1. Identification of the substance/ preparation and of the company/ undertaking

Identification of the substance or preparation
Trade name: germanBond® 2kR

Use of the substance/ preparation
Identified uses:
Product categories [PC]:
Adhesives, sealants

Uses advised against
Do not use for private purposes (household).

Company/ undertaking identification
Manufacturer
germanBelt GmbH
Carl-Vollrath-Str. 8
D-07422 Bad Blankenburg
P.O. Box:
Telephone: +49 (0)36741 / 5680-0
Telefax: +49 (0)36741/ 5680-70
E-mail: sales@germanBelt.de
information Telephone: +49 (0)36741 / 5680-0
information Telefax: +49 (0)36741 / 5680-70
Emergency telephone: Giftnotruf Erfurt: +49 (0)361 / 730 730
www.germanBelt.de

2. Hazards identification
Classification according to directive 67/548/EEC or 1999/45/EC
Danger characteristic(s)
Carcinogenic Cat. 2 (Carc. Cat. 2)
Mutagenic Cat. 3 (Mut. Cat. 3)
Xi; R36/38
Carc. Cat. 2; R45
R67
Muta. Cat. 3; R68
R52
R53

Labelling (67/548/EEC or 1999/45/EC)
Hazardous component(s) for labelling
containing trichlorethylene

Danger symbol(s) and danger term(s) for dangerous materials and preparations
T Toxic.

R phrases
R52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R67 Vapours may cause drowsiness and dizziness.
R45 May cause cancer.
R36/38 Irritating to eyes and skin.

Special labelling of particular preparations
Reserved for industrial and professional use.
Contains: Trichlorethylene

**S phrases**
S45 In case of accident or if you feel unwell, seek medical advice immediately (show this label if possible).
S53 Avoid exposure - obtain special instructions before use.
S61 Avoid release to the environment. Refer to special instructions/Safety data sheets.

**Classification according EC regulation 1272/2008 (CLP)**

**Environmental hazards**

Hazard classes and hazard categories:
Aquatic Chronic 3

**Hazard Statements:**
H412 Harmful to aquatic life with long lasting effects.

**Health hazards**

Hazard classes and hazard categories:
Skin Irrit. 2

**Hazard Statements:**
H315 Causes skin irritation.

Hazard classes and hazard categories:
Carc. 1

**Hazard Statements:**
H350 May cause cancer (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard).

Hazard classes and hazard categories:
Eye Irrit. 2

**Hazard Statements:**
H319 Causes serious eye irritation.

Hazard classes and hazard categories:
STOT SE 3

**Hazard Statements:**
H336 May cause drowsiness or dizziness.

Hazard classes and hazard categories:
Muta. 2

**Hazard Statements:**
H341 Suspected of causing genetic defects (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard).

**Labelling (EU-GHS)**

**Hazard pictograms**

- GHS07
- GHS08

**Hazard Statements for health hazards:**
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H336 May cause drowsiness or dizziness.
H341 Suspected of causing genetic defects (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard).
H350 May cause cancer (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard).

hazard statements for environmental hazards
H412 Harmful to aquatic life with long lasting effects.

Remark
For professional users.

Precautionary Statements

Prevention:
P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P273 Avoid release to the environment.

Response:
P308 + P313 IF exposed or concerned: Get medical advice/attention.

Storage:
P405 Store locked up.

Signal word
Danger

3. Composition/ Information on ingredients

Additional information
CAS: 79-01-6 Trichloroethylene SVHC

Preparation related information

Description
Mixture with trichlorethylene

Dangerous ingredients
trichloroethylene
   ca.85 %

   CAS 79-01-6
   EC 201-167-4
   INDEX 602-027-00-9
   Carc.Cat.2 R45; Muta.Cat.3 R68; R67; Xi R36/38; R52-53
   Skin Irrit. 2, H315 / Eye Irrit. 2, H319 / Muta. 2, H341 / Carc. 1B, H350 / STOT SE 3, H336 / Aquatic Chronic 3, H412

colophony
   0,1 - 1 %

   CAS 8050-09-7
   EC 232-475-7
   INDEX 650-015-00-7
   R43
   Skin Sens. 1, H317
4. First-aid measures

General information
If victim is at risk of losing consciousness, position and transport on their side. Move victim out of danger zone and lay down. Maintain victim in horizontal position during transport. Put victim at rest, cover with a blanket and keep warm. Take off immediately all contaminated clothing. Immediately get medical attention.

