

# Safety data sheet

according to 1907/2006/EC, Article 31

Revision: 14.06.2011

Printing date 01.07.2013

## SECTION 1: Identification of the substance/mixture and of the company/undertaking

### 1.1 Product identifier

Trade name

**2,4-Dichloro-1-(4-nitrophenoxy)benzene**

Stock number:

A19977

CAS Number:

1836-75-5

EC number:

217-406-0

Index number:

609-040-00-9

### 1.2 Relevant identified uses of the substance or mixture and uses advised against.

Identified use:

SU24 Scientific research and development

### 1.3 Details of the supplier of the safety data sheet

Manufacturer/Supplier:

Alfa Aesar GmbH & Co.KG  
A Johnson Matthey Company  
Zeppelinstr. 7b  
76185 Karlsruhe / Germany  
Tel: +49 (0) 721 84007 280  
Fax: +49 (0) 721 84007 300  
Email: tech@alfa.com  
www.alfa.com

Informing department:

Product safety Tel + +049 (0) 7275 988687-0

1.4 Emergency telephone number:

Carechem 24: +44 (0) 1235 239 670 (Multi-language emergency number)

Poison Information Center Mainz

www.giftinfo.uni-mainz.de Telephone: +49(0)6131/19240

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008



GHS08 health hazard

Carc. 1B H350 May cause cancer.

Repr. 1B H360D May damage the unborn child.



GHS09 environment

Aquatic Acute 1 H400 Very toxic to aquatic life.

Aquatic Chronic 1 H410 Very toxic to aquatic life with long lasting effects.



GHS07

Acute Tox. 4 H302 Harmful if swallowed.

Classification according to Directive 67/548/EEC or Directive 1999/45/EC



T; Toxic

Carc. Cat. 2, Repr. Cat. 2

R45-61: May cause cancer. May cause harm to the unborn child.



Xn; Harmful

R22: Harmful if swallowed.



N; Dangerous for the environment

R50/53: Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Information concerning particular hazards for human and environment:

Not applicable

Other hazards that do not result in classification

No information known.

### 2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008

Hazard pictograms

Signal word

Hazard statements

The substance is classified and labelled according to the CLP regulation.

GHS07, GHS08, GHS09

Danger

H302 Harmful if swallowed.

H350 May cause cancer.

H360D May damage the unborn child.

H410 Very toxic to aquatic life with long lasting effects.

P281 Use personal protective equipment as required.

P273 Avoid release to the environment.

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

P308+P313 IF exposed or concerned: Get medical advice/attention.

P405 Store locked up.

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

### Precautionary statements

### 2.3 Other hazards

Results of PBT and vPvB assessment

PBT:

1836-75-5 2,4-Dichloro-1-(4-nitrophenoxy)benzene

vPvB:

Not applicable.

## SECTION 3: Composition/information on ingredients

### 3.1 Substances

CAS# Designation:

1836-75-5 2,4-Dichloro-1-(4-nitrophenoxy)benzene

Identification number(s):

217-406-0

EC number:

609-040-00-9

Index number:

## SECTION 4: First aid measures

### 4.1 Description of 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.

Seek immediate medical advice.

After eye contact

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

After swallowing

Seek medical treatment.

4.2 Most important symptoms and effects, both acute and delayed

No further relevant information available.

(Contd. on page 2)  
DE/E

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(Contd. of page 1)

**4.3 Indication of any immediate medical attention and special treatment needed**

No further relevant information available.

**SECTION 5: Firefighting measures****5.1 Extinguishing media****Suitable extinguishing agents**CO<sub>2</sub>, extinguishing powder or water jet. Fight larger fires with water jet or alcohol-resistant foam.**5.2 Special hazards arising from the substance or mixture**

If this product is involved in a fire, the following can be released:  
Carbon monoxide and carbon dioxide  
Nitrogen oxides (NO<sub>x</sub>)  
Hydrogen chloride (HCl)  
Possibly Hydrogen cyanide (HCN)

**5.3 Advice for firefighters****Protective equipment:**

Wear self-contained breathing apparatus.  
Wear full protective suit.

**SECTION 6: Accidental release measures****6.1 Personal precautions, protective equipment and emergency procedures**

Wear protective equipment. Keep unprotected persons away.  
Ensure adequate ventilation

**6.2 Environmental precautions:**

Do not allow material to be released to the environment without proper governmental permits.  
Do not allow product to reach sewage system or water bodies.  
Do not allow to enter the ground/soil.

**6.3 Methods and material for containment and cleaning up:**

Dispose of contaminated material as waste according to item 13.

**Prevention of secondary hazards:**

No special measures required.

