



Section 1. Product and Company Identification.

1.1 Model Number; MM102 v1
1.2 Description; Professional Auto-Ranging Digital Multimeter
Battery: 1.5 Volts. 23 grams.

1.3 Manufacturer;
Sealey Group.
Kempson Way,
Bury St. Edmunds,
Suffolk.
IP32 7AR

1.4 Emergency telephone number; 44 (0) 1284 757 500 (Office Hours)

Date of source compilation; 04 January 2016

Section 2. Hazards Identification.

Battery is hermetically sealed and does not present a hazard under normal conditions of use.
Inappropriate handling and / or use can cause electrolyte to leak.

Ingestion: Contents of an open battery can cause chemical burns of mouth, oesophagus, and gastrointestinal tract.
Inhalation: Contents of an open battery can cause respiratory irritation.
Skin Contact: Contents of an open battery can cause skin irritation.
Eye Contact: Contents of an open battery can cause irritation.



Section 3. Substances.

| 3.1 Chemical Name (substance) | 3.1 CAS No. | 3.2 Concentration Weight | Classification | |
|----------------------------------|-------------|-----------------------------|--|--|
| | | | Hazard Class & Category Code | Hazard Statements |
| Manganese Dioxide | 1313-13-9 | 35.26% | Acute Tox. 4 Acute Tox. 4 | H332 H302 |
| Zinc | 7440-66-6 | 15.56% | Water-react. 1 Pyr. Sol. 1 Aquatic Acute 1 Aquatic Chronic 1 | H260 H250 H400 H410 |
| Potassium Hydroxide | 1310-58-3 | 6.25% | Acute Tox. 4 Skin Corr. 1A | H302 H314 |
| Graphite | 7782-42-5 | 2.43% | Not classified | - |
| Cadmium | 7440-43-9 | < 0.0005% | Pyr. Sol. 1 Carc. 1B Muta. 2 Repr. 2 Acute Tox. 2 STOT RE 1 Aquatic Acute 1 Aquatic Chronic 1 | H250 H350 H341 H361 H330 H372 H400 H410 |
| Lead | 7439-92-1 | < 0.0005% | Not classified | - |
| Mercury | 7439-97-6 | < 0.0001% | Acute Tox. 3 STOT RE 2 Aquatic Acute 1 Aquatic Chronic 1 | H331 H373 H400 H410 |

For full text of Phrases and Statements, see Section 16.



Section 4. First Aid Measures.

Batteries do not pose a risk to eyes or skin under normal circumstances.
In the case of contact with internal substances;

4.1 Description of first aid measures

- Inhalation** If breathing difficulties develop, remove the person to fresh air.
Loosen close fitting clothing.
Ensure that person is warm.
Get medical attention.
- Skin Contact** Remove contaminated clothing.
Wash affected area(s) with soap and water.
Seek medical attention if chemical burn(s) appear or if symptoms persist.
- Eye Contact** irrigate eyes with water for at least 15 minutes while raising eyelid(s).
Get medical attention.
- Ingestion** Do not induce vomiting.
Do not give food or drink.
Get medical attention.

Do not induce vomiting.
Do not give food or drink.
Seek medical attention.

4.2. Most important symptoms and effects, both acute and delayed
No information available.

4.3. Indication of any immediate medical attention and special treatment needed
No information available.

Section 5. Fire Fighting Measures.

5.1. Extinguishing media
Any extinguishing media.
Use extinguishing media that is appropriate for the surrounding area.

5.2. Special hazards arising from the substance or mixture
Move batteries away from a fire incident, if safe to do so.
Cool batteries to reduce the risk of rupture.

5.3. Advice for fire-fighters
Fire Fighters should wear self-contained breathing apparatus and appropriate Personal Protective Equipment.
Thermal degradation may produce hazardous fumes of zinc and manganese; hydrogen gas, caustic vapours of potassium hydroxide and other toxic by-products.



Section 6. Accidental Release Measures.

6.1. Personal precautions, protective equipment and emergency procedures

Wear appropriate protective clothing, see section 8.

6.2. Environmental precautions

Ventilate area.

6.3. Methods and material for containment and cleaning up

Collect in a leak proof container.

Place battery in a sealed bag with an absorbent such as sand, silica, chalk, lime powder or vermiculite.

Rinse contamination with water.

Prevent contaminated water from entering sewers or water courses.

6.4. Reference to other sections

See Section 7 for information on Safe Handling

See Section 8 for information of Personal Protective Equipment.

See Section 13 for information on disposal.

Section 7. Handling and Storage.

7.1. Precautions for safe handling

Wear appropriate protective clothing, see section 8

7.2. Conditions for safe storage, including any incompatibilities

Store batteries in a well ventilated area.

Do not short circuit a battery. A short circuit causes heating and can lead to ignition of surrounding materials.

To minimize the risk of a short circuit, always store batteries in an appropriate container to prevent contact with conductive materials.

Keep batteries away from children.

7.3. Specific end use(s)

Intended for use as the battery for the Model Number identified in 1.1 with Description stated in 1.2.



Section 8. Exposure Controls/Personal Protection.

8.1. Control parameters

In the event of battery rupture and leakage:
Ventilate the area.
Remove sources of ignition.

8.2. Exposure controls

The use of Personal Protective Equipment (PPE) is not necessary under conditions of normal use.
If handling a leaking or ruptured battery, ensure that the following Personal Protective Equipment (PPE) is used.

Eye/Face Protection

Chemical grade full face shield

Skin Protection

Acid resistant, natural rubber or neoprene gloves.
Protective rubber apron
Appropriate Personal Protection with long sleeves and long trousers.

