions. These substances may be harmful if swallowed, may cause burns and may be irritating to skin and eyes.

3. Composition/Information on ingredients

3.1 Chemical characterization (constituent):
n/a

3.2 Chemical characterization (preparation):
n/a

3.3 Other information:
Electrochemical DrägerSensors™ are products which are not subject to identification. The requirements of GHS and, EC regulations 1907/2006 (Reach) and 1272/2008 (GHS/CLP) do not apply to such products. Hence the following information is purely voluntary.
Electrochemical DrägerSensors™ which are not classified as hazardous material may contain small/very small amounts (<1,5ml) of organic and inorganic substances. Due to their characteristics and the small/very small amounts, these substances do not present relevant hazards. Housings are made from polyethylene and polypropylene.

4. First-aid measures

4.1 After inhalation:
Fresh air.

4.2 After contact with skin:
Wash with plenty of water.

4.3 After contact with the eyes:
Flush open eye with plenty of water (for at least 15 minutes). Consult ophthalmologist.

4.4 After ingestion:
Make victim drink plenty of water, induce vomiting, summon doctor.

4.5 Information for the doctor:
The organic solvents or inorganic salts/solutions in the electrochemical DrägerSensors™ may cause irritations to skin and eyes. Risk of damage to eyes.

5. Fire-fighting measures

5.1 Suitable extinguishing media:
The organic solvents in electrochemical DrägerSensors™ are combustible. Use extinguishing media appropriate to the environment, preferably water, foam or CO_2.

5.2 Extinguishing media which must not be used for safety reasons:
n/a

5.3 Special exposure hazards arising from substances or preparation itself, combustion products, resulting gases:
Thermal decomposition or combustion of the plastic components and ingredients of the electrochemical DrägerSensors™ may release small amounts of harmful or toxic gases (CO_2, CO etc.).

5.4 Special protective equipment for fire-fighters:
For firefighting respiratory protection with a compressed air breathing apparatus is recommended.

6. Accidental release measures

6.1 Personal precautions:
Take care to avoid eye and skin contact with released/leaked electrolyte; use safety goggles. Do not inhale vapors/aerosols.

6.2 Environmental precautions:
Do not discharge electrolyte into the sewer system.

6.3 Methods for cleaning up:
Bind released/leaked electrolyte with suitable absorbent (silica gel) and dispose of correctly. Wash away residues with large amounts of water.

6.4 Additional information:
n/a

7. Handling and storage

7.1 Handling:

Precautions for safety handling: Closely follow the instructions in the relevant sensor data sheets/instructions for use when handling electrochemical DrägerSensors™. This also applies for all calibration activities and when handling calibration gases. Calibration activities should always be carried out in areas which are well-ventilated or provided with an exhausting device. Observe hazard information.

Information for protection against fire and explosion: Electrochemical DrägerSensors™ with organic electrolyte contain very small amounts of combustible solvents.

7.2 Storage:

Requirements for storage and containers: DrägerSensors™ must be stored under the conditions stated in the sensor data sheets (0°C - +30°C [-20°C - +40°C]) and in their original packaging. Observe the use-by date indicated on the packaging.

Information on storage together with other materials: Observe VCI concept for storing chemicals

Further information on storage conditions: n/a

Storage class: 10-13 (recommendation) for electrochemical sensors

7.3 Certain application:

n/a

8. Exposure controls/Personal protection

8.1 Exposure limit values:

With normal handling of the DrägerSensors™ there should be no exposure to contents. However, if exposure does occur, keep exposure as low as possible.

8.2 Exposure controls:

Additional information on plant design: Handling according to the Instructions for Use.

8.2.1 Occupational exposure controls:

General protection and hygiene measures:
With normal handling of the electrochemical DrägerSensors™ there should be no exposure to contents. However, if exposure does occur, keep exposure as low as possible.

Personal protection:

8.2.1.1 Respiratory protection:
Recommended when vapours/aereosols are generated in large amounts.

8.2.1.2 Hand protection:
With normal handling of the DrägerSensors™ there should be no exposure to contents. In case of accidents use suitable protective gloves made from PE/ PP, Latex, butyl or nitrile rubber. Please observe the glove manufacturer's instructions on permeability and rupture times as well as the specific workplace conditions. Prophylactic skin protection is recommended. Wash hands before breaks and after work.

8.2.1.3 Eye protection:
Not necessary when electrochemical DrägerSensors™ are handled correctly. Use safety goggles if electrolyte is released from the DrägerSensors™.

8.2.1.4 Skin protection:
Prophylactic skin protection is recommended. Wash thoroughly after handling. Skin care.

8.2.2 Environmental exposure controls: n/a

9. Physical and chemical properties

9.1 General information:

Form:	Electrochemical DrägerSensors™ containing
Color:	colorless liquids. colorless
Odor:	odorless or specific

9.2 Important information about the protection of health, safety and the environment: Method (67/548/EEC):

Solubility:		n/a
pH-value:		n/a
Boiling point:		n/a
Melting point:		n/a
Flame point:		n/a
Inflammability:		n/a
Explosion limits:		
	lower:	n/a
	upper:	n/a
Ignition temperature:		n/a
Vapor pressure:		n/a
Mass density:		n/a
Further information:		see relevant sensor data sheet and section 2/3

9.3 Other information

cf. relevant sensor data sheet and section 2/3

10. Stability and reactivity

General information:

