



## SAFETY DATA SHEET

According to 1907/2006/EC, Article 31

Revision number: 1

Revision date: 10/02/2018

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

#### 1.1 Product identifiers

Product name: N-Butylchlorid  
Product code: 52524

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

Identified uses: Reagents.

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

Supplier: Company : Aaron Chemistry GmbH, Am Fischweiher 41-43  
: D-82481 Mittenwald, Germany  
Telephone: : +49-8823-917521  
Fax: : +49-8823-917523  
email: : info@aaron-chemistry.de

**Emergency telephone number** : +49-8823-917521

### SECTION 2: Hazards identification

#### 2.1 Classification of the substance or mixture

Flammable liquids Category 2  
Aspiration hazard Category 1

#### 2.2 Label elements

Pictograms or hazard symbols



Signal word

Danger

Hazard statements

H225-Highly flammable liquid and vapour.  
H361fd-Suspected of damaging fertility. Suspected of damaging the unborn child.  
H304-May be fatal if swallowed and enters airways.

Precautionary statements

P210-Keep away from heat/sparks/open flames/hot surfaces. - No smoking.  
P280-Wear protective gloves, protective clothing, face protection.  
P301+P310+P331-IF SWALLOWED: Immediately call a POISON CENTER or doctor. Do NOT induce vomiting.  
P303+P361+P353-IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.  
P308+P313-IF exposed or concerned: Get medical advice or attention.  
P370+P378-In case of fire: Use dry chemical or dry sand to extinguish.

#### 2.3 Other hazards

Results of PBT and vPvB assessment

PBT: Not applicable  
vPvB: Not applicable

### SECTION 3: Composition/information on ingredients

#### 3.1 Substances

Components: 1-Chlorobutane  
Percent: >99.0%(GC)  
CAS RN: 109-69-3  
EC-No: 203-696-6  
Synonyms: Butyl Chloride  
Chemical Formula: C<sub>4</sub>H<sub>9</sub>Cl

#### SECTION 4: First aid measures

##### 4.1 Description of first aid measures

<b>Inhalation:</b>	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical advice/attention.
<b>Skin contact:</b>	Remove/Take off immediately all contaminated clothing. Gently wash with plenty of soap and water. Get medical advice/attention.
<b>Eye contact:</b>	Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Get medical advice/attention.
<b>Ingestion:</b>	Immediately call a POISON CENTER or doctor/physician. Rinse mouth. Do NOT induce vomiting.
<b>Protection of first-aiders:</b>	A rescuer should wear personal protective equipment, such as rubber gloves and air-tight goggles.

##### 4.2 Most important symptoms and effects, both acute and delayed

No data available

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

No data available

#### SECTION 5: Firefighting measures

##### 5.1 Extinguishing media

<b>Suitable extinguishing media:</b>	Dry chemical, foam, carbon dioxide.
<b>Unsuitable extinguishing media:</b>	Water (It may scatter and spread fire.)

##### 5.2 Special hazards arising from the substance or mixture

Carbon monoxide, carbon dioxide etc

##### 5.3 Advice for firefighters

Fire-extinguishing work is done from the windward and the suitable fire-extinguishing method according to the surrounding situation is used. Uninvolved persons should evacuate to a safe place. In case of fire in the surroundings: Keep containers cool by spraying with water. Eliminate all ignition sources if safe to do so. When extinguishing fire, be sure to wear personal protective equipment

#### SECTION 6: Accidental release measures

##### 6.1 Personal precautions, protective equipment and emergency procedures

Use extra personal protective equipment (self-contained breathing apparatus). Keep people away from and upwind of spill/leak. Ensure adequate ventilation. Entry to non-involved personnel should be controlled around the leakage area by roping off, etc

##### 6.2 Environmental precautions

Prevent product from entering drains

##### 6.3 Methods and materials for containment and cleaning up

Absorb spilled material in dry sand or inert absorbent before recovering it into an airtight container. In case of large amount of spillage, contain a spill by bunding. Adhered or collected material should be promptly disposed of, in accordance with appropriate laws and regulations. Remove all sources of ignition. Fire-extinguishing devices should be prepared in case of a fire. Use spark-proof tools and explosion-proof equipment.

##### 6.4 Reference to other sections

For disposal see section 13.

#### SECTION 7: Handling and storage

##### 7.1 Precautions for safe handling

Handling is performed in a well ventilated place. Wear suitable protective equipment. Prevent generation of vapour or mist. Keep away from heat/sparks/open flame/hot surfaces. -No smoking. Take measures to prevent the build up of electrostatic charge. Use explosion-proof equipment. Wash hands and face thoroughly after handling. Use a closed system if possible. Use a ventilation, local exhaust if vapour or aerosol will be generated. Avoid all contact!

##### 7.2 Conditions for safe storage, including any incompatibilities

Keep container tightly closed. Store in a cool, dark and well-ventilated place. Store locked up. Store away from incompatible materials such as oxidizing agents.

##### 7.3 Specific end use(s)

No further relevant information available.

#### SECTION 8: Exposure controls/personal protection

##### 8.1 Control parameters

No data available

##### 8.2 Exposure controls

Install a closed system or local exhaust. Also install safety shower and eye bath.

###### **Respiratory protection:**

Half or full facepiece respirator, self-contained breathing apparatus(SCBA), supplied air respirator, etc. Use respirators approved under appropriate government standards and follow local and national regulations.

###### **Hand protection:**

Impervious gloves.

###### **Eye protection:**

Safety goggles. A face-shield, if the situation requires.