**6.4 Reference to other sections**

See Section 7 for information on safe handling  
See section 8 for information on personal protection equipment.  
See Section 13 for information on disposal.

**SECTION 7: Handling and storage****7.1 Precautions for safe handling**

Keep containers tightly sealed.  
Store in cool, dry place in tightly closed containers.  
Ensure good ventilation/exhaustion at the workplace.  
Open and handle container with care.

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

No information known.

**7.2 Conditions for safe storage, including any incompatibilities****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.  
Store in a locked cabinet or with access restricted to technical experts or their assistants.  
No further relevant information available.

**7.3 Specific end use(s)****SECTION 8: Exposure controls/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.

**8.1 Control parameters****Components with critical values that require monitoring at the workplace:**

Not required.

**Additional information:**

No data

**8.2 Exposure controls****Personal protective equipment****General protective and hygienic measures**

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.  
Store protective clothing separately.  
Maintain an ergonomically appropriate working environment.  
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.

**Breathing equipment:****Protection of hands:**

Impervious gloves  
Not determined  
Safety glasses  
Protective work clothing.

**Material of gloves****Penetration time of glove material****Eye protection:****Body protection:****SECTION 9: Physical and chemical properties****9.1 Information on basic physical and chemical properties****General Information****Appearance:**

Crystalline

**Form:**

Not determined.

**Colour:**

Not determined

**Smell:**

Not determined.

**Odour threshold:**

Not applicable.

**pH-value:**

Not applicable.

**Change in condition****Melting point/Melting range:**

68-71 °C

**Boiling point/Boiling range:**

Not determined

**Sublimation temperature / start:**

Not determined

**Inflammability (solid, gaseous)**

Not determined.

**Ignition temperature:**

Not determined

**Decomposition temperature:**

Not determined

**Self-inflammability:**

Not determined.

(Contd. on page 3)  
DE/E

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(Contd. of page 2)

<b>Danger of explosion:</b>	Product is not explosive.
<b>Critical values for explosion:</b>	
Lower:	Not determined
Upper:	Not determined
<b>Steam pressure:</b>	Not applicable.
<b>Density</b>	Not determined
<b>Relative density</b>	Not determined.
<b>Vapour density</b>	Not applicable.
<b>Evaporation rate</b>	Not applicable.
<b>Solubility in / Miscibility with</b>	
Water:	Not determined
<b>Partition coefficient (n-octanol/water):</b>	Not determined.
<b>Viscosity:</b>	
dynamic:	Not applicable.
kinematic:	Not applicable.
<b>9.2 Other information</b>	No further relevant information available.

**SECTION 10: Stability and reactivity**

<b>10.1 Reactivity</b>	No information known.
<b>10.2 Chemical stability</b>	Stable under recommended storage conditions.
<b>Thermal decomposition / conditions to be avoided:</b>	No decomposition if used and stored according to specifications.
<b>10.3 Possibility of hazardous reactions</b>	No dangerous reactions known
<b>10.5 Incompatible materials:</b>	Oxidizing agents
<b>10.6 Hazardous decomposition products:</b>	Carbon monoxide and carbon dioxide Nitrogen oxides (NO <sub>x</sub> ) Hydrogen chloride (HCl) Possibly Hydrogen cyanide (HCN)

**SECTION 11: Toxicological information**

<b>11.1 Information on toxicological effects</b>	
<b>Acute toxicity:</b>	Harmful if swallowed. The Registry of Toxic Effects of Chemical Substances (RTECS) contains acute toxicity data for components in this product.

**LD/LC50 values that are relevant for classification:**

Oral LD50 740 mg/kg (rat)

<b>Skin irritation or corrosion:</b>	May cause irritation
<b>Eye irritation or corrosion:</b>	May cause irritation
<b>Sensitization:</b>	No sensitizing effect known.
<b>Germ cell mutagenicity:</b>	The Registry of Toxic Effects of Chemical Substances (RTECS) contains mutation data for components in this product.
<b>Carcinogenicity:</b>	May cause cancer. IARC-2B: Possibly carcinogenic to humans: limited evidence in humans in the absence of sufficient evidence in experimental animals. NTP-R: Reasonably anticipated to be a carcinogen: limited evidence from studies in humans or sufficient evidence from studies in experimental animals. The Registry of Toxic Effects of Chemical Substances (RTECS) contains tumorigenic and/or carcinogenic and/or neoplastic data for this product.
<b>Reproductive toxicity:</b>	May damage fertility or the unborn child. The Registry of Toxic Effects of Chemical Substances (RTECS) contains reproductive data for components in this product.
<b>Specific target organ system toxicity - repeated exposure:</b>	No effects known.
<b>Specific target organ system toxicity - single exposure:</b>	No effects known.
<b>Aspiration hazard:</b>	No effects known.
<b>Experience with humans:</b>	The Registry of Toxic Effects of Chemical Substances (RTECS) contains multiple dose toxicity data for components in this product.
<b>Additional toxicological information:</b>	To the best of our knowledge the acute and chronic toxicity of this substance is not fully known.

