

Detector Tube Natural gas

D050019801

Revision no.: 3,00

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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 Natural gas
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.
 D5086846
 10050571

2. Hazards identification

Classification of the substance or mixture:

As an article the product does not need to be labelled in accordance with EC-directives or respective national laws.

Label elements

Hazardous components which must be listed on the label:

Sulfic acid fuming, chromium trioxide

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.
 28 After contact with skin, wash immediately with plenty of water.
 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.

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Other hazards:

Detector tube: No hazards deemed to be of major importance.
 Content: May cause cancer. May cause heritable genetic damage. Harmful by inhalation. Causes burns.

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

Sealed glass tube, filled with inert granules, treated with sulfuric acid fuming, sulphuric acid, chromium trioxide, potassium permanganate

Hazardous components

EC No.	Chemical name	Quantity
CAS No.	Classification	
Index No.	GHS classification	
REACH No.		
-	Sulfuric acid fuming	< 3 %
8014-95-7	C R14-35-37	
	Skin Corr. 1; H335 H314	
231-639-5	Sulphuric acid	< 2 %
7664-93-9	C R35	
016-020-00-8	Skin Corr. 1A; H314	
215-607-8	Chromium trioxide	< 0,2 %
1333-82-0	O, Carc. Cat. 1, Muta. Cat. 2, Repr. Cat. 3, T+, T, C, N R9-45-46-62-26-24/25-48/23-35-42/43-50-53	
024-001-00-0	Ox. Sol. 1, Carc. 1A, Muta. 1B, Repr. 2, Acute Tox. 2, Acute Tox. 3, Acute Tox. 3, STOT RE 1, Skin Corr. 1A, Resp. Sens. 1, Skin Sens. 1, Aquatic Acute 1, Aquatic Chronic 1; H271 H350 H340 H361f H330 H311 H301 H372 H314 H334 H317 H400 H410	
231-760-3	Potassium permanganate	< 0,5 %
7722-64-7	O, Xn, N R8-22-50-53	
025-002-00-9	Ox. Sol. 2, Acute Tox. 4, Aquatic Acute 1, Aquatic Chronic 1; H272 H302 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: Inhalation of vapours: Move to fresh air. Call a physician immediately.

After contact with skin:

Not applicable for intact detector tubes.
 When indicator material is spilled: Wash off immediately with plenty of water. Consult a physician. Cut be handled through a doctor.

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After contact with eyes:

Not applicable for intact detector tubes.
When indicator material is spilled: Rinse immediately with plenty of water, also under the eyelids. Consult an ophthalmologist immediately.

After ingestion:

Not applicable for intact detector tubes.
When indicator material is spilled: Call a physician immediately. If conscious, drink plenty of water.

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.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures:

Release not possible if used properly.

Methods and material for containment and cleaning up:

When indicator material is spilled: Dilute with water. Soak up the product with absorbent, non-flammable material (acid binding agent). 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:

See the specific Instruction for use.

Advice on protection against fire and explosion:

No special precautions required.

Conditions for safe storage, including any incompatibilities

Advice on storage compatibility:

Do not store together with edibles.

Further information on storage conditions:

See the specific Instruction for use. Recommended storage temperature: 20°C

8. Exposure controls/personal protection

Control parameters

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Exposure limits (EH40)

CAS No.	Chemical name	ml/m ³	mg/m ³	F/ml	Category	Origin
	- Chromium (VI) compounds (as Cr)	-	0.05		TWA (8 h)	WEL
		-	-		STEL (15 min)	WEL
	- Manganese and its inorganic compounds	-	0.5		TWA (8 h)	WEL
		-	-		STEL (15 min)	WEL
7664-93-9	Sulphuric acid (mist)	-	1		TWA (8 h)	EU
		-	-		STEL (15 min)	EU

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

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:

various

Odour:

pungent

pH-Value (at 20 °C):

1

Test method

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:
(at 20 °C)

partly soluble

Viscosity / dynamic:

n.a.

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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****Toxicocinetics, 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
1333-82-0	Chromium trioxide			
	Acute oral toxicity	LD50	50 mg/kg	rats
	Acute dermal toxicity	LD50	55 mg/kg	rats
7722-64-7	Potassium permanganate			
	Acute oral toxicity	LD50	750 mg/kg	rats

Irritation and corrosivity:

In the formation of vapours: Vapours may be irritating to eyes, nose, throat, and lungs. May cause skin irritation.
 Ingestion causes burns of the upper digestive and respiratory tracts.

Sensitizing effects:

Not applicable for intact detector tubes.
 Chromium trioxide: May cause sensitization by inhalation and skin contact.

Carcinogenic/mutagenic/toxic effects for reproduction:

Not applicable for intact detector tubes.
 Chromium trioxide: Carcinogenic, category: K1. Mutagenic, category: M2. May impair fertility, category: RF3

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
1333-82-0	Chromium trioxide				
	Acute crustacea toxicity	EC50	0,162 mg/l	Daphnia Magna	48
7722-64-7	Potassium permanganate				
	Acute fish toxicity	LC50	0,1 mg/l		96
	Acute crustacea toxicity	EC50	0,056 mg/l	Daphnia Magna	48

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.

Partition coefficient n-octanol/water

CAS No.	Chemical name	Log Pow
7722-64-7	Potassium permanganate	-1,73

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. Do not flush into surface water or sanitary sewer system.

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

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Other applicable information (inland waterways transport):

Not classified as dangerous regarding transport regulations.

Marine transport

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, 7, 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:

- | | |
|-------|---|
| 08 | Contact with combustible material may cause fire. |
| 09 | Explosive when mixed with combustible material. |
| 14 | Reacts violently with water. |
| 22 | Harmful if swallowed. |
| 24/25 | Toxic in contact with skin and if swallowed. |
| 26 | Very toxic by inhalation. |
| 35 | Causes severe burns. |
| 37 | Irritating to respiratory system. |
| 42/43 | May cause sensitization by inhalation and skin contact. |
| 45 | May cause cancer. |
| 46 | May cause heritable genetic damage. |
| 48/23 | Toxic: danger of serious damage to health by prolonged exposure through inhalation. |
| 50 | Very toxic to aquatic organisms. |
| 53 | May cause long-term adverse effects in the aquatic environment. |
| 62 | Possible risk of impaired fertility. |
| H271 | May cause fire or explosion; strong oxidiser. |
| H272 | May intensify fire; oxidiser. |
| H301 | Toxic if swallowed. |
| H302 | Harmful if swallowed. |
| H311 | Toxic in contact with skin. |
| H314 | Causes severe skin burns and eye damage. |
| H317 | May cause an allergic skin reaction. |
| H330 | Fatal if inhaled. |
| H334 | May cause allergy or asthma symptoms or |

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

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	breathing difficulties if inhaled.
H335	May cause respiratory irritation.
H340	May cause genetic defects.
H350	May cause cancer.
H361f	Suspected of damaging fertility.
H372	Causes damage to organs through prolonged or repeated exposure.
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.

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