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**MATERIAL SAFETY DATA SHEET**

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**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1 Product identifiers**

**Product name:** Testing Solution No. 6 Potassium permanganate 0.1N

**Product number:** TS06, 129112150

**Brand:** Solmedia Ltd

**1.2 Relevant identified uses of the substance or mixture and uses advised against**

Identified uses: Test reagent

**1.3 Details of the supplier of the safety data sheet**

- Name of Supplier: Solmedia Ltd.
- Address of Supplier: Unit 2, Vernon Drive  
Battlefield Enterprise Park  
Shrewsbury  
SY1 3TF  
UK
- Telephone: 0844 80 80 900
- Email: labsupplies@solmedialtd.com

**1.4 Emergency telephone number**

Emergency Phone # +44 (0)844 80 80 900

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**SECTION 2: Hazards identification****2.1 Classification of the substance or mixture****2.1.1 Classification according to regulation (EC) No. 1272/2008 (CLP)**

Hazard Class	Hazard Category	Target Organs	Hazard Statement
Hazardous to the aquatic environment, chronic	Category 2	-	H411

**2.2 Label elements According to Regulation (EC) No. 1272/2008**

**Signal word:** None

**2.2.1 Hazard Statements**

H411 - Toxic to aquatic life with long lasting effects

### Precautionary Statements

P273 – Avoid release to the environment

## SECTION 3: Composition/information on ingredients

### 3.1 Substances

Not relevant

### 3.2 Mixtures

Hazardous ingredients Classification according to Regulation (EC) No. 1272/2008 [CLP]

		Classification (Regulation (EC) No 1272/2008 [CLP])	
Hazardous Components		Hazard class/ Hazard category	Hazard Statements
Name:	Potassium permanganate	0.25-2.5%	OXIDISING SOLID. CAT. 2.
CAS NO.	7722-64-7		ACUTE TOX. CAT. 4. ORAL
EC-NO.	231-760-3		HAZARD TO AQUATIC ENVIRONMENT CAT. 1.
EU REACH-REG. NO.	N/A		

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

#### General information

When in doubt or if symptoms are observed, get medical advice. If unconscious place in recovery position and seek medical advice. Never give anything by mouth to an unconscious person or a person with cramps. Change contaminated, saturated clothing. Do not leave affected person unattended.

**After inhalation** Remove casualty to fresh air and keep warm and at rest. If breathing is irregular or stopped, administer artificial respiration. In case of respiratory tract irritation, consult a physician.

**In case of skin contact** After contact with skin, wash immediately with plenty of water and soap. Remove contaminated, saturated clothing immediately. In case of skin reactions, consult a physician.

**After eye contact** In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist. Protect uninjured eye. Remove contact lenses, if present and easy to do. Continue rinsing.

**In case of ingestion** If accidentally swallowed rinse the mouth with plenty of water (only if the person is conscious) and obtain immediate medical attention. Do NOT induce vomiting. Give nothing to eat or drink

#### **4.2 Most important symptoms and effects, both acute and delayed**

No data available.

#### **4.3 Indication of any immediate medical attention and special treatment needed**

No data available.

#### **4.4 Self-protection of the first aider**

First aider: Pay attention to self-protection!

#### **4.5 Information to physician**

No data available

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### **SECTION 5: Firefighting measures**

#### **5.1 Extinguishing media**

Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

#### **5.2 Special hazards arising from the substance or mixture**

In case of fire may be liberated: Potassium oxide & manganese oxides

#### **5.3 Advice for firefighters**

Wear self-contained breathing apparatus for firefighting if necessary.

#### **5.4 Further information**

No data available

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### **SECTION 6: Accidental release measures**

#### **6.1 Personal precautions, protective equipment and emergency procedures**

Avoid breathing vapours, mist or gas.

For personal protection see section 8.

#### **6.2 Environmental precautions**

Do not allow to enter into surface water or drains.

#### **6.3 Methods and materials for containment and cleaning up**

Spilled product must never be returned to the original container for recycling. Take up carefully when dry. Avoid generation of dust. Clean contaminated objects and areas

thoroughly observing environmental regulations. Collect in closed and suitable containers for disposal.

#### **6.4 Reference to other sections**

Clear spills immediately.

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### **SECTION 7: Handling and storage**

#### **7.1 Precautions for safe handling**

Avoid: Inhalation Avoid contact with skin and eyes.

#### **7.2 Conditions for safe storage, including any incompatibilities**

Store in cool place. Keep container tightly closed in a dry and well-ventilated place. Store in a dark place and keep/store away from combustible materials.

#### **7.3 Specific end use(s)**

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

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### **SECTION 8: Exposure controls/personal protection**

#### **8.1 Control parameters**

Does not contain substances above concentration limits fixing an occupational exposure limit.

#### **8.2 Exposure controls**

##### **8.2.1 Appropriate engineering controls**

###### **Appropriate engineering controls**

Technical measures and the application of suitable work processes have priority over personal protection equipment. If handled uncovered, arrangements with local exhaust ventilation have to be used.

###### **Personal protective equipment**

Wear suitable protective clothing. When handling with chemical substances, protective clothing with CE-labels including the four control digits must be worn. For the protection against direct skin contact, body protective clothing is essential (in addition to the usual working clothes).

###### **Skin protection**

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique

(Without touching glove's outer surface) to avoid skin contact with this product. Dispose of

Contaminated gloves after use in accordance with applicable laws and good laboratory practices.

The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

Full contact      Material: Nitrile rubber  
Minimum layer thickness: 0.11 mm  
Break through time: 480 min

Splash contact    Material: Nitrile rubber  
Minimum layer thickness: 0.11 mm  
Break through time: 480 min

Wash and dry hands.