**SECTION 12: Ecological information**

<b>12.1 Toxicity</b>	
<b>Aquatic toxicity:</b>	No further relevant information available.
<b>12.2 Persistence and degradability</b>	No further relevant information available.
<b>12.3 Bioaccumulative potential</b>	No further relevant information available.
<b>12.4 Mobility in soil</b>	No further relevant information available.
<b>Ecotoxicological effects:</b>	
<b>Remark:</b>	Very toxic for fish
<b>Additional ecological information:</b>	
<b>General notes:</b>	Do not allow material to be released to the environment without proper governmental permits. Water danger class 3 (Self-assessment): extremely hazardous for water. Do not allow product to reach ground water, water bodies or sewage system, even in small quantities. Danger to drinking water if even extremely small quantities leak into soil. Also poisonous for fish and plankton in water bodies. May cause long lasting harmful effects to aquatic life. Avoid transfer into the environment. Very toxic for aquatic organisms

**12.5 Results of PBT and vPvB assessment**

PBT: 1836-75-5 2,4-Dichloro-1-(4-nitrophenoxy)benzene

<b>vPvB:</b>	Not applicable.
<b>12.6 Other adverse effects</b>	No further relevant information available.

**SECTION 13: Disposal considerations**

<b>13.1 Waste treatment methods</b>	
<b>Recommendation</b>	Hand over to disposers of hazardous waste. Must be specially treated under adherence to official regulations. Consult state, local or national regulations for proper disposal.
<b>Uncleaned packagings:</b>	
<b>Recommendation:</b>	Disposal must be made according to official regulations.

DE/E  
(Contd. on page 4)

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(Contd. of page 3)

**SECTION 14: Transport information**

UN-Number ADR, IMDG, IATA	UN3077
14.2 UN proper shipping name ADR	3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (2,4-Dichloro-1-(4-nitrophenoxy)benzene)
IMDG, IATA	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (2,4-Dichloro-1-(4-nitrophenoxy)benzene)
14.3 Transport hazard class(es) ADR	
Class Label IMDG	9 (M7) Miscellaneous dangerous substances and articles.
Class Label IATA	9 Miscellaneous dangerous substances and articles.
Class Label	9 Miscellaneous dangerous substances and articles.
Packing group ADR, IMDG, IATA	III
14.5 Environmental hazards: Special marking (ADR): Special marking (IATA):	Symbol (fish and tree) Symbol (fish and tree)
14.6 Special precautions for user Kemler Number:	Warning: Miscellaneous dangerous substances and articles. 90
14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
Transport/Additional information:	
ADR Excepted quantities (EQ): Limited quantities (LQ) Transport category Tunnel restriction code	E1 5 kg 3 E
UN "Model Regulation":	UN3077, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (2,4-Dichloro-1-(4-nitrophenoxy)benzene), 9, III

**SECTION 15: Regulatory information****15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

Australian Inventory of Chemical Substances      Substance is not listed.

**Standard for the Uniform Scheduling of Drugs and Poisons**

1836-75-5 | 2,4-Dichloro-1-(4-nitrophenoxy)benzene

S7

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

Workers should not be exposed to this hazardous material. Exceptions can be made by the authorities in certain exceptional cases.  
Employment restrictions concerning young persons must be observed.  
Employment restrictions concerning women of child-bearing age must be observed.  
For use only by technically qualified individuals.

**Water hazard class:**

Water danger class 3 (Self-assessment): extremely hazardous for water.

**Other regulations, limitations and prohibitive regulations  
ELINCS (European List of Notified Chemical Substances)**

Substance is not listed.

**Substances of very high concern (SVHC)****according to REACH, Article 57**

Substance is not listed.

**REACH - Pre-registered substances**

Substance is listed.

**15.2 Chemical safety assessment:**

A Chemical Safety Assessment has not been carried out.

**SECTION 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.**Abbreviations and acronyms:**

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)  
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)  
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)  
IMDG: International Maritime Code for Dangerous Goods  
IATA: International Air Transport Association  
GHS: Globally Harmonized System of Classification and Labelling of Chemicals  
EINECS: European Inventory of Existing Commercial Chemical Substances  
CAS: Chemical Abstracts Service (division of the American Chemical Society)  
LC50: Lethal concentration, 50 percent  
LD50: Lethal dose, 50 percent

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