

**Safety data sheet**  
according to 1907/2006/EC, Article 31

Printing date 12.01.2015

Version number 28

Revision: 12.01.2015

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

- **1.1 Product identifier**
- **Trade name:** 1,2-Dichloroethane
- **Article number:** 9301-01
- **CAS Number:**  
107-06-2
- **EC number:**  
203-458-1
- **Index number:**  
602-012-00-7
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**  
No further relevant information available.
- **Application of the substance / the mixture :** For Laboratory, Research or Manufacturing use.
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
Avantor Performance Materials B.V.  
P.O.Box 1  
7400 AA Deventer  
The Netherlands  
Tel: (+31) (0)570 - 687500  
Fax: (+31) (0)570 - 687574  
E-mail : jtbaker.nl@avantormaterials.com
- **Informing department:**  
E-mail : pawel.skiba@avantormaterials.com  
Avantor Performance Materials Sales Office Tel.: +31(0) 570 687500
- **1.4 Emergency telephone number:**  
Environment Health & Safety department  
during normal opening times (8 am till 5.30 pm) tel: (+31)(0) 570 687500

**SECTION 2: Hazards identification**

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**  
Flam. Liq. 2 H225 Highly flammable liquid and vapour.  
Carc. 1B H350 May cause cancer.  
Acute Tox. 4 H302 Harmful if swallowed.  
Skin Irrit. 2 H315 Causes skin irritation.  
Eye Irrit. 2 H319 Causes serious eye irritation.  
STOT SE 3 H335 May cause respiratory irritation.
- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**  
T; Toxic  
Carc. Cat. 2  
R45: May cause cancer.  
Xn; Harmful  
R22: Harmful if swallowed.  
Xi; Irritant  
R36/37/38: Irritating to eyes, respiratory system and skin.  
F; Highly flammable  
R11: Highly flammable.
- **Information concerning particular hazards for human and environment:** void
- **2.2 Label elements**
- **Labelling according to Regulation (EC) No 1272/2008**  
The substance is classified and labelled according to the CLP regulation.

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 · **Hazard pictograms**


GHS02    GHS07    GHS08

 · **Signal word** *Danger*

 · **Hazard statements**
*H225 Highly flammable liquid and vapour.*
*H302 Harmful if swallowed.*
*H315 Causes skin irritation.*
*H319 Causes serious eye irritation.*
*H350 May cause cancer.*
*H335 May cause respiratory irritation.*

 · **Precautionary statements**
*P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.*
*P241 Use explosion-proof electrical/ventilating/lighting/equipment.*
*P261 Avoid breathing dust/fume/gas/mist/vapours/spray.*
*P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.*
*P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.*
*P405 Store locked up.*

 · **2.3 Other hazards**

 · **Results of PBT and vPvB assessment**

 · **PBT:** Not applicable.

 · **vPvB:** Not applicable.

 \* **SECTION 3: Composition/information on ingredients**

 · **3.1 Chemical characterisation: Substances**

 · **CAS No. Designation:**

107-06-2 1,2-Dichloroethane

 · **Identification number(s):**

 · **EC number:** 203-458-1

 · **Index number:** 602-012-00-7

 · **SVHC**

107-06-2	1,2-Dichloroethane
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 \* **SECTION 4: First aid measures**

 · **4.1 Description of first aid measures**

 · **General information**
*Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.*

 · **After inhalation** *In case of unconsciousness bring patient into stable side position for transport.*

 · **After skin contact**
*If skin irritation continues, consult a doctor.*
*Instantly wash with water and soap and rinse thoroughly.*

 · **After eye contact**
*Rinse opened eye for several minutes under running water. If symptoms persist, consult doctor.*

 · **After swallowing**
*Seek medical treatment.*
*Instantly call for doctor.*

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- **4.2 Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **4.3 Indication of any immediate medical attention and special treatment needed**  
No further relevant information available.

**SECTION 5: Firefighting measures**

- **5.1 Extinguishing media**
- **Suitable extinguishing agents**  
CO<sub>2</sub>, extinguishing powder or water jet. Fight larger fires with water jet or alcohol-resistant foam.
- **For safety reasons unsuitable extinguishing agents** Water with a full water jet.
- **5.2 Special hazards arising from the substance or mixture** No further relevant information available.
- **5.3 Advice for firefighters**
- **Protective equipment:** Wear self-contained breathing apparatus.