Following inhalation
In case of irritation of the respiratory tract seek medical advice. Provide fresh air. In case of inhaling spray mists, consult a doctor immediately and show him box or label.

After skin contact
After contact with skin, wash immediately with plenty of water and soap. In case of skin irritation, seek medical treatment.

Following eye contact
In case of contact with eyes, rinse immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart. Subsequently consult an ophthalmologist.

after ingestion
Do not induce vomiting.

Self-protection of the first aider. 
First aid assistant: Pay attention to self-protection!

Information to physician

Symptoms:
- shortage of breath. difficulties of breathing. drowsiness. unconsciousness. excitation.

Nature of Hazard:

Treatment:
- Where appropriate artificial ventilation. To supervise the blood circulation.

5. Fire-fighting measures

Suitable extinguishing media

Extinguishing media which must not be used for safety reasons
High power water jet.

Special exposure hazards arising from the substance or preparation itself, its combustion products or from resulting gases
Hydrogen chloride (HCl). Chlorine (Cl2). phosgene.

Special protective equipment for fire-fighters
In case of fire: Wear self-contained breathing apparatus. Wear a self-contained breathing apparatus and chemical resistant suit.

Additional information
Use water spray/stream to protect personnel and to cool endangered containers. Remove product from area of fire.
6. Accidental release measures

**Personal precautions**
Vapours are heavier than air and will spread at floor level. See protective measures under point 7 and 8. Wear personal protection equipment. Remove all sources of ignition. Provide adequate ventilation.

**Environmental precautions**
Cover drains. Do not empty into drains or the aquatic environment. Do not allow to enter into soil/subsoil.

**Methods for cleaning up**
Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents). Ventilate affected area.

**Additional information**
Eliminate leaks immediately.

7. Handling and storage

**Handling**

**Precautions against fire and explosion**
Do not eat, drink, smoke or snort at the workplace.

**Specific requirements or handling regulations**
Product must only be transfilled and handled in a closed system. Process within closed systems. Carry out bottling at stations preventing a suction sections only.

**Information for safe handling**

**Preventive measures**
If suction of the immediate vicinity is impossible or insufficient, the entire working place must be sufficiently ventilated using appropriate machines. Provide a suction section for room air on ground-level. Always close containers tightly after the removal of product.

**Technical measures**

**Measures required to protect the environment**
Refer to chapter 8.

**Measures to prevent aerosol and dust accumulation**

**Storage**

**Requirements for storerooms and containers**
Keep container tightly closed. Material, solvent-proof. Provide for retaining containers, eg. floor pan without outflow. Only use containers approved for especially this product. Keep/Store only in original container. Restrict access to stockrooms.

**Information about storage in one common storage facility**
Do not store together with:
- Oxidizing agents.
- Food and animal feedingstuff

**Further information concerning storage conditions**
Do not store at temperatures over: + 30°C

**Storage class**
6.1 B
Non-combustible toxic substances (liquid)
Specific use(s)
Recommendation
Observe technical data sheet. Observe instructions for use.

8. Exposure controls/ Personal protection

Exposure limit values

Components with workplace or biological limit values to be monitored

Additional critical values of explosion under processing conditions

Biological limit values

Limit value type (country of origin):
BGW (DE).
Identification of the hazard: Trichlorethylen
CAS-No. 79-01-6
Parameter: Tetrachlorethanol
Value: 5 mg/l
Examination material: Whole blood (B).
Test date: b, c
Source: TRGS 903.

Limit value type (country of origin):
BGW (DE).
Identification of the hazard: Trichlorethylen
CAS-No. 79-01-6
Parameter: Trichloressigsäure
Value: 100 mg/l
Examination material: Urine (U).
Test date: b, c
Source: TRGS 903.

Exposure controls

Occupational exposure controls

Personal protection equipment

Suitable eye protection
Tightly sealed safety glasses. Eye wash bottle with pure water.

