1. Identification

**Product Name**  
Dichloromethane, anhydrous

**Cat No.:**  
AC610300000; AC610300010; AC61030019R; AC61030019S; AC61030050R; AC61030050S; AC610301000; AC61030115R; AC61030115S; AC61030200R; AC61030200S; AC61030RS19; AC61030RS28; NC1233073

**CAS-No**  
75-09-2

**Synonyms**  
Dichloromethane; DCM

**Recommended Use**  
Laboratory chemicals.

**Uses advised against**  
This chemical/product is not and cannot be distributed in commerce (as defined in TSCA section 3(5)) or processed (as defined in TSCA section 3(13)) for consumer paint or coating removal.

---

2. Hazard(s) identification

**Classification**  
This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

<table>
<thead>
<tr>
<th>Hazard</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skin Corrosion/Irritation</td>
<td>Category 2</td>
</tr>
<tr>
<td>Serious Eye Damage/Eye Irritation</td>
<td>Category 2</td>
</tr>
<tr>
<td>Carcinogenicity</td>
<td>Category 1B</td>
</tr>
<tr>
<td>Specific target organ toxicity (single exposure)</td>
<td>Category 3</td>
</tr>
<tr>
<td>Target Organs - Central nervous system (CNS).</td>
<td>Category 2</td>
</tr>
<tr>
<td>Specific target organ toxicity - (repeated exposure)</td>
<td>Category 2</td>
</tr>
<tr>
<td>Target Organs - Liver, Kidney, Blood.</td>
<td>Category 2</td>
</tr>
</tbody>
</table>
Label Elements

Signal Word
Danger

Hazard Statements
Causes skin irritation
Causes serious eye irritation
May cause drowsiness or dizziness
May cause cancer
May cause damage to organs through prolonged or repeated exposure

Precautionary Statements
Prevention
Obtain special instructions before use
Do not handle until all safety precautions have been read and understood
Use personal protective equipment as required
Wash face, hands and any exposed skin thoroughly after handling
Wear eye/face protection
Do not breathe dust/fume/gas/mist/vapors/spray
Use only outdoors or in a well-ventilated area

Response
IF exposed or concerned: Get medical attention/advice

Inhalation
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing

Skin
IF ON SKIN: Wash with plenty of soap and water
If skin irritation occurs: Get medical advice/attention
Take off contaminated clothing and wash before reuse

Eyes
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
If eye irritation persists: Get medical advice/attention

Storage
Store locked up
Store in a well-ventilated place. Keep container tightly closed

Disposal
Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)


### 3. Composition/Information on Ingredients

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No</th>
<th>Weight %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methylene chloride</td>
<td>75-09-2</td>
<td>&gt;99.5</td>
</tr>
</tbody>
</table>

### 4. First-aid measures

General Advice
If symptoms persist, call a physician.
Dichloromethane, anhydrous

Eye Contact
Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention.

Skin Contact
Wash off immediately with plenty of water for at least 15 minutes. If skin irritation persists, call a physician.

Inhalation
Remove to fresh air. If not breathing, give artificial respiration. Get medical attention if symptoms occur.

Ingestion
Clean mouth with water and drink afterwards plenty of water.

Most important symptoms and effects
Difficulty in breathing. Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting: Causes central nervous system depression: Continued or high exposures by inhalation will cause anaesthetic effects. This may result in a loss of consciousness and could prove fatal: Causes formation of carbon monoxide in the blood. Carbon monoxide may cause adverse effects on the cardiovascular system and the central nervous system

Notes to Physician
Treat symptomatically

5. Fire-fighting measures

Suitable Extinguishing Media
Water spray, carbon dioxide (CO2), dry chemical, alcohol-resistant foam.

Unsuitable Extinguishing Media
No information available

Flash Point
No information available

Autoignition Temperature
556 °C / 1032.8 °F

Explosion Limits
Upper 23 vol %
Lower 13 vol %

Hazardous Combustion Products

Protective Equipment and Precautions for Firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

Specific Hazards Arising from the Chemical
Thermal decomposition can lead to release of irritating gases and vapors. Keep product and empty container away from heat and sources of ignition.

NFPA
Health 2 Flammability 1 Instability 0 Physical hazards N/A

6. Accidental release measures

Personal Precautions
Use personal protective equipment as required. Ensure adequate ventilation. Avoid breathing vapors or mists. Wear respiratory protection.

