

**Detector Tube SO2-100**

D050011201

Revision no.: 3,00

Revision date: 16.08.2011

Print date: 16.08.2011

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**0. General notes**

These products are articles according to article 3.3 of regulation (EC) no. 1907/2006 (REACH). It is not necessary to supply a Safety Data Sheet for these products. Safety Data Sheets stipulate according to Article 31 for hazardous substances and preparations, but not for articles. MSA is obliged to supply its customers with appropriate information to ensure safe handling. A special format is not required for this information.

**1. Identification of the substance/mixture and of the company/undertaking**

**Product identifier:** Detector Tube SO2-100  
**Relevant identified uses of the substance or mixture and uses advised against**  
**Use of the substance/mixture:** Detector tube  
**Uses advised against:** The product is to be used exclusively for the applications named in the directions for use.

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

**Company name:** MSA AUER GmbH  
**Street:** Thiemannstrasse 1  
**Place:** D-12059 Berlin  
**Telephone:** ++49-30-6886-0  
**Telefax:** ++49-30-6886-1558  
**Emergency telephone:** 1-800-255-3924 USA/CDN  
++1-813-248-0585 internat.

**Further Information:** Apply Safety data sheet to the following products:  
Part-No.  
D5085825

**2. Hazards identification**

**Classification of the substance or mixture:** This mixture is not classified as dangerous according to Directive 1999/45/EC.  
As an article the product does not need to be labelled in accordance with EC-directives or respective national laws.

**Label elements**

**S phrases:**

02	Keep out of the reach of children.
26	In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
46	If swallowed, seek medical advice immediately and show this container or label.
24/25	Avoid contact with skin and eyes.

**Additional advice on labelling:** As an article the product does not need to be labelled in accordance with EC-directives or respective national laws.

**Other hazards:** Detector tube: No hazards deemed to be of major importance.  
Content: No hazards deemed to be of major importance.

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**3. Composition/information on ingredients****Mixtures****Chemical characterization:**

Sealed glass tube, filled with inert granules, treated with copper(II)sulfate and further chemicals, which are not dangerous in their concentration

**Hazardous components**

EC No.	Chemical name	Quantity
CAS No.	Classification	
Index No.	GHS classification	
REACH No.		
231-847-6	Copper sulphate	0,1 - 0,2 %
7758-98-7	Xn, Xi, N R22-36/38-50-53	
029-004-00-0	Acute Tox. 4, Eye Irrit. 2, Skin Irrit. 2, Aquatic Acute 1, Aquatic Chronic 1; H302 H319 H315 H400 H410	

Full text of R- and H-phrases: see section 16.

**4. First aid measures****Description of first aid measures****After inhalation:**

Not applicable for intact detector tubes.  
 When indicator material is spilled: If you feel unwell, seek medical advice (show the label where possible).

**After contact with skin:**

Not applicable for intact detector tubes.  
 When indicator material is spilled: Wash off immediately with plenty of water.

**After contact with eyes:**

Not applicable for intact detector tubes.  
 When indicator material is spilled: In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice (10 min).

**After ingestion:**

Not applicable for intact detector tubes.  
 When indicator material is spilled: If you feel unwell, seek medical advice (show the label where possible).

**5. Fire-fighting measures****Extinguishing media****Suitable extinguishing media:**

The product itself does not burn. Use extinguishing measures that are appropriate to the environment.

**Extinguishing media which must not be used for safety reasons:**

None.

**Special hazards arising from the substance or mixture:**

None.

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### 6. Accidental release measures

**Personal precautions, protective equipment and emergency procedures:**  
**Methods and material for containment and cleaning up:**

Release not possible if used properly.

When indicator material is spilled: Mop up whilst dry. Avoid dust formation. Avoid contact of breakage of glass and indicator material. Dispose of as described in section 13.

### 7. Handling and storage

**Precautions for safe handling**

**Advice on safe handling:**

**Advice on protection against fire and explosion:**

See the specific Instruction for use.

No special precautions required.

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

**Advice on storage compatibility:**

**Further information on storage conditions:**

Do not store together with edibles.

See the specific Instruction for use. Store in cool place (< 20° C)

### 8. Exposure controls/personal protection

**Control parameters**

**Additional advice on limit values:**

Release not possible if used properly.

**Exposure controls**

**Protective and hygiene measures:**

Avoid contact with eyes or skin after breaking of the tub tips. Avoid contact of breakage of glass and indicator material. Do not take up glass breads and content of the tube with bare hands. Wash hands before breaks and at the end of the workday.

