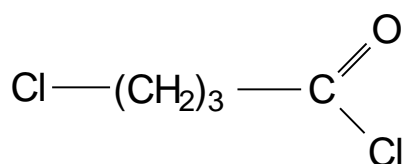


DATA SHEET Nr 1010 H

## 4-CHLOROBUTYRYL CHLORIDE

### 4 CBCL



Molecular formula:  $\text{C}_4\text{H}_6\text{Cl}_2\text{O}$

Molecular weight: 141.0

CAS number: 4635-59-0

EC number: 225-059-1

#### SYNONYM

Gamma-chlorobutyryl chloride

#### APPEARANCE

Clear liquid with pungent odor.

#### PHYSICAL PROPERTIES

Density (20 °C): 1.26 g/cm<sup>3</sup>

Boiling point: 173 °C/101 kPa

Melting point: - 47 °C

Solubility:

Soluble in usual organic solvents (acetone, chloroform, toluene, THF).

#### CHEMICAL PROPERTIES

- Reacts by hydrolysis yielding hydrochloric acid and 4-chlorobutyric acid.
- Reacts with amines yielding amides.
- Reacts with alcohols yielding esters.

#### USES

- Synthesis intermediate for pharmaceuticals and fine chemicals.

## 4-CHLOROBUTYRYL CHLORIDE

### 4 CBCL

#### SPECIFICATION

Parameter	Guaranteed value	Method	Operating procedure
Appearance	Clear liquid	Visual	
Color	≤ 50 APHA*	Colorimetry	C – 210
Purity	≥ 98.0 %	Gas chromatography	GC – 420
Phosgene	≤ 0.1 %	Iodometry	I – 230
Hydrogen chloride	≤ 0.1 %	Acidimetry	A – 220
γ-Butyrolactone	≤ 1.0 %	Gas chromatography	GC – 420
4-Chlorobutyric acid	≤ 0.5 %	Gas chromatography	GC – 420
4-Chlorobutyric anhydride	≤ 1.0 %	Gas chromatography	GC – 420

\* During the storage the product may show slight purple coloration.

#### PACKAGING

Polyethylene lined metal drum containing 200 kg.  
Polyethylene drum containing 220 kg.  
In bulk.

#### HANDLING PRECAUTIONS

- Physicochemical hazard  
Flash point (closed cup): 85 °C
- Health hazards:  
LD 50 (oral, rat): 1100 mg/kg  
Irritating action on skin and mucous membranes.  
Corrosive.
- Recommended:  
When handling this product wear mask, gloves, goggles and protective clothes.  
Wash contaminated surfaces immediately with plenty of water.

In case of inhalation take person to fresh air and call a physician.

- Neutralization:  
Neutralize with an alkaline solution.

#### STORAGE

Stored in its closed original drum in a covered, dry, cool and well-ventilated warehouse the product is stable.

However, in case of prolonged storage it is recommended to check again the product before use by measuring typical parameters of its quality such as color, hydrogen chloride, 4-chlorobutyric acid and anhydride levels.

#### TRANSPORTATION

Refer to the MSDS.

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