



## Section 1. Product and Company Identification.

**1.1 Model Number;** TA319 v1  
**1.2 Description;** Digital Insulation Tester  
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;** 04/01/2016

## 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 and chemical burns.  
**Eye Contact:** Contents of an open battery can cause irritation and chemical burns.



## Section 3. Substances.

3.1 Chemical Name (substance)	3.1 CAS No.	3.2 Concentration Weight	Classification	
			Hazard Class & Category Code	Hazard Statements <sup>1</sup>
Manganese Dioxide	1313-13-9	37.07%	Acute Tox. 4 Acute Tox. 4	H332 H302
Zinc	7440-66-6	17.43%	Aquatic Acute 1 Aquatic Chronic 1	H400 H410
Potassium Hydroxide	1310-58-3	6.82%	Acute Tox. 4 Skin Corr. 1A	H302 H314
Graphite	7782-42-5	2.56%	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

<sup>1</sup>For full text of 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.
(b) Odour:	Not relevant to battery as supplied.
(c) Odour threshold;	Not relevant to battery as supplied.
(d) pH:	No data available.
(e) Melting point;	Manganese Dioxide: 535°C Zinc: 420°C
(f) Initial boiling point;	Potassium Hydroxide: 140°C
(g) Flash point;	No data available.
(h) Evaporation rate;	Not relevant to battery as supplied.
(i) Flammability (solid, gas);	No data available.
(j) Upper/lower flammability or explosive limits;	No data available.
(k) Vapour pressure;	Potassium Hydroxide: 3mmHg (20°C)
(l) Vapour density;	Not relevant.
(m) Relative density;	Manganese Dioxide: 4.4 Zinc: 7.1 Potassium Hydroxide: 2.0
(n) Solubility(ies);	Battery insoluble in water.
(o) Partition coefficient: n-octanol/water;	Not relevant.
(p) Auto-ignition temperature;	No data available.
(q) Decomposition temperature;	No data available.
(r) Viscosity;	Not relevant.
(s) Explosive properties;	No data available.
(t) Oxidising properties.	No data available.

### 9.2 Other information

No data available.



## Section 10. Stability and Reactivity.

**10.1.** Reactivity

No data available.

**10.2.** Chemical stability

Stable under normal conditions.

**10.3.** Possibility of hazardous reactions

Hazardous polymerisation will not occur.

**10.4.** Conditions to avoid

Mechanical shock.

Vibrations during transport are not detrimental to condition.

Do not dismantle, crush or install with incorrect polarity.

Prevent mechanical / electrical misuse.

**10.5.** Incompatible materials

No data available.

**10.6.** No data 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.

## 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.

#### Special Provision 188.

Cells and batteries offered for carriage are not subject to other provisions of ADR if they are packed in inner packaging's that completely enclose the cell or battery. Cells and batteries shall be protected so as to protect short circuits. This includes protection against contact with conductive materials within the same packaging that could lead to a short circuit. The inner packaging's shall be packed in strong outer packagings.

### 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.

#### Special provision 188.

Cells and batteries offered for transport are not subject to other provisions of this Code if they are packed in inner packagings that completely enclose the cell or battery. Cells and batteries shall be protected so as to protect short circuits. This includes protection against contact with conductive materials within the same packaging that could lead to a short circuit. The inner packagings shall be packed in strong outer packagings.





**Section 15. Regulatory Information.**

**15.1.** Safety, health and environmental regulations/legislation specific for the substance or mixture  
No data available.

**15.2.** Chemical safety assessment  
No data available.

**Section 16. Additional Information.**

Full text of Phrases and Statements used in Section 3;

- H250: Catches fire spontaneously if exposed to air.
- 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	26/03/21	First issue.

End of Safety Data Sheet.