

# Safety Data Sheet

according to 1907/2006/EC, Article 31

Printing date 17.08.2010

Revision: 17.08.2010

**1 Identification of substance****Product details****Trade name****Barium yttrium tungsten oxide anhydrous****Stock number:**

A17483

**Manufacturer/Supplier:**Alfa Aesar GmbH & Co.KG  
Benzstrasse 3  
D-76185 Karlsruhe / GermanyE-mail: gcat@matthey.com  
www.alfa-chemcat.com**Informing department:**

Product safety department.

**Emergency information:**Giftnotruf Universität Mainz / Poison Information Center Mainz  
www.giftinfo.uni-mainz.de Telefon: +49(0)6131/19240**2 Hazards identification****Hazard designation:**

Xn Harmful

**Information pertaining to particular dangers for man and environment  
GHS label elements**

R 20/22 Harmful by inhalation and if swallowed.

**Warning**

H302 - Harmful if swallowed.

H332 - Harmful if inhaled.

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.

P264 Wash thoroughly after handling.

P301+P312 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.

P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P312 Call a POISON CENTER or doctor/physician if you feel unwell.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

**Prevention:****Response:****Disposal:****3 Composition/information on ingredients****Chemical characterization:****Designation: (CAS#)**

Barium yttrium tungsten oxide (CAS# ?): 100%

**Identification number(s):**

056-002-00-7

**Index number:****4 First aid measures****After inhalation**

Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.

**After skin contact**

Seek immediate medical advice.

Instantly wash with water and soap and rinse thoroughly.

**After eye contact**

Seek immediate medical advice.

**After swallowing**

Rinse opened eye for several minutes under running water. Then consult doctor.

Seek immediate medical advice.

**5 Fire fighting measures****Suitable extinguishing agents**

Use fire fighting measures that suit the environment.

**Special hazards caused by the material, its products of combustion or flue gases:**

Can be released in case of fire:

Barium oxide

Metal oxide

**Protective equipment:**

Wear self-contained breathing apparatus.

Wear full protective suit.

**6 Accidental release measures****Person-related safety precautions:**

Wear protective equipment. Keep unprotected persons away.

**Measures for environmental protection:**

Ensure adequate ventilation

Do not allow material to be released to the environment without proper governmental permits.

**Measures for cleaning/collecting:**

Dispose of contaminated material as waste according to item 13.

**Additional information:**

Ensure adequate ventilation.

See Section 7 for information on safe handling

See section 8 for information on personal protection equipment.

See Section 13 for information on disposal.

**7 Handling and storage****Handling****Information for safe handling:**

Keep containers tightly sealed.

Store in cool, dry place in tightly closed containers.

Ensure good ventilation/exhaustion at the workplace.

**Information about protection against explosions and fires:**

The product is not flammable

**Storage****Requirements to be met by storerooms and containers:**

No special requirements.

**Information about storage in one common storage facility:**

Store away from oxidizing agents.

**Further information about storage conditions:**

Keep container tightly sealed.

Store in cool, dry conditions in well sealed containers.

**8 Exposure controls and personal protection****Additional information about design of technical systems:**

Properly operating chemical fume hood designed for hazardous chemicals and having an average face velocity of at least 100 feet per minute.

**Components with critical values that require monitoring at the workplace:**Barium, and soluble compounds, as Ba  
mg/m<sup>3</sup>

ACGIH TLV 0.5; Not classified as a human carcinogen

Austria MAK 0.5

Belgium TWA 0.5

Denmark TWA 0.5

Finland TWA 0.5

Germany MAK 0.5 (total dust)

Hungary 0.5-STEL

(Contd. on page 2)  
GB

# Safety Data Sheet

according to 1907/2006/EC, Article 31

Printing date 17.08.2010

Revision: 17.08.2010

Trade name **Barium yttrium tungsten oxide anhydrous**

(Contd. of page 1)

Ireland TWA 0.5  
 Korea TLV 0.5  
 Netherlands MAC-TGG 0.5  
 Norway TWA 0.5  
 Poland TWA 0.5; 1.5-STEL  
 Sweden TWA 0.5  
 Switzerland MAK-W 0.5  
 United Kingdom LTEL 0.5  
 USA PEL 0.5

Tungsten and compounds (as W)  
 mg/m<sup>3</sup>  
 ACGIH TLV 5; 10-STEL (metal)  
 1; 3-STEL (soluble compounds)  
 5; 10-STEL (insoluble compounds)  
 Belgium TWA 1 (soluble compounds)  
 5; 10-STEL (insoluble compounds)  
 Finland TWA 5 (metal)  
 1 (soluble compounds)  
 5 (insoluble compounds)  
 Netherlands MAC-TGG 5 (metal)  
 1 (soluble compounds)  
 5 (insoluble compounds)  
 Poland TWA 5 (metal)  
 1 (soluble compounds)  
 5 (insoluble compounds)  
 Sweden NGV 5 (metal)  
 1 (soluble compounds)  
 5 (insoluble compounds)  
 United Kingdom TWA 5; 10-STEL (metal)  
 1; 3-STEL (soluble compounds)  
 5; 10-STEL (insoluble compounds)  
 MSHA TWA 1 (soluble compounds)  
 5 (insoluble compounds)

Yttrium and compounds, as Y  
 mg/m<sup>3</sup>  
 ACGIH TLV 1  
 Austria MAK 1  
 Belgium TWA 1  
 Denmark TWA 1  
 Finland TWA 1  
 France VME 1  
 Germany MAK 5  
 Korea TLV 1  
 Netherlands MAC-TGG 1  
 Norway TWA 1  
 Poland TWA 1  
 Switzerland MAK-W 1  
 United Kingdom TWA 1; 3-STEL  
 USA PEL 1  
 No data

**Additional information:****Personal protective equipment****General protective and hygienic measures****Breathing equipment:****Protection of hands:****Material of gloves****Penetration time of glove material****Eye protection:****Body protection:**

The usual precautionary measures should be adhered to in handling the chemicals.

