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

- Date of compilation: 16.11.2010
- 1.1 Product identifier
  - Trade name: PVC-Cold-Welding Liquid Type A, PVC-Cold-Welding Paste Type C, PVC-Cold-Welding Paste Type T
- 1.2 Relevant identified uses of the substance or mixture and uses advised against
- 1.3 Details of the supplier of the safety data sheet
  - Manufacturer / Supplier: Tarkett
    - 30000 Aurora Road
    - Solon, Ohio 44139
    - Germany
  - E-mail address of the competent person responsible for the Safety Data Sheet: sdb@csb-online.de
  - Informing department: Technical Department
  - 1-800-899-8916 ext. 9297
- 1.4 Emergency telephone number:
  - Call CHEMTREC Day or Night: DOMESTIC NORTH AMERICA 800-424-9300
  - International, call +49 621 60 43 333

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.
    - Health hazard
      - Carc. 2 H351 Suspected of causing cancer.
    - Acute Tox. 4 H302 Harmful if swallowed.
    - Eye Irrit. 2 H319 Causes serious eye irritation.
    - STOT SE 3 H335-H336 May cause respiratory irritation. May cause drowsiness or dizziness.
- 2.2 Label elements
  - Labelling according to Regulation (EC) No 1272/2008
    - The product is classified and labelled according to the CLP regulation.
  - Hazard pictograms
    - GHS02
    - GHS07
    - GHS08

(Contd. on page 2)
Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 27.05.2015
Version number 6
Revision: 27.05.2015

Trade name: PVC-Cold-Welding Liquid Type A,
PVC-Cold-Welding Paste Type C,
PVC-Cold-Welding Paste Type T

· Signal word Danger
· Hazard-determining components of labelling:
  Tetrahydrofuran
· Hazard statements
  H225 Highly flammable liquid and vapour.
  H302 Harmful if swallowed.
  H319 Causes serious eye irritation.
  H351 Suspected of causing cancer.
  H335-H336 May cause respiratory irritation. May cause drowsiness or dizziness.
· Precautionary statements
  P101 If medical advice is needed, have product container or label at hand.
  P102 Keep out of reach of children.
  P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
  P280 Wear protective gloves / protective clothing.
  P233 Keep container tightly closed.
  P202 Do not handle until all safety precautions have been read and understood.
  P312 Call a POISON CENTER/doctor if you feel unwell.
· Additional information:
  AUH019 May form explosive peroxides.
· 2.3 Other hazards
· Results of PBT and vPvB assessment
  · PBT: Not applicable.
  · vPvB: Not applicable.

SECTION 3: Composition/information on ingredients

· 3.2 Chemical characterisation: Mixtures
  · Description: Mixture of the substances listed below with nonhazardous additions.
  · Dangerous components:

<table>
<thead>
<tr>
<th>109-99-9 Tetrahydrofuran</th>
<th>75 - 95%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flam. Liq. 2, H225</td>
<td>Carc. 2, H351</td>
</tr>
</tbody>
</table>

· Additional information: For the wording of the listed risk phrases refer to section 16.

SECTION 4: First aid measures

· 4.1 Description of first aid measures
  · General information:
    Take affected persons out of danger area and instruct to lie down.
    Immediately remove any clothing contaminated by the product.
    Call a POISON CENTER/doctor if you feel unwell.
  · After inhalation: Supply fresh air; consult doctor in case of symptoms.
  · After skin contact:
    Instantly wash with water and soap and rinse thoroughly.
    If skin irritation continues, consult a doctor.
  · After eye contact: Rinse opened eye for several minutes under running water. Then consult doctor.
  · After swallowing:
    Rinse out mouth and then drink plenty of water.
    Do not induce vomiting; instantly call for medical help.
· 4.2 Most important symptoms and effects, both acute and delayed May cause drowsiness and dizziness.
· 4.3 Indication of any immediate medical attention and special treatment needed symptomatic treatment
SECTION 5: Firefighting measures

- **5.1 Extinguishing media**
  - Suitable extinguishing agents
    - Carbon dioxide (CO₂), extinguishing powder or water spray/fog. Fight larger fires with water spray/fog 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**
  - Can be released in case of fire:
    - Carbon monoxide (CO) and Carbon dioxide (CO₂)
    - Hydrogen chloride (HCl)
  - Can form explosive vapour-air mixtures.

- **5.3 Advice for firefighters**
  - Protective equipment: Wear self-contained breathing apparatus.
  - Additional information
    - Cool endangered containers with water spray jet.
    - Collect contaminated fire fighting water separately. It must not enter drains.
    - Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**
  - Wear protective clothing.
  - Ensure adequate ventilation.
  - Remove all ignition sources.
  - Avoid contact with skin and eyes.