Environmental Precautions
Should not be released into the environment.

Methods for Containment and Clean Up
Soak up with inert absorbent material. Keep in suitable, closed containers for disposal.
7. Handling and storage

Handling
Wear personal protective equipment/face protection. Do not get in eyes, on skin, or on clothing. Avoid ingestion and inhalation. Vapors are heavier than air and may spread along floors. Handle product only in closed system or provide appropriate exhaust ventilation. Reacts with aluminum and its alloys.

Storage
Keep containers tightly closed in a dry, cool and well-ventilated place. Do not store in aluminum containers.

8. Exposure controls / personal protection

Exposure Guidelines

<table>
<thead>
<tr>
<th>Component</th>
<th>ACGIH TLV</th>
<th>OSHA PEL</th>
<th>NIOSH IDLH</th>
<th>Mexico OEL (TWA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methylene chloride</td>
<td>TWA: 50 ppm</td>
<td>(Vacated) TWA: 500 ppm</td>
<td>(Vacated) STEL: 2000 ppm</td>
<td>IDLH: 2300 ppm</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(Vacated) Ceiling: 1000 ppm</td>
<td>TWA: 25 ppm</td>
<td>TWA: 50 ppm</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>STEL: 125 ppm</td>
<td></td>
</tr>
</tbody>
</table>

Legend
ACGIH - American Conference of Governmental Industrial Hygienists
OSHA - Occupational Safety and Health Administration
NIOSH IDLH: NIOSH - National Institute for Occupational Safety and Health

Engineering Measures
Use only under a chemical fume hood. Ensure that eyewash stations and safety showers are close to the workstation location.

Personal Protective Equipment

Eye/face Protection
Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA’s eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin and body protection
Wear appropriate protective gloves and clothing to prevent skin exposure.

Respiratory Protection
Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

Hygiene Measures
Handle in accordance with good industrial hygiene and safety practice.

9. Physical and chemical properties

<table>
<thead>
<tr>
<th>Physical State</th>
<th>Liquid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Colorless</td>
</tr>
<tr>
<td>Odor</td>
<td>sweet</td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>No information available</td>
</tr>
<tr>
<td>pH</td>
<td>No information available</td>
</tr>
<tr>
<td>Melting Point/Range</td>
<td>-97 °C / -142.6 °F</td>
</tr>
<tr>
<td>Boiling Point/Range</td>
<td>39 °C / 102.2 °F</td>
</tr>
<tr>
<td>Flash Point</td>
<td>No information available</td>
</tr>
<tr>
<td>Evaporation Rate</td>
<td>No information available</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Flammability or explosive limits</td>
<td>Upper: 23 vol %, Lower: 13 vol %</td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>350 mbar @ 20°C</td>
</tr>
<tr>
<td>Vapor Density</td>
<td>2.93</td>
</tr>
</tbody>
</table>
Dichloromethane, anhydrous

Specific Gravity: 1.33
Solubility: No information available
Partition coefficient; n-octanol/water: No data available
Autoignition Temperature: 556 °C / 1032.8 °F
Decomposition Temperature: No information available
Viscosity: 0.42 mPas @ 25°C
Molecular Formula: C2H2Cl2
Molecular Weight: 84.93

10. Stability and reactivity

Reactive Hazard: None known, based on information available
Stability: Stable under normal conditions. Decomposes on exposure to light.
Conditions to Avoid: Excess heat. Protect from direct sunlight.
Incompatible Materials: Strong oxidizing agents, Strong acids, Amines
Hazardous Decomposition Products: Carbon monoxide (CO), Carbon dioxide (CO2), Phosgene, Hydrogen chloride gas
Hazardous Polymerization: Hazardous polymerization does not occur.
Hazardous Reactions: Forms a detonable mixture with nitric acid.

11. Toxicological information

Acute Toxicity

Product Information
Component Information

<table>
<thead>
<tr>
<th>Component</th>
<th>LD50 Oral</th>
<th>LD50 Dermal</th>
<th>LC50 Inhalation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methylene chloride</td>
<td>&gt; 2000 mg/kg (Rat)</td>
<td>&gt; 2000 mg/kg (Rat)</td>
<td>53 mg/L (Rat) 6 h</td>
</tr>
</tbody>
</table>

Toxicologically Synergistic Products: No information available

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Irritation: Irritating to eyes and skin
Sensitization: No information available
Carcinogenicity: The table below indicates whether each agency has listed any ingredient as a carcinogen.