10.1 Conditions to be avoided:

n/a

10.2 Materials to be avoided:

n/a

10.3 Hazardous decomposition products:

n/a

Possibility of a dangerous exothermic reaction:	n/a
Dangerous products of decomposition at contact with water:	n/a

10.4 Further information:

n/a

11. Toxicological information

11.1 Toxicity tests:
Classification-relevant LD/LC_{50}-values: n/a

11.1.1 Specific symptoms in animal studies: n/a

11.1.2 Irritant/corrosive effects: n/a

11.1.3 Sensitization: n/a

11.1.4 Subacute and chronic toxicity:
Experiments: n/a
Species: n/a

11.1.5 Carcinogenic, mutagenic and reproductive toxic effects: n/a

11.1.6 Further information: n/a

11.2 Effects on human body/Experiments made in practice:

after inhalation:
n/a
after ingestion:
n/a
after eye contact:
n/a
after skin contact:
n/a

11.3 Additional toxicological information:
Organic solvents and aqueous solutions in electrochemical DrägerSensors™ may be harmful if swallowed, may cause burns and may be irritating to skin and eyes.
Further information:
n/a

12. Ecological information

12.1 Ecotoxicity:
n/a

12.2 Mobility:
n/a

12.3 Persistence and degradability:

Biological decompositionability: n/a
Behavior in purification plants: n/a

12.4 Bioaccumulative potential:
n/a

12.5 Other adverse effects:
n/a

12.6 Additional information:
Quantitative data on the ecological effects of the electrochemical DrägerSensors™ and their ingredients are not available. Electrochemical DrägerSensors™ contain electrolytes which are classified as slightly hazardous for water (German water hazard classification: "1"). No ecological problems are to be expected when the electrochemical DrägerSensors™ are handled and used with due care and attention.

13. Disposal considerations

13.1 Product (recommendations):
Utilized and exhausted electrochemical DrägerSensors™ must not be disposed of as household waste. They must be disposed of in accordance with local waste disposal regulations or by hiring an appropriate disposal company. Disposal is regulated by federal and state waste disposal laws and the corresponding regulations or other national regulations.
Dräger Safety AG & Co. KGaA takes back expired and exhausted electrochemical DrägerSensors™ and ensures correct recycling or disposal after separating off usable materials (a charge is made to cover costs).
Notice for catalytic sensors: In case of a destroyed housing, solvent vapors may ignite.

Waste category:	EWL (European waste list): 160216
Waste designation:	Components removed from discarded equipment other than those mentioned in 160215
Obligation to prove correct disposal:	no

13.2 Not cleaned packaging material (recommendations):
n/a

14. Transport information

14.1 Road transport ADR/RID and GGVSE (cross-border/domestic):

UN-No.:	n/a	Class:	n/a	Packing group:	n/a
Name:	n/a			Classification code:	n/a
Remarks:	The DrägerSensors™ mentioned in this PSIS are not subject to the provisions of ADR/GGVSE.				

14.2 Marine transport IMDG-Code/GGVSee:

UN-No.	n/a	Correct technical name:	n/a		
Class:	n/a	Sub risk:	n/a	Packing group:	n/a
EmS-No.:	n/a			MFAG:	n/a
Marine pollutant:	n/a				
Remarks:	n/a				

14.3 Air transport ICAO-TI and IATA-DGR:

UN-No.	n/a	Proper shipping Name:	n/a		
Class	n/a	Sub risk:	n/a	PG:	n/a
Remarks:	The DrägerSensors™ mentioned in this PSIS are not subject to the provisions of ICAO-TI and IATA-DGR.				

14.4 Transport/further information:
n/a

15. Regulatory information

15.1 Labelling according to EC Regulations:
Hazard pictograms and signal word for dangerous substances and preparations: No labelling necessary
Hazardous components to be indicated on label: contains: n/a

H-Phrases:
n/a

P-Phrases (recommendation):

P102	Keep out of reach of children.
P302+P352	IF ON SKIN: Wash with plenty of water.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308+P313	IF exposed or concerned: Get medical advice/attention.

15.2 National regulations:

Additional classification acc. to GefStoffV Annex II No. (only if differing from EC classification): n/a
Restrictions of occupation: n/a
Statutory order on hazardous incidents: n/a
Water pollution class: nwg
Information according 1999/13/EC about limitation of emissions of volatile organic compounds (VOC-guideline): n/a
Further regulations, restrictions, and prohibition regulation:
(such as principles of industrial medicine and health and safety regulations)
Instruction Sheet BG-Chemie (Chemical Professional Association): n/a. Other state regulations may apply. Check individual state requirements.

16. Other information

Use of the substance / preparation:
See section 1.2; additional information in the Instruction for Use.

Relevant H-Phrases:
n.a.

Comments:

n. a.; n/a, ./. :	not applicable
MAC:	Maximum allowable concentration
COD:	Chemical oxygen demand
BOD:	Biochemical oxygen demand
EWL:	European waste list
VOC:	Volatile organic compounds
VCI:	Verband der Chemischen Industrie e.V. (Association of the German chemical industry)
WGK:	German water hazard class

Further information:
The above information represents our current state of experience and describes the product only with respect to safety requirements. The manufacturer makes no representation and assumes no liability for any direct, incidental or consequential damages resulting from its use. It is the responsibility of the customer to test whether the product is suitable for the purpose intended by the customer.

Data sheet issued by: Global EHS Management
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Changes to preceding version: In section 1 and 2.