**SECTION 6: Accidental release measures**

- **6.1 Personal precautions, protective equipment and emergency procedures**  
Wear protective equipment. Keep unprotected persons away.
- **6.2 Environmental precautions:** Prevent material from reaching sewage system, holes and cellars.
- **6.3 Methods and material for containment and cleaning up:**  
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).  
Dispose of contaminated material as waste according to item 13.  
Ensure adequate ventilation.
- **6.4 Reference to other sections**  
See Section 7 for information on safe handling  
See Section 8 for information on personal protection equipment.  
See Section 13 for information on disposal.

**SECTION 7: Handling and storage**

- **7.1 Precautions for safe handling** Open and handle container with care.
- **Information about protection against explosions and fires:**  
Keep ignition sources away - Do not smoke.  
Protect against electrostatic charges.  
Keep breathing equipment ready.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage**
- **Requirements to be met by storerooms and containers:** Store in cool location.
- **Information about storage in one common storage facility:** Store away from oxidising agents.
- **Further information about storage conditions:**  
+ 15 °C - +25 °C  
Keep container tightly sealed.  
Store in cool, dry conditions in well sealed containers.
- **7.3 Specific end use(s)** No further relevant information available.

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

· **8.1 Control parameters**

· **Components with critical values that require monitoring at the workplace:**

**107-06-2 1,2-Dichloroethane**

WEL	Long-term value: 21 mg/m <sup>3</sup> , 5 ppm
	Carc; Sk

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- **Additional information:** The lists that were valid during the compilation were used as basis.
- **8.2 Exposure controls**
- **Personal protective equipment**
- **General protective and hygienic measures**
  - Keep away from foodstuffs, beverages and food.
  - Instantly remove any soiled and impregnated garments.
  - Wash hands during breaks and at the end of the work.
  - Store protective clothing separately.
  - Avoid contact with the eyes and skin.
- **Breathing equipment:**
  - In case of brief exposure or low pollution use breathing filter apparatus. In case of intensive or longer exposure use breathing apparatus that is independent of circulating air.
- **Protection of hands:**
  - Protective gloves.
  - The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
  - Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.
  - Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
- **Material of gloves**
  - PVA gloves
  - The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.
- **Penetration time of glove material**
  - The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
- **Eye protection:** Tightly sealed safety glasses.
- **Body protection:** Protective work clothing.

**SECTION 9: Physical and chemical properties**

- **9.1 Information on basic physical and chemical properties**
- **General Information**
- **Appearance:**

· <b>Form:</b>	Oily
· <b>Colour:</b>	Colourless
· <b>Smell:</b>	Like chlorine
· <b>Odour threshold:</b>	Not determined.
- **pH-value:** Not determined.
- **Change in condition**

· <b>Melting point/Melting range:</b>	-35.5 °C
· <b>Boiling point/Boiling range:</b>	84 °C
· <b>Flash point:</b>	13 °C
- **Inflammability (solid, gaseous)** Not applicable.
- **Ignition temperature:** 440 °C
- **Decomposition temperature:** Not determined.
- **Self-inflammability:** Not determined.
- **Danger of explosion:** Product is not explosive. However, formation of explosive air/steam mixtures is possible.
- **Critical values for explosion:**

· <b>Lower:</b>	6.2 Vol %
· <b>Upper:</b>	16 Vol %
- **Steam pressure at 20 °C:** 87 hPa

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- **Density at 20 °C** 1.25 g/cm<sup>3</sup>
- **Relative density** Not determined.
- **Vapour density** Not determined.
- **Evaporation rate** Not determined.
- **Solubility in / Miscibility with Water at 20 °C:** 8 g/l
- **Partition coefficient (n-octanol/water):** 1.5 log POW
- **Viscosity:**
- **dynamic at 20 °C:** 0.8 mPas
- **kinematic:** Not determined.
- **9.2 Other information** No further relevant information available.

### SECTION 10: Stability and reactivity

- **10.1 Reactivity**
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:** Heat, boiling temperatures.
- **10.3 Possibility of hazardous reactions** No dangerous reactions known
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:** No further relevant information available.
- **10.6 Hazardous decomposition products:** No dangerous decomposition products known

### SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
  - **Acute toxicity:** Harmful if swallowed.
  - **LD/LC50 values that are relevant for classification:**
- |        |      |                  |
|--------|------|------------------|
| Oral   | LD50 | 670 mg/kg (rat)  |
| Dermal | LD50 | 2800 mg/kg (rat) |
- **Primary irritant effect:**
  - **on the skin:** Irritant for skin and mucous membranes.
  - **on the eye:** Irritant effect.
  - **Sensitisation:** No sensitizing effect known.
  - **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
  - Carc. 1B

### SECTION 12: Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **12.2 Persistence and degradability** No further relevant information available.
- **12.3 Bioaccumulative potential** No further relevant information available.
- **12.4 Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**
- Water danger class (D) 3 (Assessment by list): extremely hazardous for water.
- Do not allow product to reach ground water, water bodies or sewage system, even in small quantities.
- Danger to drinking water if even extremely small quantities leak into soil.
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

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· 12.6 Other adverse effects No further relevant information available.

