

DART SENSORS LTD

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MATERIAL SAFETY DATA SHEET

Prepared in accordance with EU directive 91/155/EEC

1. Identification of the substance/preparation and of the company/undertaking
Trade name: Calibration standards (Liquid or Dry) for Electronic Breath Analysers

Manufacturer:
Dart Sensors Ltd
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Our website: <http://www.dart-sensors.com>
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2. Composition/information on ingredients

Ethanol (< 1%):
CAS number 64-17-5
EINECS number 200-578-6

Liquid standards only
Water:
CAS number 7732-18-5
EINECS number 231-791-2

Copper sulphate (< 1%):
CAS number 7758-98-7
EINECS number 231-847-6

Dry standards only
Molecular sieve:
CAS number 1318-02-1
EINECS number 215-283-8

Copper acetate (<1%):
CAS number 142-71-2
EINECS number 205-553-3

3. Hazards identification
Description of ingredient hazards:
None at specified levels.

Special instructions for man and the environment
Copper sulphate and acetate solutions:
R52: harmful to aquatic organisms.
R53: may cause long-term adverse effects in the aquatic environment.

4. First aid measures

Revised: 15 November 2012

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After inhalation: Not applicable

After eye contact: Rinse opened eye for several minutes under running water.

After skin contact: Flush skin with plenty of soap and water.

After ingestion: Seek medical attention immediately.

5. Fire-fighting measures

The material is not flammable or explosive.

6. Accidental release measures

Person-related safety precautions: Not required.

Measures for cleaning/collecting:

Dry standards - collect mechanically

Liquid standards - absorb on tissue or cloth and dispose according to local regulations

7. Handling and storage

Handling: No precautions required

Storage: Store in a cool dark place to preserve shelf life

8. Exposure control / personal protection:

Recommended personal protection:

None.

General protective and hygienic measures:

Keep away from food and beverages.

9. Physical and chemical properties

Dry Standards:

Appearance: Pellets

Colour: Grey or brown

Odour: None

Boiling point/boiling range: N/A

Melting point/melting range: N/A

Flash point: N/A

Autoflammability: N/A

Explosive properties: none

Water solubility: none

pH: N/A

Liquid Standards:

Appearance: Aqueous solution

Colour: Pale blue

Odour: none

Boiling point/boiling range: 100°C

Melting point/melting range: 0°C

Flash point: n/a

Autoflammability: n/a

Explosive properties: n/a

Relative density at 20°C: 1 g/cm³

Water solubility: 100% miscible

pH: 7

10. Stability and reactivity

Conditions to avoid: no thermal decomposition.

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Materials to avoid (liquid standards only): K, Na

Hazardous decomposition products: none.

11. Toxicological information

Acute toxicity: none known

Primary irritations (dry standards only): skin and mucous membranes.

Sensitisation: none known

12. Ecological information

General instructions: copper salts are hazardous to aquatic life but their concentrations in the liquid standard and the reconstituted dry standard are not greater than 0.275%. The UK CHIP Regulations apply to copper salt concentrations greater than 1%.

13. Disposal considerations

Disposal of materials: according to local regulations

Disposal of packaging: waste disposal according to local regulations

14. Transport information

Land transport ADR/RID (cross-border)

ADR/RID class: -

Maritime transport IMDG:

IMDG Class: -

Marine pollutant: No

Air transport ICAO-TI and IATA-DGR:

ICAO/IATA Class: -

15. Regulatory information

Classified and labelled in accordance with EU directives.

Liquid standards:

Risk phrases

R52: harmful to aquatic organisms.

R53: may cause long-term adverse effects in the aquatic environment.

Safety phrases

S61: Avoid release into the environment

16. Any other relevant information

This information is based on our present knowledge and shall be used only as a guide. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship. Dart Sensors is not held liable for any damage resulting from handling or from contact with the above mentioned products. MSDS has been prepared in accordance with EU directives 67/548/EEC, 91/155/EEC and other European Union legislation in force.