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No</th>
<th>IARC</th>
<th>NTP</th>
<th>ACGIH</th>
<th>OSHA</th>
<th>Mexico</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methylene chloride</td>
<td>75-09-2</td>
<td>Group 2A</td>
<td>Reasonably Anticipated</td>
<td>A3</td>
<td>X</td>
<td>A3</td>
</tr>
</tbody>
</table>

IARC (International Agency for Research on Cancer)
Group 1 - Carcinogenic to Humans
Group 2A - Probably Carcinogenic to Humans
Group 2B - Possibly Carcinogenic to Humans

NTP: (National Toxicity Program)
Known - Known Carcinogen
Reasonably Anticipated - Reasonably Anticipated to be a Human Carcinogen

ACGIH: (American Conference of Governmental Industrial Hygienists)
A1 - Known Human Carcinogen
A2 - Suspected Human Carcinogen
A3 - Animal Carcinogen

Mexico - Occupational Exposure Limits - Carcinogens
Mexico - Occupational Exposure Limits - Carcinogens
A1 -Confirmed Human Carcinogen
A2 - Suspected Human Carcinogen
A3 - Confirmed Animal Carcinogen
Dichloromethane, anhydrous

**Revision Date** 28-Nov-2019

**A4 - Not Classifiable as a Human Carcinogen**

**A5 - Not Suspected as a Human Carcinogen**

**Mutagenic Effects**
No information available

**Reproductive Effects**
No information available.

**Developmental Effects**
No information available.

**Teratogenicity**
No information available.

**STOT - single exposure**
Central nervous system (CNS)

**STOT - repeated exposure**
Liver Kidney Blood

**Aspiration hazard**
No information available

**Symptoms / effects, both acute and delayed**
Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting; Causes central nervous system depression; Continued or high exposures by inhalation will cause anaesthetic effects. This may result in a loss of consciousness and could prove fatal; Causes formation of carbon monoxide in the blood. Carbon monoxide may cause adverse effects on the cardiovascular system and the central nervous system.

**Endocrine Disruptor Information**
No information available

**Other Adverse Effects**
Tumorigenic effects have been reported in experimental animals.

### 12. Ecological information

#### Ecotoxicity

<table>
<thead>
<tr>
<th>Component</th>
<th>Freshwater Algae</th>
<th>Freshwater Fish</th>
<th>Microtox</th>
<th>Water Flea</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methylene chloride</td>
<td>EC50: &gt;660 mg/L/96h</td>
<td>Pimephales promelas:</td>
<td>EC50: 1 mg/L/24 h</td>
<td>EC50: 140 mg/L/48h</td>
</tr>
<tr>
<td></td>
<td></td>
<td>LC50: 193 mg/L/96h</td>
<td>EC50: 2.88 mg/L/15 min</td>
<td></td>
</tr>
</tbody>
</table>

#### Persistence and Degradability
Persistence is unlikely based on information available.

#### Bioaccumulation/Accumulation
No information available.

#### Mobility
Will likely be mobile in the environment due to its volatility.

<table>
<thead>
<tr>
<th>Component</th>
<th>log Pow</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methylene chloride</td>
<td>1.25</td>
</tr>
</tbody>
</table>

### 13. Disposal considerations

**Waste Disposal Methods**
Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

<table>
<thead>
<tr>
<th>Component</th>
<th>RCRA - U Series Wastes</th>
<th>RCRA - P Series Wastes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methylene chloride</td>
<td>U080</td>
<td></td>
</tr>
</tbody>
</table>

### 14. Transport information

**DOT**
- **UN-No:** UN1593
- **Proper Shipping Name:** DICHLOROMETHANE
- **Hazard Class:** 6.1
- **Packing Group:** III

**TDG**
- **UN-No:** UN1593
- **Proper Shipping Name:** DICHLOROMETHANE
Dichloromethane, anhydrous  
Revision Date 28-Nov-2019

**15. Regulatory information**

**United States of America Inventory**

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No</th>
<th>TSCA</th>
<th>TSCA Inventory notification - Active/Inactive</th>
<th>TSCA - EPA Regulatory Flags</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methylene chloride</td>
<td>75-09-2</td>
<td>X</td>
<td>ACTIVE</td>
<td>R</td>
</tr>
</tbody>
</table>

**Legend:**
- **TSCA** - Toxic Substances Control Act, (40 CFR Part 710)
- **X** - Listed
- **-'** - Not Listed
- **R** - Indicates a substance that is the subject of a Section 6 risk management rule under TSCA.