Respiratory Protection

Acid gas filter mask or self-contained breathing apparatus.

Section 9. Physical and Chemical Properties.

9.1. Information on basic physical and chemical properties

The following information is not a technical specification or sales specification.

| | |
|---|---|
| (a) Appearance: | Manganese Dioxide: Black powder. Graphite: Black powder. Zinc: Silver metal. Potassium Hydroxide: Colourless liquid. |
| (b) Odour: | No information available. |
| (c) Odour threshold: | No information available. |
| (d) pH: | No information available. |
| (e) Melting point/freezing point; | Manganese Dioxide: 535°C Zinc: 420°C Potassium Hydroxide: 35°C |
| (f) Initial boiling point and boiling range; | Potassium Hydroxide: 140°C |
| (g) Flash point; | No information available. |
| (h) Evaporation rate; | No information available. |
| (i) Flammability (solid, gas); | No information available. |
| (j) Upper/lower flammability or explosive limits; | No information available. |
| (k) Vapour pressure; | Potassium Hydroxide: 3mmHg (20°C) |
| (l) Vapour density; | No information available. |
| (m) Relative density; | No information available. |
| (n) Solubility (ies); | Potassium Hydroxide: Complete. |
| (o) Partition coefficient: n-octanol/water; | No information available. |
| (p) Auto-ignition temperature; | No information available. |
| (q) Decomposition temperature; | No information available. |
| (r) Viscosity; | No information available. |
| (s) Explosive properties; | No information available. |
| (t) Oxidising properties. | No information available. |

9.2 Other information

No information available.



Section 10. Stability and Reactivity.

| | |
|---|---|
| 10.1. Reactivity | No information available. |
| 10.2. Chemical stability | Stable. |
| 10.3. Possibility of hazardous reactions | Hazardous polymerisation will not occur. |
| 10.4. Conditions to avoid | Do not short circuit, charge or dispose of in fire. |
| 10.5. Incompatible materials | No information available. |
| 10.6. Hazardous decomposition products | No information available. |

Section 11. Toxicological Information.

11.1. Information on toxicological effects

The materials that comprise this battery are hermetically sealed.

The potential for exposure to materials is negligible when this battery is used as directed. See Section 7.

Inappropriate handling and / or inappropriate use of this battery may result in release of the materials that are sealed within.

Inhalation, skin contact and eye contact are possible when the battery is opened.

Exposure to internal components and corrosive fumes will cause irritation to the eyes skin and mucous membranes.

Section 12. Ecological Information.

When properly used and disposed of correctly, the battery does not present environmental hazard.

Do not release internal components into water ways, wastewater or ground water.

| | |
|---|--------------------|
| 12.1. Toxicity | No data available. |
| 12.2. Persistence and degradability | No data available. |
| 12.3. Bioaccumulative potential | No data available. |
| 12.4. Mobility in soil | No data available. |
| 12.5. Results of PBT and vPvB assessment | No data available. |
| 12.6. Other adverse effects | No data available. |

Section 13. Disposal Considerations.

13.1. Waste treatment methods

Disposal of the battery must be in accordance with local authority regulations.

The battery should be completely discharged prior to disposal and the terminals taped or capped to prevent short circuit.

Do not dispose of batteries with household waste.

Do not dispose of batteries at landfill sites.

Do not incinerate batteries.



Section 14. Transport Information.

ADR. International Carriage of Dangerous Goods by Road.

Not subject to ADR.

IATA. International Air Transport Association.

Special Provision A123.

Batteries not otherwise listed as Dangerous Goods concerning transport by air, no UN Code refers.

Examples of such batteries are (but not restricted to) alkali-manganese, zinc-carbon and nickel cadmium batteries.

Any electrical battery or battery powered device, equipment or vehicle having the potential of a dangerous evolution of heat must be prepared for transport so as to prevent:

(a) A short circuit (e.g. in the case of batteries, by the effective insulation of exposed terminals; or in the case of equipment, by the disconnection of the battery and protection of exposed terminals); and

(b) Accidental activation.

The statement "Not restricted, as per Special Provision A123" must be included in the description of the article on the Air Waybill when required.

IMDG. International Maritime Dangerous Goods.

Not subject to IMDG.

Section 15. Regulatory Information.

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

No information available.

15.2. Chemical safety assessment

No information available.



Section 16. Additional Information.

Full text of Phrases and Statements used in Section 3;

- H250: Catches fire spontaneously if exposed to air.
- H260: In contact with water releases flammable gases which may ignite spontaneously.
- H302: Harmful if swallowed.
- H314: Causes severe skin burns and eye damage.
- H330: Fatal if inhaled.
- H331: Toxic if inhaled.
- H332: Harmful if inhaled.
- H341: Suspected of causing genetic defects.
- H350: May cause cancer.
- H361: Suspected of damaging fertility or the unborn child.
- H372: Causes damage to organs through prolonged or repeated exposure.
- H373: May cause damage to organs through prolonged or repeated exposure.
- H400: Very toxic to aquatic life.
- H410: Very toxic to aquatic life with long lasting effects.

The above information is believed to be accurate and represents the best information currently available.
 No warranty is expressed or implied by the above information.
 We assume no liability resulting from use of the above information.
 The end user should conduct their own investigations to determine the suitability of the above information for their particular purpose.

| Issue level | Date | Revisions |
|-------------|----------|--------------|
| 1 | 03/11/16 | First issue. |
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End of Safety Data Sheet.