- **6.2 Environmental precautions:**
  - Do not allow product to reach sewage system or water bodies.
  - Inform respective authorities in case product reaches water or sewage system.

- **6.3 Methods and material for containment and cleaning up:**
  - Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
  - Dispose of the material collected according to regulations.
  - Ensure adequate ventilation.
  - Send for recovery or disposal in suitable containers.

- **6.4 Reference to other sections**
  - See Section 8 for information on personal protection equipment.

SECTION 7: Handling and storage

- **7.1 Precautions for safe handling**
  - Ensure good ventilation/exhaustion at the workplace.
  - Ensure good interior ventilation, especially at floor level (fumes are heavier than air).
  - Make sure that all applicable workplace limits are observed.
  - Open and handle container with care.
  - Prevent formation of aerosols.
  - Avoid contact with skin and eyes.

- **Information about protection against explosions and fires:**
  - Fumes can combine with air to form an explosive mixture.
  - Keep ignition sources away - Do not smoke.
  - Protect against electrostatic charges.
  - Use explosion-proof apparatus / fittings and spark-proof tools.

- **7.2 Conditions for safe storage, including any incompatibilities**
  - Storage
  - Requirements to be met by storerooms and containers:
    - Store only in the original container.
Observe regulations for storage of flammable liquids.
Observe all local and national regulations for storage of water polluting products.
- **Information about storage in one common storage facility:** Store away from foodstuffs.
- **Further information about storage conditions:**
  - Store container in a well ventilated position.
  - Store in cool, dry conditions in well sealed containers.
  - Protect from overexposure to light.
  - Avoid contact with air / oxygen (formation of peroxide).
  - Store in a locked cabinet and out of the reach of children.
- **Maximum storage temperature:** 30 °C
- **Minimum storage temperature:** ≥ 0 °C
- **7.3 Specific end use(s)** No further relevant information available.

### SECTION 8: Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.

#### 8.1 Control parameters

<table>
<thead>
<tr>
<th>Component with critical values that require monitoring at the workplace:</th>
</tr>
</thead>
<tbody>
<tr>
<td>109-99-9 Tetrahydrofuran</td>
</tr>
<tr>
<td>NES (Australia) Long-term value: 295 mg/m³, 100 ppm</td>
</tr>
<tr>
<td>MAXELs</td>
</tr>
<tr>
<td>109-99-9 Tetrahydrofuran</td>
</tr>
<tr>
<td>Oral DNEL long-term exposure - systemic effects</td>
</tr>
<tr>
<td>Dermal DNEL long-term exposure - systemic effects</td>
</tr>
<tr>
<td>Inhalative DNEL acute / short-term exposure - local effects</td>
</tr>
<tr>
<td>Dermal DNEL acute / short-term exposure - systemic effect</td>
</tr>
<tr>
<td>Dermal DNEL long-term exposure - local effects</td>
</tr>
<tr>
<td>Dermal DNEL long-term exposure - systemic effects</td>
</tr>
<tr>
<td>Dermal MAXELs</td>
</tr>
</tbody>
</table>

| PNECs |
| 109-99-9 Tetrahydrofuran |
| PNEC | 4.32 mg/l (aqua (freshwater)) |
| | 21.6 mg/l (aqua (intermittent releases)) |
| | 0.432 mg/l (aqua (marine water)) |
| | 23.3 mg/kg (sediment (freshwater)) |
| | 2.33 mg/kg (sediment (marine water)) |
| | 2.13 mg/kg (soil) |
| | 4.6 mg/l (STP (sewage treatment plant)) |

- **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 contaminated garments.
  - Avoid contact with the eyes and skin.
  - Wash hands during breaks and at the end of the work.
  - Do not eat, drink or smoke while working.
· 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.
· Recommended filter device for short term use: Filter A
· Protection of hands:
  The glove material has to be impermeable and resistant to the product/ the substance / the preparation.
  Selection of the glove material on consideration of the penetration times, rates of diffusion and the
  degradation.
  Solvent resistant gloves.
  (THF)
· Material of 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. As the product is a preparation of several substances, the
  resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the
  application.
· 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.
· As protection from splashes gloves made of the following materials are suitable:
  Fluorocarbon rubber (Viton) - FKM
  Nitrile rubber - NBR
  Butyl rubber - BR
· Eye protection: Safety glasses
· Body protection:
  Protective work clothing
  Body protection must be chosen depending on activity and possible exposure.
· Limitation and supervision of exposure into the environment
  Do not allow to enter drainage system, surface or ground water.