### **Body Protection**

Impervious clothing, the type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

### **Respiratory protection**

Respiratory protection not required. For nuisance exposures use type OV/AG (US) or type ABEK

(EU EN 14387) respirator cartridges. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

### **Eye protection:**



Goggles recommended during refilling: Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU)

### **Additional Information**

Wash hands before breaks and after work. Avoid contact with skin and eyes. When using do not eat, drink or smoke. Provide eye shower and label its location conspicuously.

### **Control of environmental exposure**

Do not flush into surface water or sanitary sewer system. Avoid subsoil penetration. If the product contaminates rivers and lakes or drains inform respective authorities. If material reaches soil inform authorities responsible for such cases.

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## **SECTION 9: Physical and chemical properties**

### **9.1 Information on basic physical and chemical properties**

a) Appearance Form: liquid,

Colour: purple

b) Odour No data available

c) Odour Threshold No data available

d) pH 1 (20°C)

e) Melting point/freezing point

No data available

f) Initial boiling point and boiling range

No data available

g) Flash point not applicable

h) Evaporation rate No data available

i) Flammability (solid, gas) No data available

j) Upper/lower flammability or explosive limits

No data available

k) Vapour pressure No data available

l) Vapour density No data available

m) Relative density 1.01 g/cm<sup>3</sup> (20°C)

n) Water solubility No data available

o) Partition coefficient: octanol/water No data available

p) Auto-ignition temperature No data available

q) Decomposition temperature No data available

r) Viscosity No data available

s) Explosive properties No data available

t) Oxidizing properties No data available

## 9.2 Other safety information

No data available

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## SECTION 10: Stability and reactivity

### 10.1 Reactivity

No data available

### 10.2 Chemical stability

Stable under recommended storage conditions.

### **10.3 Possibility of hazardous reactions**

No data available

### **10.4 Conditions to avoid**

No data available

### **10.5 Incompatible materials**

No data available

### **10.6 Hazardous decomposition products**

No data available

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## **SECTION 11: Toxicological information**

### **11.1 Information on toxicological effects**

#### **Acute oral toxicity:**

LD50 (oral. Rat): 1090 mg/kg (Merck KGaA) (anhydrous)

#### **Skin corrosion/irritation**

No data available

#### **Serious eye damage/eye irritation**

No data available

#### **Respiratory or skin sensitisation**

In case of skin contact: not sensitising After inhalation: not sensitising

#### **Germ cell mutagenicity**

No data available

#### **Carcinogenicity**

No indication of human carcinogenicity.

#### **Reproductive toxicity**

No data available

#### **Specific target organ toxicity - single exposure**

No data available

#### **Specific target organ toxicity - repeated exposure**

No data available

#### **Aspiration hazard**

No data available

**Additional Information**

RTECS: Not available

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**SECTION 12: Ecological information**

**12.1 Toxicity**

**Fish Toxicity:**

Potassium permanganate – LC50: 1.72mg/l (96h) – Marking, L.L, and T.D Bills 1975. Toxicity of Potassium permanganate to fish and its effectiveness for Detoxifying Antimycin. Tran.Am.Fish.Soc 104(3):579-583

**Daphnia Toxicity:**

Potassium permanganate – EC50; 0.08mg/l (48h) – Office of Pesticide Programs 2000. Pesticide Ecotoxicity Database (formerly Environmental Effects Database (EEDB)). Environmental Fate and effects division, U.S EPA, Washington, D.C.

**Algae Toxicity:**

Potassium permanganate – EC50: 0.45mg/l (72h) – Paixao, S.M, L. Silna, A Fernandez, K. O'Rourke, E. Mendonca and A. Picado 2008. Performance of a Miniaturised Algal Biossay in Phytotoxicity Screening, Ecotoxicity 17 (3):165-171

**Bacteria 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

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**SECTION 13: Disposal considerations**

**13.1 Waste treatment methods**

**Product**



Offer surplus and non-recyclable solutions to a licensed disposal company.

**Contaminated packaging**

Dispose of as unused product.

**SECTION 14: Transport information**

**Land transport (ADR/RID)**

14.1 UN-No.: 3082

14.2 Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.  
(POTASSIUM PERMANGANATE SOLUTION)

14.3 Class(es): 9 Classification code: M6 Hazard label(s): 9

14.4 Packing group: III

14.5 Environmental hazards: Dangerous for the environment

14.6 Special precautions for user: Hazard identification number (Kemler No.): 90 tunnel  
restriction code: E (Passage forbidden through tunnels of category E.)

**Sea transport (IMDG)**

14.1 UN-No.: 3082

14.2 Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.  
(POTASSIUM PERMANGANATE SOLUTION)

14.3 Class(es): 9 Classification code: Hazard label(s): 9

14.4 Packing group: III

14.5 Environmental hazards: Dangerous for the environment MARINE POLLUTANT: Yes (P)

14.6 Special precautions for user: Segregation group: - EmS-No. F-A S-F 14.7 Transport in  
bulk according to Annex II of MARPOL 73/78 and the IBC Code not relevant.

**Air transport (ICAO-TI / IATA-DGR)**

14.1 UN-No.: 3082

14.2 Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.  
(POTASSIUM PERMANGANATE SOLUTION)

14.3 Class(es): 9 Classification code: M6 Hazard label(s): 9

14.4 Packing group: III

14.5 Special precautions for user not relevant

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**SECTION 15: Regulatory information**

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

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006 as amended by Regulation (EU) 2015/830.

Water hazard class (WGK): strongly hazardous to water (WGK 3)

## 15.2 Chemical safety assessment

No data available

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## SECTION 16: Other information

### Further information

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Solmedia Ltd shall not be held liable for any damage resulting from handling or from contact with the above product.