Hand protection
In case of prolonged or frequently repeated skin contact:

Suitable material
FKM (fluororubber).
Unsuitable materials
Thick material. PVC (Polyvinyl chloride). NR (Natural rubber (caoutchouc), Natural latex). CR (polychloroprenes, Chloroprene rubber). Butyl rubber.

penetration time (maximum wearing period): ca.480 min
Thickness of glove material: >0,7 mm

Remarks
Type of chemical protective gloves to choose depends on the concentration and quantity of dangerous substances as well as on work place specifications. In the cases of special applications, it is recommended to check the chemical resistance with the manufacturer of the gloves.

Skin protection
Work clothing with long sleeves.

Respiratory protection
Respiratory protection required in case of:
- exceeding critical value
- handling larger quantities. high concentration. bottling and transfer.
When limits are exceeded: type A for organic gases and vapors

Environmental exposure controls
Product related measures to prevent exposure
The regulations for exhaust must be observed. An entry into the environment should be avoided.

Consumer exposure controls
Measures related to consumer uses of the substance (as such or in preparations)
See Chapter 7.

9. Physical and chemical properties

General information

Appearance

Colour
black
colourless
off-white

State of matter
liquid

Odour
characteristic

Important health, safety and environmental information

Safety relevant basis data
boiling temperature / boiling range: 87 °C
density: 1,45 g/cm³
at °C: 20 °C

Flash point
Evaluation:
No flash point according to standard method.

melting point / melting range: -87 °C

Vapour pressure: 77 hPa
at °C: 20 °C
Solubility
Solubility in water (g/l): ca.1 g/l
at °C: 20 °C
Remark: slightly soluble

Viscosity
Viscosity, dynamic: ca.2500 mPa*s
at °C: 20 °C

Substance group relevant properties
lower explosion limit: 7.9 Vol-%
Upper explosion level: 90 Vol-%
Ignition temperature (AIT) 410 °C

Other information
Decomposition Temperature:> 110 °C
Solid content (%) ca.12 %

10. Stability and reactivity
Conditions to avoid
When heated> 110 ° C

Hazardous decomposition products
chlorine. phosgene. hydrochloric gas.

Materials to avoid
Alkalis (alkalis). Oxidizing agents, strong.

11. Toxicological information
Toxicological Tests
Acute effects
Acute toxicity, dermal >29000 mg/kg
Effective dose:
LD50:
species:
Rabbit.

Acute toxicity, inhalant 43,7 - 68,28 mg/l
Effective dose:
LC50:
Exposure time: 4 h
species:
Rat.

Acute toxicity, oral 4290 - 7200 mg/kg
Effective dose:
LD50:
species:  
Rat.

Irritation and etching

Irritant effect on the eye
   Evaluation:  
   irritant.

Irritant effect on the respiratory tract
   Evaluation:  
   May cause respiratory irritation.

Irritant effect on the skin
   Evaluation:  
   Causes skin irritation.

Sensitization

Additional information
   No sensitizing effects known.

Repeated dose toxicity

Evaluation/Classification
   Danger of serious damage to health by prolonged exposure if swallowed. May cause damage to organs through prolonged or repeated exposure.

CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)

Summarized evaluation of the CMR properties
   Trichloroethylene is classified as GHS: Mutag. 2 and Carc. 1B

Practical experience

Observations relevant to classification
   May be absorbed through the skin. Frequently or prolonged contact with skin may cause dermal irritation.

12. Ecological information

Ecotoxicity

Aquatoxicity

Acute fish toxicity  41 mg/l
   Effective dose:
   LC50:
   Exposure time:  96 h

Acute Daphnia toxicity  18 mg/l
   Effective dose:
   EC50:
   Exposure time:  48 h

Algae toxicity  175 mg/l
   Effective dose:
   IC50:
   Exposure time:  96 h

Bacterial toxicity  975 mg/l
   Effective dose:
   EC50:
Exposure time: 5 min

Persistence and degradability

Biological degradation

Evaluation:
Not easily bio-degradable (according to OECD-criteria).

