

# Safety Data Sheet

according to 1907/2006/EC, Article 31

Printing date 25.08.2010

Revision: 25.08.2010

**1 Identification of substance****Product details****Trade name****1,4-Benzenedithiol****Stock number:**

L19440, 44008

**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**R 20/21/22 Harmful by inhalation, in contact with skin and if swallowed.  
R 37/38 Irritating to respiratory system and skin.  
R 41 Risk of serious damage to eyes.**GHS label elements****Danger**

H318 - Causes serious eye damage.

**Warning**H302 - Harmful if swallowed.  
H312 - Harmful in contact with skin.  
H332 - Harmful if inhaled.  
H335 - May cause respiratory irritation.**Warning**

H315 - Causes skin irritation.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

**Prevention:****Response:****3 Composition/information on ingredients****Chemical characterization:**

1,4-Benzenedithiol (CAS# 624-39-5)

**Designation: (CAS#)****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  
Special hazards caused by the material, its  
products of combustion or flue gases:**CO<sub>2</sub>, extinguishing powder or water jet. Fight larger fires with water jet or alcohol-resistant foam.**Protective equipment:**Can be released in case of fire:  
Carbon monoxide and carbon dioxide  
Sulphur oxides (SO<sub>x</sub>)  
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

**Measures for cleaning/collecting:**

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

**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:**Handle under dry protective gas.  
Keep containers tightly sealed.  
Ensure good ventilation/exhaustion at the workplace.**Information about protection against  
explosions and fires:**

Keep ignition sources away - Do not smoke.

**Storage  
Requirements to be met by storerooms and  
containers:  
Information about storage in one common  
storage facility:**

Refrigerate

Store away from oxidizing agents.  
Store away from air.  
Protect from heat.**Further information about storage  
conditions:**Store under dry inert gas.  
Keep container tightly sealed.  
Refrigerate  
This product is air sensitive.**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:**

Not required.

(Contd. on page 2)  
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Trade name **1,4-Benzenedithiol**

<b>Additional information:</b>	No data	(Contd. of page 1)
<b>Personal protective equipment</b>	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. Avoid contact with the eyes and skin. Use breathing protection with high concentrations. Safety glasses Face protection Protective work clothing.	
<b>General protective and hygienic measures</b>		
<b>Breathing equipment:</b>		
<b>Eye protection:</b>		
<b>Body protection:</b>		

**9 Physical and chemical properties:**

<b>General Information</b>		
<b>Form:</b>	Crystalline powder	
<b>Colour:</b>	Colourless	
<b>Smell:</b>	Unpleasant	
<b>Change in condition</b>		
<b>Melting point/Melting range:</b>	95-99°C	
<b>Boiling point/Boiling range:</b>	Not determined	
<b>Sublimation temperature / start:</b>	Not determined	
<b>Flash point:</b>	Not applicable	
<b>Ignition temperature:</b>	Not determined	
<b>Decomposition temperature:</b>	Not determined	
<b>Danger of explosion:</b>	Product is not explosive.	
<b>Critical values for explosion:</b>		
<b>Lower:</b>	Not determined	
<b>Upper:</b>	Not determined	
<b>Steam pressure:</b>	Not determined	
<b>Density</b>	Not determined	
<b>Solubility in / Miscibility with</b>		
<b>Water:</b>	Slightly soluble	

**10 Stability and reactivity**

<b>Thermal decomposition / conditions to be avoided:</b>	No decomposition if used and stored according to specifications.
<b>Materials to be avoided:</b>	No information known. Oxidizing agents Air Heat
<b>Dangerous reactions:</b>	No dangerous reactions known
<b>Dangerous products of decomposition:</b>	Carbon monoxide and carbon dioxide Sulphur oxides (SOx)

**11 Toxicological information**

<b>Acute toxicity:</b>	Irritant for skin and mucous membranes. Strong irritant with the danger of severe eye injury. No sensitizing effect known. To the best of our knowledge the acute and chronic toxicity of this substance is not fully known. Danger by skin resorption. No classification data on carcinogenic properties of this material is available from the EPA, IARC, NTP, OSHA or ACGIH.
<b>Primary irritant effect:</b>	
<b>on the skin:</b>	
<b>on the eye:</b>	
<b>Sensitization:</b>	
<b>Additional toxicological information:</b>	



**12 Ecological information:**

<b>Additional ecological information:</b>	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.
<b>General notes:</b>	

**13 Disposal considerations**

<b>Product:</b>	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.
<b>Recommendation</b>	
<b>Uncleaned packagings:</b>	
<b>Recommendation:</b>	Disposal must be made according to official regulations.

**14 Transport information**

<b>Land transport ADR/RID and GGVS/GGVE (cross-border/domestic)</b>		
		
<b>ADR/RID-GGVS/E Class:</b>	9 (M11) Miscellaneous dangerous substances and articles.	
<b>UN-Number:</b>	3335	
<b>Label</b>	9	
<b>Designation of goods:</b>	3335 AVIATION REGULATED SOLID, N.O.S. (1,4-Benzenedithiol)	
<b>Maritime transport IMDG/GGVSea:</b>		
		
<b>IMDG/GGVSea Class:</b>	9	

(Contd. on page 3)

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(Contd. of page 2)

<b>UN Number:</b>	3335
<b>Label</b>	9
<b>Marine pollutant:</b>	No
<b>Correct technical name:</b>	AVIATION REGULATED SOLID, N.O.S. (1,4-Benzenedithiol)

Air transport ICAO-TI and IATA-DGR:



<b>ICAO/IATA Class:</b>	9
<b>UN/ID Number:</b>	3335
<b>Label</b>	9
<b>Correct technical name:</b>	AVIATION REGULATED SOLID, N.O.S. (1,4-Benzenedithiol)

<b>UN "Model Regulation":</b>	UN3335, AVIATION REGULATED SOLID, N.O.S., 9
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**15 Regulatory information**

Designation according to EC guidelines:

Code letter and hazard designation of product:



Xn Harmful

<b>Risk phrases:</b>	20/21/22 Harmful by inhalation, in contact with skin and if swallowed.
	37/38 Irritating to respiratory system and skin.
	41 Risk of serious damage to eyes.

<b>Safety phrases:</b>	26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
	36/37/39 Wear suitable protective clothing, gloves and eye/face protection.

National regulations

<b>Information about limitation of use:</b>	For use only by technically qualified individuals. Employment restrictions concerning young persons must be observed.
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<b>Water hazard class:</b>	Water hazard class 1 (Self-assessment): slightly hazardous for water.
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**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.

<b>Department issuing data specification sheet:</b>	Health, Safety and Environmental Department.
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<b>Contact:</b>	Zachariah Holt
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<b>Abbreviations and acronyms:</b>	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 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)
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