

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:** 9301-03
- **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.

(Contd. on page 2)

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

Printing date 12.01.2015

Version number 28

Revision: 12.01.2015

Trade name: 1,2-Dichloroethane

(Contd. of page 1)

 · **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
----------	--------------------

 * **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.

(Contd. on page 3)

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

Printing date 12.01.2015

Version number 28

Revision: 12.01.2015

Trade name: 1,2-Dichloroethane

(Contd. of page 2)

- **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**
CO₂, 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 ³ , 5 ppm
	Carc; Sk

(Contd. on page 4)

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

Printing date 12.01.2015

Version number 28

Revision: 12.01.2015

Trade name: 1,2-Dichloroethane

(Contd. of page 3)

- **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:**

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

Melting point/Melting range:	-35.5 °C
Boiling point/Boiling range:	84 °C
Flash point:	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:**

Lower:	6.2 Vol %
Upper:	16 Vol %
- **Steam pressure at 20 °C:** 87 hPa

(Contd. on page 5)

GB

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

Printing date 12.01.2015

Version number 28

Revision: 12.01.2015

Trade name: 1,2-Dichloroethane

(Contd. of page 4)

- **Density at 20 °C** 1.25 g/cm³
- **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.

(Contd. on page 6)

GB

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

Printing date 12.01.2015

Version number 28

Revision: 12.01.2015

Trade name: 1,2-Dichloroethane

(Contd. of page 5)

· **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)**

II

· **Excepted quantities (EQ)**

Code: E2

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 500 ml

(Contd. on page 7)

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

Printing date 12.01.2015

Version number 28

Revision: 12.01.2015

Trade name: 1,2-Dichloroethane

(Contd. of page 6)

· Transport category	2
· Tunnel restriction code	D/E
<hr/>	
· IMDG	
· 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
· UN "Model Regulation":	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**
- | | |
|--|--------------------|
| · Substances of very high concern (SVHC) according to REACH, Article 57 | |
| 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.

(Contd. on page 8)

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

Printing date 12.01.2015

Version number 28

Revision: 12.01.2015

Trade name: 1,2-Dichloroethane

(Contd. of page 7)

· **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.**

GB