### SECTION 13: Disposal considerations

· 13.1 Waste treatment methods

· Recommendation

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

· Uncleaned packagings:

· Recommendation: Disposal must be made according to official regulations.

### SECTION 14: Transport information

· 14.1 UN-Number

· ADR, IMDG, IATA

UN1184

· 14.2 UN proper shipping name

· ADR

1184 ETHYLENE DICHLORIDE

· IMDG, IATA

ETHYLENE DICHLORIDE

· 14.3 Transport hazard class(es)

· ADR



· Class

3 (F+1) Flammable liquids.

· Label

3+6.1

· IMDG, IATA



· Class

3 Flammable liquids.

· Label

3 + 6.1

· 14.4 Packing group

· ADR, IMDG, IATA

II

· 14.5 Environmental hazards:

· Marine pollutant:

No

· 14.6 Special precautions for user

Warning: Flammable liquids.

· Kemler Number:

336

· EMS Number:

F-E,S-D

· Segregation groups

Liquid halogenated hydrocarbons

· 14.7 Transport in bulk according to Annex II of

MARPOL73/78 and the IBC Code

Not applicable.

· Transport/Additional information:

· ADR

· Limited quantities (LQ)

1L

· Excepted quantities (EQ)

Code: E2

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 500 ml

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· <b>Transport category</b>	2
· <b>Tunnel restriction code</b>	D/E
<hr/>	
· <b>IMDG</b>	
· <b>Limited quantities (LQ)</b>	1L
· <b>Excepted quantities (EQ)</b>	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· <b>UN "Model Regulation":</b>	UN1184, ETHYLENE DICHLORIDE, 3 (6.1), II

### SECTION 15: Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Labelling according to Regulation (EC) No 1272/2008**  
The substance is classified and labelled according to the CLP regulation.
- **Hazard pictograms**



GHS02 GHS07 GHS08

- **Signal word** Danger
  - **Hazard statements**  
H225 Highly flammable liquid and vapour.  
H302 Harmful if swallowed.  
H315 Causes skin irritation.  
H319 Causes serious eye irritation.  
H350 May cause cancer.  
H335 May cause respiratory irritation.
  - **Precautionary statements**  
P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.  
P241 Use explosion-proof electrical/ventilating/lighting/equipment.  
P261 Avoid breathing dust/fume/gas/mist/vapours/spray.  
P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.  
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P405 Store locked up.
  - **National regulations**
  - **Information about limitation of use:**  
Workers should not be exposed to this hazardous material. Exceptions can be made by the authorities in certain exceptional cases.
  - **Other regulations, limitations and prohibitive regulations**
- |  |                    |
|--|--------------------|
| · <b>Substances of very high concern (SVHC) according to REACH, Article 57</b> |                    |
| 107-06-2   | 1,2-Dichloroethane |
- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

### SECTION 16: Other information

These data are based on our present knowledge. However, they shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

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· **Department issuing data specification sheet:** EHS

· **Contact:** Paweł Skiba

· **Abbreviations and acronyms:**

*RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)*

*IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)*

*ICAO: International Civil Aviation Organisation*

*ICAO-TI: Technical Instructions by the "International Civil Aviation Organisation" (ICAO)*

*ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)*

*IMDG: International Maritime Code for Dangerous Goods*

*IATA: International Air Transport Association*

*GHS: Globally Harmonised System of Classification and Labelling of Chemicals*

*EINECS: European Inventory of Existing Commercial Chemical Substances*

*CAS: Chemical Abstracts Service (division of the American Chemical Society)*

*LC50: Lethal concentration, 50 percent*

*LD50: Lethal dose, 50 percent*

*Flam. Liq. 2: Flammable liquids, Hazard Category 2*

*Acute Tox. 4: Acute toxicity, Hazard Category 4*

*Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2*

*Eye Irrit. 2: Serious eye damage/eye irritation, Hazard Category 2*

*Carc. 1B: Carcinogenicity, Hazard Category 1B*

*STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3*

· **\* Data compared to the previous version altered.**

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