**Respiratory protection:**

Not required.

**Hand protection:**

Not required.

When indicator material is spilled: Protective gloves made out of: Nitrile rubber, butyl rubber

**Eye protection:**

Not required.

**Skin protection:**

Not required.

### 9. Physical and chemical properties

**Information on basic physical and chemical properties**

**Physical state:**

Granules in a glass tube.

**Colour:**

violet and light blue

**Odour:**

almost odorless

**Test method**

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pH-Value (at 20 °C): 7 50 g/l water

### Changes in the physical state

Melting point: n.a.  
 Boiling point: n.a.  
 Flash point: n.a.  
 Lower explosion limits: n.a.  
 Upper explosion limits: n.a.  
 Vapour pressure: n.a.  
 Water solubility: low solubility  
 (at 20 °C)  
 Viscosity / dynamic: n.a.

## 10. Stability and reactivity

**Reactivity:** None if handled correctly  
**Possibility of hazardous reactions:** None if handled correctly  
**Conditions to avoid:** None if handled correctly  
**Hazardous decomposition products:** No decomposition if stored and applied as directed.  
**Further information:** After the opening of the tube: Sensitive to air (discolouration )

## 11. Toxicological information

### Information on toxicological effects

**Toxicokinetics, metabolism and distribution:** Not applicable for intact detector tubes.  
 When indicator material is spilled: No data available.

**Acute toxicity:** Not applicable for intact detector tubes.  
 When indicator material is spilled: No data available.

CAS No.	Chemical name			
	Exposure routes	Method	Dose	Species
7758-98-7	Copper sulphate			
	Acute oral toxicity	LD50	300 mg/kg	rats

## 12. Ecological information

**Toxicity:** Not applicable for intact detector tubes.  
 When indicator material is spilled: No data available.

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CAS No.	Chemical name				
	Aquatic toxicity	Method	Dose	Species	h
7758-98-7	Copper sulphate				
	Acute fish toxicity	LC50	0,11 mg/l	Rainbow trout (Oncorhynchus mykiss)	96

**Persistence and degradability:**

Not applicable for intact detector tubes.

When indicator material is spilled: No data available.

**Bioaccumulative potential:**

Not applicable for intact detector tubes.

When indicator material is spilled: No data available.

**Mobility in soil:**

Not applicable for intact detector tubes.

When indicator material is spilled: No data available.

**Further information:**

When indicator material is spilled: Should not be released into the environment.

**13. Disposal considerations****Waste treatment methods**

**Recommendation Waste disposal number of waste from residues/unused products:**

150202  
 WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED; absorbents, filter materials, wiping cloths and protective clothing; absorbents, filter materials (including oil filters not otherwise specified), wiping cloths, protective clothing contaminated by dangerous substances  
 Classified as hazardous waste.

**Recommendation Waste disposal number of contaminated packaging:**

150101  
 WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED; packaging (including separately collected municipal packaging waste); paper and cardboard packaging

**14. Transport information****Land transport (ADR/RID)**

**Other applicable information (land transport):**

Not classified as dangerous regarding transport regulations.

**Inland waterways transport**

**Other applicable information (inland waterways transport):**

Not classified as dangerous regarding transport regulations.

**Marine transport**

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**Other applicable information (marine transport):**

Not classified as dangerous regarding transport regulations.

**Air transport**

**Other applicable information (air transport):**

Not classified as dangerous regarding transport regulations.

## 15. Regulatory information

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

**National regulatory information**

## 16. Other information

**Changes:**

Sections which have been changed in comparison to the preceding edition: 1, 2, 3, 8, 10, 11, 12, 14

**Abbreviations and acronyms:**

n.a. = not applicable

n.d. = not determined

**Full text of R-phrases referred to under sections 2 and 3:**

22	Harmful if swallowed.
36/38	Irritating to eyes and skin.
50	Very toxic to aquatic organisms.
53	May cause long-term adverse effects in the aquatic environment.

**Full text of H-Statements referred to under sections 2 and 3:**

H302	Harmful if swallowed.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.

**Further Information:**

The information is based on present levels of our knowledge. It does not, however, give assurances of product properties and establishes no contract legal rights. The product is to be used exclusively for the applications named in the technical leaflet or in the processing instructions. The receiver of our product is singularly responsible for adhering to existing laws and regulations.

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*(The data for the hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)*