Keep away from foodstuffs, beverages and food.

Instantly remove any soiled and impregnated garments.

Wash hands during breaks and at the end of the work.

Use breathing protection with high concentrations.

Check protective gloves prior to each use for their proper condition.

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

Impervious gloves

Not determined

Safety glasses

Protective work clothing.

**9 Physical and chemical properties:****General Information**

**Form:** Powder  
**Colour:** White  
**Smell:** Not determined

**Change in condition**

**Melting point/Melting range:** Not determined  
**Boiling point/Boiling range:** Not determined  
**Sublimation temperature / start:** Not determined

**Flash point:** Not applicable**Ignition temperature:** Not determined**Decomposition temperature:** Not determined**Danger of explosion:** Product is not explosive.**Critical values for explosion:**

**Lower:** Not determined  
**Upper:** Not determined

**Steam pressure:** Not determined**Density** Not determined**10 Stability and reactivity****Thermal decomposition / conditions to be avoided:**

No decomposition if used and stored according to specifications.

**Materials to be avoided:**

Oxidizing agents

**Dangerous reactions:**

No dangerous reactions known

**Dangerous products of decomposition:**

Barium oxide

(Contd. on page 3)

GB

# Safety Data Sheet

according to 1907/2006/EC, Article 31

Printing date 17.08.2010

Revision: 17.08.2010

Trade name **Barium yttrium tungsten oxide anhydrous**

Metal oxide

(Contd. of page 2)

**11 Toxicological information****Acute toxicity:****Primary irritant effect:****on the skin:****on the eye:****Sensitization:****Additional toxicological information:**

Irritant for skin and mucous membranes.

Irritant effect.

No sensitizing effect known.

To the best of our knowledge the acute and chronic toxicity of this substance is not fully known.

EPA-CBD: Carcinogenic potential cannot be determined.

ACGIH A4: Not classifiable as a human carcinogen: Inadequate data on which to classify the agent in terms of its carcinogenicity in humans and/or animals.

**12 Ecological information:****Additional ecological information:****General notes:**

Water hazard class 1 (Self-assessment): slightly hazardous for water.

Do not allow undiluted product or large quantities of it to reach ground water, water bodies or sewage system.

Do not allow material to be released to the environment without proper governmental permits.

**13 Disposal considerations****Product:****Recommendation**

Consult state, local or national regulations for proper disposal.

Hand over to disposers of hazardous waste.

Must be specially treated under adherence to official regulations.

**Uncleaned packagings:****Recommendation:**

Disposal must be made according to official regulations.

**14 Transport information****Land transport ADR/RID and GGVS/GGVE (cross-border/domestic)****ADR/RID-GGVS/E Class:**

6.1 (T5) Toxic substances.

**Kemler Number:**

60

**UN-Number:**

1564

**Packaging group:**

III

**Label**

6.1

**Designation of goods:**

1564 BARIUM COMPOUND, N.O.S. (Barium yttrium tungsten oxide anhydrous)

**Maritime transport IMDG/GGVSea:****IMDG/GGVSea Class:**

6.1

**UN Number:**

1564

**Label**

6.1

**Packaging group:**

III

**Marine pollutant:**

No

**Correct technical name:**

BARIUM COMPOUND, N.O.S. (Barium yttrium tungsten oxide anhydrous)

**Air transport ICAO-TI and IATA-DGR:****ICAO/IATA Class:**

6.1

**UN/ID Number:**

1564

**Label**

6.1

**Packaging group:**

III

**Correct technical name:**

BARIUM COMPOUND, N.O.S. (Barium yttrium tungsten oxide anhydrous)

**UN "Model Regulation":**

UN1564, BARIUM COMPOUND, N.O.S., 6.1, III

**15 Regulatory information****Designation according to EC guidelines:****Code letter and hazard designation of product:**

Xn Harmful

**Risk phrases:**

20/22 Harmful by inhalation and if swallowed.

**Safety phrases:**

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

**National regulations****Information about limitation of use:**

For use only by technically qualified individuals.

Employment restrictions concerning young persons must be observed.

**Water hazard class:**

Water hazard class 1 (Self-assessment): slightly hazardous for water.

**16 Other information:**

Employers should use this information only as a supplement to other information gathered by them, and should make independent judgement of suitability of this information to ensure proper use and protect the health and safety of employees. This information is furnished without warranty, and any use of the product not in conformance with this Material Safety Data Sheet, or in combination with any other product or process, is the responsibility of the user.

**Department issuing data specification sheet:** Health, Safety and Environmental Department.**Contact:** Zachariah Holt**Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)

ICAO: International Civil Aviation Organization

(Contd. on page 4)

**Safety Data Sheet**  
according to 1907/2006/EC, Article 31

Printing date 17.08.2010

Revision: 17.08.2010

Trade name **Barium yttrium tungsten oxide anhydrous**

ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)  
GHS: Globally Harmonized System of Classification and Labelling of Chemicals  
CAS: Chemical Abstracts Service (division of the American Chemical Society)

(Contd. of page 3)

GB