###### **Skin and body protection:**

Impervious protective clothing. Protective boots, if the situation requires.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

<b>Physical state (20°C):</b>	Liquid
<b>Form:</b>	Clear
<b>Colour:</b>	Colorless - Almost colorless
<b>Odour:</b>	Pungent
<b>pH:</b>	No data available
<b>Melting point/freezing point:</b>	-123°C
<b>Boiling point/range:</b>	78°C
<b>Flash point:</b>	-13°C
<b>Evaporation rate(Butyl Acetate=1):</b>	No data available
<b>Flammability(solid, gas):</b>	No data available
<b>Flammability or explosive limits:</b>	
<b>Lower:</b>	1.8%
<b>Upper:</b>	10.1%
<b>Vapour pressure:</b>	10.7kPa/20°C
<b>Vapour density:</b>	3.2
<b>Relative density:</b>	0.89
<b>Solubility(ies):</b>	
<b>[Water]</b>	Insoluble (0.066g/100mL, 12°C)
<b>[Other solvents]</b>	
<b>Miscible:</b>	Ether, Alcohols
<b>Partition coefficient:</b>	2.64
<b>n-octanol/water:</b>	
<b>Autoignition temperature:</b>	240°C
<b>Decomposition temperature:</b>	No data available
<b>Dynamic Viscosity:</b>	No data available
<b>Kinematic viscosity:</b>	No data available

9.2 Other safety information No data available

## SECTION 10: Stability and reactivity

10.1 Reactivity	No data available
10.2 Chemical stability	Stable under proper conditions.
10.3 Possibility of hazardous reactions	No special reactivity has been reported.
10.4 Conditions to avoid	Spark, Open flame, Static discharge
10.5 Incompatible materials	Oxidizing agents, Strong bases, Metal powders
10.6 Hazardous decomposition products	Carbon monoxide, carbon dioxide etc

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

<b>Acute Toxicity:</b>	ihl-rat LCLo:8000 ppm/4H ori-rat LD50:2200 mg/kg skn-rbt LDLo:20 g/kg
<b>Skin corrosion/irritation:</b>	No data available
<b>Serious eye damage/irritation:</b>	No data available
<b>Respiratory or skin sensitization:</b>	No data available
<b>Germ cell mutagenicity:</b>	msc-mus-lym 500 mg/L
<b>Carcinogenicity:</b>	ori-mus TDLo:257.5 g/kg/103W-I
<b>IARC =</b>	No data available
<b>NTP =</b>	No data available
<b>Reproductive toxicity:</b>	ori-rat TDLo:13927 mg/kg (1-19D preg)
<b>STOT-single exposure:</b>	No data available
<b>STOT-repeated exposure:</b>	No data available
<b>Aspiration hazard:</b>	No data available
<b>RTECS Number:</b>	EJ6300000

## SECTION 12: Ecological information

<b>12.1 Toxicity</b>	
<b>Fish:</b>	96h LC50:120 mg/L (Oryzias latipes)
<b>Crustacea:</b>	24h EC50:380 mg/L (Daphnia magna)
<b>Algae:</b>	72h EC50:>1000 mg/L (Selenastrum capricornutum)
<b>12.2 Persistence and degradability</b>	0 % (by BOD)
<b>12.3 Bioaccumulative potential</b>	7.6 - 21 (conc. 500 ug/L) , 11 - 17 (conc. 50 ug/L)
<b>12.4 Mobility in soil</b>	
<b>Log Pow:</b>	2.64
<b>Soil adsorption (Koc):</b>	93 and 102
<b>Henry's Law (PaM<sup>3</sup>/mol):</b>	1.67 x 10 <sup>3</sup>
<b>12.5 Results of PBT and vPvB assessment</b>	
<b>PBT:</b>	Not applicable
<b>vPvB:</b>	Not applicable
<b>12.6 Other adverse effects</b>	No data available

## SECTION 13: Disposal considerations

### **13.1 Waste treatment methods**

Recycle to process, if possible. Consult your local regional authorities. You may be able to burn in a chemical incinerator equipped with an afterburner and scrubber system but exert extra care in igniting as this material is highly flammable. Observe all federal, state and local regulations when disposing of the substance

## SECTION 14: Transport information

<b>14.1 UN number</b>	1127
<b>14.2 UN proper shipping name</b>	
<b>ADR/RID</b>	Chlorobutanes
<b>IMDG/IMO</b>	Chlorobutanes
<b>ICAO/IATA</b>	Chlorobutanes
<b>14.3 Transport hazard class(es)</b>	
<b>ADR/RID</b>	3: Flammable liquid
<b>IMDG/IMO</b>	3: Flammable liquid
<b>ICAO/IATA</b>	3: Flammable liquid
<b>14.4 Packaging group</b>	
<b>ADR/RID</b>	II
<b>IMDG/IMO</b>	II
<b>ICAO/IATA</b>	II
<b>14.5 Environmental hazards</b>	
<b>Marine pollutant</b>	-
<b>14.6 Special precautions for user</b>	No data available

## SECTION 15: Regulatory information

### **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

<b>Water Hazard Classes (WGK) :</b>	Class 2 - Hazard to waters
<b>Substance of Very High Concern (SVHC) according to the REACH Regulations (EC) No.1907/2006</b>	Not listed

<b>15.2 Chemical safety assessment</b>	A chemical safety assessment has not been carried out.
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**SECTION 16: Other information**

**Prepared by:** Aaron Chemistry GmbH  
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