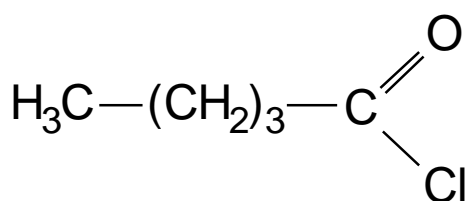


## DATA SHEET Nr 1630 E

# VALEROYL CHLORIDE

## VACL



Molecular formula: C<sub>5</sub>H<sub>9</sub>ClO

Molecular weight: 120.5

CAS number: 638-29-9

EC number: 211-330-1

### SYNONYMS

Valeryl chloride;  
Pentanoyl chloride.

### APPEARANCE

Clear liquid with pungent odor.

### PHYSICAL PROPERTIES

Density (20 °C): 1,01 g/cm<sup>3</sup>

Melting point: -110 °C

Boiling point: 126 °C/101 kPa

### Solubility:

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

### CHEMICAL PROPERTIES

- Reacts by hydrolysis yielding hydrochloric acid and valeric acid.
- Reacts with amines yielding amides.
- Reacts with alcohols yielding esters.
- Reacts with mercaptanes yielding thioesters.

### USES

- Intermediate for organic synthesis.

## VALEROYL CHLORIDE

### VACL

#### SPECIFICATION

Parameter	Guaranteed value	Method	Operating procedure
Appearance	Clear liquid	Visual	
Color	≤ 50 APHA	Colorimetry	C – 210
Purity	≥ 99.0 %	Gas chromatography	GC – 544
Phosgene	≤ 0.1 %	Iodometry	I – 230
Acidity (HCl)	≤ 0.1 %	Acidimetry	A – 220
2,2-Dimethylpropionyl chloride	≤ 0.1 %	Gas chromatography	GC – 544
Butyryl chloride	≤ 0.1 %	Gas chromatography	GC – 544
2-Methylbutyryl chloride	≤ 0.5 %	Gas chromatography	GC – 544
3-Methylbutyryl chloride	≤ 0.25 %	Gas chromatography	GC – 544
Other impurities (each)	≤ 0.25 %	Gas chromatography	GC – 544
Total impurities	≤ 1.0 %	Gas chromatography	GC – 544

#### PACKAGING

- Polyethylene drum with fluorinated inner coating containing 190 kg.
- **Polyethylene lined metal drum. The storage time is maximum 6 months. During the storage the product migrates through the liner and this will cause serious corrosion and bulging of metal drum.**
- In bulk.

#### HANDLING PRECAUTIONS

- Physicochemical hazard:  
Flash point (closed cup): 23 °C  
Flammable.
- Health hazards:  
LD 50 (oral, rat): 650 mg/kg  
Corrosive: causes burns  
Irritating on skin, mucous membranes and eyes.
- Recommended:  
Wear gloves, glasses, mask and protective clothes.

If eyes are contaminated wash immediately with clean water for at least 15 minutes.

If concentrated vapors are inhaled carry the person into fresh air out of the contaminated area.

In both cases 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 (color, hydrogen chloride, valeric acid and anhydride levels).

#### TRANSPORTATION

Refer to MSDS.