

**Detector Tube CO - xxx**

D050011601

Revision no.: 3,00

Revision date: 26.07.2011

Print date: 26.07.2011

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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 CO - xxx  
**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.	Product name
D5085820	CO-10 mg/m <sup>3</sup>
D5085821	CO-10 ppm
D5085836	CO-5
D5085891	CO-10 Brigon
D5085897	CO BWB
D5085920	CO-10 ppm
D5085921	CO-10 mg/m <sup>3</sup>
D5085936	CO-5
D5092821	CO - ETW

**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**

**Hazardous components which must be listed on the label:** Sulfic acid fumic  
 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.

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

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

Sealed glass tube, filled with inert granules, treated with oleum, chromiumtrioxide, di-iodine pentoxide

**Hazardous components**

EC No.	Chemical name	Quantity
CAS No.	Classification	
Index No.	GHS classification	
REACH No.		
-	Sulfic acid fumic	8 - 9 %
8014-95-7	C R14-35-37	
	Skin Corr. 1; H335 H314	
215-607-8	Chromium trioxide	0,1 - 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	
-	di-Iodine pentoxide	< 0,1 %
12029-98-0	O, Xi R08-36/38	
	Ox. Sol. 2, Skin Irrit. 2, Eye Irrit. 2; H272 H315 H319	

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 <sup>3</sup>	mg/m <sup>3</sup>	F/ml	Category	Origin
	- Chromium (VI) compounds (as Cr)	-	0.05		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.

**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:**

brownish and white

**Odour:**

pungent

pH-Value (at 20 °C):

2

**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.

**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.

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**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	h
1333-82-0	Chromium trioxide				
	Acute oral toxicity	LD50	50 mg/kg	rats	
	Acute dermal toxicity	LD50	55 mg/kg	rats	

**Irritation and corrosivity:**

Not applicable for intact detector tubes.  
 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.

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

**Persistence and degradability:**

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.

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### 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

**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, 6, 10, 11, 12, 14, 15

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**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.
- 24/25 Toxic in contact with skin and if swallowed.
- 26 Very toxic by inhalation.
- 35 Causes severe burns.
- 36/38 Irritating to eyes and skin.
- 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.

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

- 62 Possible risk of impaired fertility.
- H271 May cause fire or explosion; strong oxidiser.
- H272 May intensify fire; oxidiser.
- H301 Toxic if swallowed.
- H311 Toxic in contact with skin.
- H314 Causes severe skin burns and eye damage.
- H315 Causes skin irritation.
- H317 May cause an allergic skin reaction.
- H319 Causes serious eye irritation.
- H330 Fatal if inhaled.
- H334 May cause allergy or asthma symptoms or 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.

n.a. = not applicable  
n.d. = not determined

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