



STP-FP-170 v. 005 -

## Methyl chloride

### PERFORMANCES

**Methyl chloride (CH<sub>3</sub>Cl)** or monochloromethane is a colorless gas with an ethereal odor, heavier than air. Its commercial reference is R-40. It is used in the chemical industry:

- as a methylation agent in organic synthesis
- for tetramethyl lead, silicones, and butyl rubber manufacturing
- as solvent or extraction agent for heat sensitive products
- as refrigerant and propellant

### SPECIFICATIONS

Standard characteristics	Limit values
Appearance	<b>Clear</b>
Purity	<b>≥ 99,9 % weight</b>
Moisture content	<b>≤ 50 ppm weight</b>
Acidity (HCl)	<b>≤ 10 ppm weight</b>
Dimethylether content	<b>≤ 50 ppm weight</b>
Methanol content	<b>≤ 50 ppm weight</b>
Non volatile residue	<b>≤ 100 ppm weight</b>

### CHARACTERISTICS

		Units	Values
Chemical Formula			<b>CH<sub>3</sub>Cl</b>
Molecular weight		g/mol	<b>50.5</b>
Boiling point	at 1.013 bar	°C	<b>-24.2</b>
Melting point	at 1.013 bar	°C	<b>-97.7</b>
Critical temperature		°C	<b>143.1</b>
Critical pressure		bar	<b>67.6</b>
Latent heat of vaporization	(boiling point)	kJ/kg	<b>431.4</b>
Latent heat of melting	(melting point)	kJ/kg	<b>127.4</b>
Liquid density	at 20°C	kg/m <sup>3</sup>	<b>920</b>
Vapor pressure	at 20°C	bar	<b>4.9</b>
Flash point	closed cup	°C	<b>&lt; 0</b>
Lower flammability limit	in the air at 20°C	% volume	<b>8.1</b>
Upper flammability limit	below 1.013 bar		<b>17.2</b>
Auto-ignition temperature	below 1.013 bar	°C	<b>632</b>



## PACKAGING

	Bottles		Container
Capacity (liter)	27	88	930
Tare (kg)	14.5	37	460
Load (kg)	19	63	750
Diameter (mm)	300	300	860
Height (mm)	624	1517	2330
Outflow external diameter (mm)	21.7	21.7	26.1
Tap: left pitch (mm)	1.814	1.814	1.814
Test pressure (bar)	33	33	33

- Packaging technical characteristics are available upon request to the commercial department.
- Feasibility of filling packaging of the customers if they are in conformity with the legislation.
- Contact us for any other specific packaging.

## STORAGE AND SHELF LIFE

### Precautions for handling and storage:

**French plants are controlled by the regulation of listed Establishments and have to comply with it (or with the local legislation).**

- All packaging will be stored in a dry, well ventilated, easily accessible place, sheltered from sunlight and bad weather, away from any ignition source.
- It is recommended to store all packaging either in a specific place or isolated and sheltered by a fence.
- All packaging and piping will be grounded to discharge static electricity.
- Leak detectors, put at ground level, will be connected to an audible alarm, which will trigger in the event of leaks.
- The whole equipment will be tested with an appropriate leak detector before use.

**Climalife can study the set up and assembling of your storage tanks, piping, and pumps, according to the prevailing regulations.**



## CONDITIONS OF USE

Please refer to the Material Safety Data Sheet (MSDS) before using the product.

Workers handling the product should be trained about risks and preventive measures.

**Methyl chloride** hydrolyzes in water to give, under the action of heat, hydrochloric acid and methanol. Consequently, no trace of water is to remain in installations to contain methyl chloride.

**Methyl chloride is toxic, flammable and narcotic.**

The product is compatible with:

COMPATIBILITY	INCOMPATIBILITY
<p>Plastics:</p> <ul style="list-style-type: none"><li>▪ <b>Teflon<sup>®</sup></b></li></ul> <p>Elastomers:</p> <ul style="list-style-type: none"><li>▪ <b>Viton<sup>®</sup></b></li></ul> <p>Metals:</p> <ul style="list-style-type: none"><li>▪ <b>Stainless steel</b></li></ul>	<ul style="list-style-type: none"><li>▪ <b>Polyvinyl chloride</b></li><li>▪ <b>Polyethylene</b></li><li>▪ <b>Polypropylene</b></li> <li>▪ <b>Zinc and its alloys</b></li><li>▪ <b>Aluminium and its alloys</b></li><li>▪ <b>Galvanized iron</b></li> <li>▪ <b>Strong bases</b></li><li>▪ <b>Oxidizing agents</b></li><li>▪ <b>Combustive agents</b></li></ul>

*The information above is intended as a guide only. We assume no liability for its accuracy on its use. The user should make its own tests under its conditions in order to determine the suitability of any compound in a peculiar application.*

## HEALTH SAFETY ENVIRONMENT (HSE)

Consult the Material Safety Datasheet (MSDS) on the website: [www.quickfds.com](http://www.quickfds.com)

*This data is based on information that the manufacturer believed to be reliable and offered in good faith. In no event will Climalife be responsible for special, incidental and consequential damages. The user is responsible, to the Administrative Authorities (Regulation of the listed establishments for the protection of the environment), for the conformity of his installation.*