**Section 6(a) of the Toxic Substances Control Act (TSCA)**

This chemical/product is not and cannot be distributed in commerce (as defined in TSCA section 3(5)) or processed (as defined in TSCA section 3(13)) for consumer paint or coating removal.

**TSCA 12(b) - Notices of Export**

Not applicable

**International Inventories**

Canada (DSL/NDSL), Europe (EINECS/ELINCS/NLP), Philippines (PICCS), Japan (ENCS), Australia (AICS), China (IECSC), Korea (ECL).

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No</th>
<th>DSL</th>
<th>NDSL</th>
<th>EINECS</th>
<th>PICCS</th>
<th>ENCS</th>
<th>AICS</th>
<th>IECSC</th>
<th>KECL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methylene chloride</td>
<td>75-09-2</td>
<td>X</td>
<td></td>
<td>200-838-9</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td>KE-23893</td>
</tr>
</tbody>
</table>

**U.S. Federal Regulations**

**SARA 313**

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No</th>
<th>Weight %</th>
<th>SARA 313 - Threshold Values %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methylene chloride</td>
<td>75-09-2</td>
<td>&gt;99.5</td>
<td>0.1</td>
</tr>
</tbody>
</table>

**SARA 311/312 Hazard Categories**

See section 2 for more information

**CWA (Clean Water Act)**

<table>
<thead>
<tr>
<th>Component</th>
<th>CWA - Hazardous Substances</th>
<th>CWA - Reportable Quantities</th>
<th>CWA - Toxic Pollutants</th>
<th>CWA - Priority Pollutants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methylene chloride</td>
<td>-</td>
<td>-</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

**Clean Air Act**

<table>
<thead>
<tr>
<th>Component</th>
<th>HAPS Data</th>
<th>Class 1 Ozone Depleters</th>
<th>Class 2 Ozone Depleters</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methylene chloride</td>
<td>X</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**OSHA - Occupational Safety and Health Administration**
### Component

<table>
<thead>
<tr>
<th>Component</th>
<th>Specifically Regulated Chemicals</th>
<th>Highly Hazardous Chemicals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methylene chloride</td>
<td>125 ppm STEL</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>12.5 ppm Action Level</td>
<td></td>
</tr>
<tr>
<td></td>
<td>25 ppm TWA</td>
<td></td>
</tr>
</tbody>
</table>

### CERCLA

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302).

### California Proposition 65

This product contains the following Proposition 65 chemicals.

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No</th>
<th>California Prop. 65</th>
<th>Prop 65 NSRL</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methylene chloride</td>
<td>75-09-2</td>
<td>Carcinogen</td>
<td>200 µg/day</td>
<td>Carcinogen</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>50 µg/day</td>
<td></td>
</tr>
</tbody>
</table>

### U.S. State Right-to-Know Regulations

<table>
<thead>
<tr>
<th>Component</th>
<th>Massachusetts</th>
<th>New Jersey</th>
<th>Pennsylvania</th>
<th>Illinois</th>
<th>Rhode Island</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methylene chloride</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

### U.S. Department of Transportation

- Reportable Quantity (RQ): Y
- DOT Marine Pollutant: N
- DOT Severe Marine Pollutant: N

### U.S. Department of Homeland Security

This product does not contain any DHS chemicals.

### Other International Regulations

- Mexico - Grade: No information available

### 16. Other information

Prepared By
Regulatory Affairs
Thermo Fisher Scientific
Email: EMSDS.RA@thermofisher.com

Creation Date
27-Jan-2010

Revision Date
28-Nov-2019

Print Date
28-Nov-2019

Revision Summary
This document has been updated to comply with the US OSHA HazCom 2012 Standard replacing the current legislation under 29 CFR 1910.1200 to align with the Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

Disclaimer
The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of SDS