SECTION 9: Physical and chemical properties

· 9.1 Information on basic physical and chemical properties
· General Information
· Appearance:
  Form: liquid
  Colour: colourless
· Smell: ether-like
· Odour threshold: no data available
· pH-value: not applicable
· Change in condition
  Melting point/Melting range: < -45 °C
  Boiling point/Boiling range: 65 °C (THF)
· Flash point: -21 °C (DIN 51755)
· Inflammability (solid, gaseous) not applicable
· Ignition temperature: 230 °C (THF)
· Decomposition temperature: Not determined.
· Self-inflammability: Product is not selfigniting.
· Danger of explosion: May form explosive peroxides.
  Product is not explosive. However, formation of explosive air/ vapour mixtures is possible.
SECTION 10: Stability and reactivity

- **10.1 Reactivity** see 10.3
- **10.2 Chemical stability**
  - Thermal decomposition / conditions to be avoided:
    Avoid impact, friction, heat, sparks, electrostatic charges.
    No decomposition if used according to specifications.
- **10.3 Possibility of hazardous reactions**
  Possible formation of peroxide
  Forms explosive gases / fumes
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:**
  Alkaline materials
  Strong oxidizing agents
  Oxygen
- **10.6 Hazardous decomposition products:**
  Hydrogen chloride (HCl)
  Carbon monoxide (CO) and Carbon dioxide (CO₂)

SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity:**
- **LD/LC50 values that are relevant for classification:**
  **109-99-9 Tetrahydrofuran**
<table>
<thead>
<tr>
<th>Route</th>
<th>LD50/LC50</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral</td>
<td>LD50</td>
<td>1650 mg/kg (rat)</td>
</tr>
<tr>
<td>Dermal</td>
<td>LD50</td>
<td>&gt; 2000 mg/kg (rat)</td>
</tr>
<tr>
<td>Inhalative</td>
<td>LC50/4 h</td>
<td>&gt; 14.7 mg/l (rat)</td>
</tr>
</tbody>
</table>
40.1.4

· **Primary irritant effect:**
  · on the skin: Long or repeated contact can defat skin and may cause dermatitis.
  · on the eye: Causes serious eye irritation.
  · inhalation: May cause respiratory irritation.

· **Subacute to chronic toxicity:** May cause drowsiness or dizziness.

· **Additional toxicological information:**
The product shows the following dangers according to the calculation method of the General EC Classification Guidelines for Preparations as issued in the latest version:

  - **Harmful**
  - **Irritant**
    - Inhalation of concentrated vapours may lead to anaesthesia-like conditions and headache, dizziness, etc.
  - **Sensitisation** No sensitizing effect known.
  - **CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)**
    - Limited evidence of a carcinogenic effect.
      - Carc. 2
    - **carcinogenity**
      - In long-term experiments in rats and mice with high concentrations (600 and 1800 ppm) tumours were observed (NTP-National Toxicology Program, USA, 1998). Since genotoxicity plays no or at most a minor part, the German MAK-Commission (DFG) has classified THF in Category 4, what means that no contribution to human cancer risk by THF is expected, provided the MAK/TWA (Maximum Allowable Concentration) are observed.
      - The EU has classified THF in 2012 as Carc.Cat. 3; R 40=Suspected of causing cancer.
    - **mutagenicity**
      - There is no evidence of mutagenicity or a genotoxic potential on the basis of in vitro and in vivo studies.
    - **toxicity for reproduction**
      - There is no evidence of adverse effects on reproduction on the basis of studies in rats and mice. No indication of adverse developmental effects in animal tests with non-toxic parental doses. Therefore there is no reason to fear damage to the embryo or foetus when the MAK/-TWA- values are observed (see section 8.1.1).

### SECTION 12: Ecological information

· **12.1 Toxicity**

  · **Aquatic toxicity:**
    - **109-99-9 Tetrahydrofuran**
      - EC50/48 h > 100 mg/l (water flea (daphnia magna))
      - LC50/96 h > 100 mg/l (fathead minnow (pimephales promelas))
      - NOEC > 100 mg/l (algae) (8 d)
      - > 100 mg/l (fathead minnow (pimephales promelas)) (33 d)

· **12.2 Persistence and degradability** A part of the components is biodegradable.
· **12.3 Bioaccumulative potential** No further relevant information available.
· **12.4 Mobility in soil** No further relevant information available.
· **Additional ecological information:**
  · **General notes:**
    - Do not allow undiluted product or large quantities of it to reach ground water, water bodies or sewage system.
    - Water hazard class 1 (Self-assessment): slightly hazardous for water
  · **12.5 Results of PBT and vPvB assessment**
    - **PBT:** Not applicable.
    - **vPvB:** Not applicable.
  · **12.6 Other adverse effects** No further relevant information available.
SECTION 13: Disposal considerations

13.1 Waste treatment methods

Recommendation
Hand over to disposers of hazardous waste.
Disposal must be made according to official regulations.