Bioaccumulative potential

accumulation/remark
is low (BCF < 100 oder log pOW < 3)

Distribution coefficient (n-octanol / water) (log P O/W): 2.42

Results of PBT assessment

Results of PBT assessment
The components in this formulation do not meet the criteria for classification as PBT or vPvB.

13. Disposal considerations

Appropriate disposal/Product
Waste disposal according to official state regulations.

Contaminated packaging
Contaminated packing must be completely emptied and can be re-used following appropriate cleaning. Packing which cannot be properly cleaned must be thrown away. Handle contaminated packaging in the same way as the substance itself.

Waste key product: 080409
Waste designation:
Waste adhesives and sealants containing organic solvents or other dangerous substances

14. Transport information

Overland transport (ADR/RID)

UN No. 1710
Official directive for the transport TRICHLOROETHYLENE
Class 6.1
Classification code T1
Packing Group III
Label 6.1
Limited quantity (LQ) 5 L
Hazard identification number (Kemler No.) 60
Tunnel restriction code E
Transport category 2

Transport by sea (IMDG)

UN-No. 1710
Proper Shipping Name TRICHLOROETHYLENE
IMDG-CODE-Class 6.1
Packing Group III
Remark Marine Pollutant: no; EMS-Nr. F-A; S-A
Air transport (ICAO-TI / IATA-DGR)
- **UN/ID number:** 1710
- **Proper Shipping Name:** Trichloroethylene
- **Class or Division:** 6.1
- **Packing Group:** III
- **Limited quantity (LQ):** 2
- **Remark:** toxic substances

15. Regulatory information

**EU-Regulations**

**Chemical Safety Assessment**
Chemical safety assessments for substances in this preparation were not carried out.

**Other regulations (EU)**

**Informations on working limitations**
- **CAS:** 79-01-6 Trichlorethylen
- **Very high concern (SVHC) under REACH, Article 57**

- **Volatile organic compounds (VOC) in percentage by weight:** <90 % by weight

**National regulations**

**Hazardous incident (reporting) ordinance**
- **Remark:** in Annex I, No: 9 (12 BlmSchV)

**Technical instructions on air (TA-AIR)**
- **Class:** III
- **Remark:** No. 5.2.7.1.1, ie that contained in the exhaust emission can the mass flow of 2.5 g / h or the mass concentration of 1 mg / m³ not exceed a total.

**Further regulations, limitations and legal requirements**

- **§ 3 ChemVerbotsV (Informations- und Aufzeichnungspflichten bei der Abgabe an Dritte).**
- **§ 4 ChemVerbotsV (Selbstbedienungsverbot, Versandhandel)**
- **Anhang Chemikalien-Verbotsverordnung (ChemVerbotsV). § 2 ChemVerbotsV (Erlaubnis- und Anzeigepflicht).**

**Informations on working limitations**

- **Do not sell or give to persons under the age of 18 years.**
- **§ 5 MuSchRiV**
- **§ 22 JArbSchG**
- **§ 4 MuSchRiV**

Workers shall not be exposed to this hazardous substance. In each case, the authority may allow exceptions.

**Water hazard class**
- **stark wassergefährdend (WGK 3) (very hazardous)**

**Source:**
- Rating acc. to VwVwS, Attachment 2

**Remark:**
- Kenn-Nummer: 199
16. Other information

Recommended restrictions of use

Remark:
For industrial purposes only.

Documentation of changes
Chapter 1-16

Further remarks
Notice the directions for use on the label.

Relevant R-and H-phrases (Number and full text)
R50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R67 Vapours may cause drowsiness and dizziness.
R68 Possible risks of irreversible effects.
R45 May cause cancer.
R36/38 Irritating to eyes and skin.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H336 May cause drowsiness or dizziness.
H341 Suspected of causing genetic defects (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard).
H350 May cause cancer (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard).
H400 Very toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.
H412 Harmful to aquatic life with long lasting effects.
R52 Harmful to aquatic organisms.
R53 May cause long-term adverse effects in the aquatic environment.

Data sources
Data arise from reference works and literature.

Training instructions
The product should be restricted to persons who were sufficiently informed about the work, the hazardous properties and necessary safety measures.