

Material Safety Data Sheet

1. Product name / chemical identification

Carbon Monoxide CiTiceL[®] sensors to detect Carbon Monoxide (CO).

2E/F, 3E/F, 3ME/F, 4CF, 7E/F, A2E/F, A7E/F, A3CO, EZ-T3E/F & T3E/F.

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2. Composition / information on ingredients

Electrolyte containing sulphuric acid (H₂SO₄), filter material and proprietary catalyst alloy electrodes enclosed in a plastic based housing with attached metal connections.

3. Hazards Identification

The electrolyte inside the sensor constitutes the main potential hazard. This may leak out should the housing be damaged or tampered with.

3.1. Inhalation of electrolyte:

Inhalation is not an expected hazard unless heated to high temperatures. Mist or vapour inhalation can cause irritation to the nose, throat, and upper respiratory tract.

3.2. Ingestion of electrolyte:

Corrosive. May cause sore throat, abdominal pain, nausea and severe burns of the mouth, throat and stomach.

3.3. Skin or eye contact of electrolyte:

Corrosive. May cause redness, pain, blurred vision, and eye burns.

3.4. Aggravation of pre-existing conditions:

Persons with pre-existing skin disorders or eye problems, or impaired respiratory function may be more susceptible to the effects of the substance.

4. First-Aid Measures

In case of leakage and:

4.1. Eye contact with electrolyte:

Irrigate thoroughly with water for at least 15 minutes. Obtain medical advice.

4.2. Inhalation of electrolyte:

Remove to fresh air. Rest and keep warm. Obtain medical advice if applicable.

4.3. Skin contact with electrolyte:

Immediately flush the skin thoroughly with water for at least 15 minutes. Remove contaminated clothing and wash before re-use. Obtain medical advice if continued irritation.

4.4. Ingestion of electrolyte:

If swallowed DO NOT INDUCE VOMITING. Wash out mouth thoroughly with water and give plenty of water to drink. Obtain medical advice.

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5. Fire Fighting Measures

5.1. Fire:

Not considered to be a fire hazard.

5.2. Explosion:

Not considered to be an explosion hazard.

5.3. Fire extinguishing media:

Use any means suitable for extinguishing surrounding fire.

6. Accidental release measures

6.1. Damage

Should any CiTiceL[®] be so severely damaged or tampered with that the leakage of the contents occurs then the following procedures should be adopted:

- Avoid skin contact with any liquid or internal component through the use of protective gloves.
- Disconnect CiTiceL[®] if it is attached to any equipment.
- Use copious amounts of clean water to wash away any spilt electrolyte, particularly important in equipment because of the corrosive nature of the electrolyte.
- Observe first aid measures in case of eye contact, inhalation, skin contact or ingestion of electrolyte.

7. Handling and Storage

Must not be exposed to temperatures outside the range specified on the specification sheet.

Should not be exposed to organic vapours, which may cause physical damage to the body of the sensor.

Must not be stored in areas containing organic solvents or in flammable liquid stores.

8. Exposure controls / personal protection

None in normal operation

9. Physical and chemical properties

Sensor is a sealed unit

10. Stability and reactivity

N/A

11. Toxicological information

Electrolyte is corrosive to eyes, respiratory system and skin.

12. Ecological Information

Very toxic to aquatic organisms.

Harmful effect due to pH shift.

Toxic effect on fish and algae.

13. Disposal Considerations

Contains toxic compounds irrespective of physical condition. Should be disposed of according to local waste management requirements and environmental legislation.

Should not be burnt since they may evolve toxic fumes.

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14. Transport Regulations

Electrochemical gas sensors are classed as non-dangerous and may be transported without special packing, labels etc. It is important, however, to check any local regulations.

City Technology's sensors conform to: IATA ID No. UN 2800 (section 4.5, paragraph 67) and Code of Federal Regulations 49: Transportation; Exception 159.: Toxic sensors are classified as "batteries wet non-spillable".

15. Regulatory information

R-Phrases: 35

Causes severe burns.

S-Phrases: 26-30-45

In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Never add water to this product. In case of accident or you feel unwell, seek medical advice immediately.

R-Phrases: 37-36-50-53

Irritating to respiratory system. Irritating to eyes. Very toxic to aquatic organisms. May cause long term adverse effects in the aquatic environment.

S-Phrases:

Do not discharge into drains or the environment.

16. Revision History

Issue 2 ECN I 2081