European waste catalogue:

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>08 04 09*</td>
<td>waste adhesives and sealants containing organic solvents or other dangerous substances</td>
</tr>
<tr>
<td>08 04 10</td>
<td>waste adhesives and sealants other than those mentioned in 08 04 09</td>
</tr>
</tbody>
</table>

Uncleaned packagings:

Recommendation:
Non contaminated packagings can be treated like household garbage.
Packagings that cannot be cleaned are to be disposed of in the same manner as the product.

SECTION 14: Transport information

14.1 UN-Number

ADG, IMDG, IATA UN1133

14.2 UN proper shipping name

ADG UN1133 ADHESIVES, Special provision 640D ADHESIVES

14.3 Transport hazard class(es)

ADG

<table>
<thead>
<tr>
<th>Class</th>
<th>Label</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 (F1) Flammable liquids.</td>
<td>3</td>
</tr>
</tbody>
</table>

IMDG, IATA

<table>
<thead>
<tr>
<th>Class</th>
<th>Label</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 Flammable liquids.</td>
<td>3</td>
</tr>
</tbody>
</table>

14.4 Packing group

ADG, IMDG, IATA II

14.5 Environmental hazards:

Marine pollutant: NO

14.6 Special precautions for user

<table>
<thead>
<tr>
<th>Kemler Number:</th>
<th>EMS Number:</th>
</tr>
</thead>
<tbody>
<tr>
<td>33</td>
<td>F-E,S-D</td>
</tr>
</tbody>
</table>

14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

Not applicable.

14.8 Transport/Additional information:

Transport by post may be prohibited or restricted.
Trade name: PVC-Cold-Welding Liquid Type A, PVC-Cold-Welding Paste Type C, PVC-Cold-Welding Paste Type T

- ADG
- Excepted quantities (EQ): E2
- Limited quantities (LQ): 5L
- Transport category: 2
- Tunnel restriction code: D/E
- UN "Model Regulation": UN1133, ADHESIVES, Special provision 640D, 3, II

SECTION 15: Regulatory information

- 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

Australian Inventory of Chemical Substances
109-99-9 Tetrahydrofuran

Standard for the Uniform Scheduling of Medicines and Poisons
None of the ingredients is listed.

- National regulations
- Information about limitation of use:
  Workers should not be exposed to the hazardous materials contained in this preparation. Exceptions can be made by the authorities in certain exceptional cases.
  Employment restrictions concerning pregnant and lactating women must be observed.
  Employment restrictions concerning young persons must be observed.
  Employment restrictions concerning women of child-bearing age must be observed.
- Decree to be applied in case of technical fault:
  Quantity limits according to "EC Seveso directive" should be observed.
- Water hazard class: Water hazard class 1 (Self-assessment): slightly hazardous for water
- VOC (EU): 75 - 95%
- 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.

- Relevant phrases
  The(se) R- resp. H-phrase(s) are those of the ingredient(s) and do(es) not necessarily represent the classification of the product.

- Department issuing MSDS:
  Product Safety Department
  C.S.B. GmbH Phone: +49 - 2151 - 652086-0
  Düsseldorfertor Str. 113 Fax: +49 - 2151 - 652086-9
  47809 Krefeld / Germany

- Abbreviations and acronyms:
  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
  ELINCS: European List of Notified Chemical Substances
  CAS: Chemical Abstracts Service (division of the American Chemical Society)
  MAL-Code: Måleteknisk Arbejdshygienisk Luftbehov (Regulation for the labeling concerning inhalation hazards, Denmark)
  DNEL: Derived No-Effect Level (REACH)
| **Trade name:** PVC-Cold-Welding Liquid Type A,  |
| PVC-Cold-Welding Paste Type C,  |
| PVC-Cold-Welding Paste Type T  |

| **PNEC:** Predicted No-Effect Concentration (REACH) |
| **LC50:** Lethal concentration, 50 percent |
| **LD50:** Lethal dose, 50 percent |
| **vPvB:** very Persistent and very Bioaccumulative |
| **Flam. Liq. 2:** Flammable liquids, Hazard Category 2 |
| **Acute Tox. 4:** Acute toxicity, Hazard Category 4 |
| **Eye Irrit. 2:** Serious eye damage/eye irritation, Hazard Category 2 |
| **Carc. 2:** Carcinogenicity, Hazard Category 2 |
| **STOT SE 3:** Specific target organ toxicity - Single exposure, Hazard Category 3 |

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