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

1.1 Product identifier

- Trade name: Uni-Starter
- Article number: 10520

1.2 Relevant identified uses of the substance or mixture and uses advised against

To this day we do not have any information about the identified use at the moment. These data are available we will add these to the safety data sheet.

- Application of the substance / the mixture
  - Photochemicals
  - Developer for X-ray films (additive)
  - Reserved for industrial and professional use.

1.3 Details of the supplier of the safety data sheet

- Manufacturer/Supplier:
  - Calbe Chemie GmbH
  - Stadtfeld 31
  - D-39240 Calbe
  - Tel.: +49 (0)39291 425-0
  - Fax: +49 (0)39291 425-25
  - e-mail: info@calbe-chemie.de
  - www.calbe-chemie.de

- Informing department:
  - Tel.: +49 (0)39291 42515
  - E-Mail: kr@calbe-chemie.de

1.4 Emergency telephone number:

Tel.: 0700-24112112 (CAL)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

- Classification according to Regulation (EC) No 1272/2008

- GHS05 corrosion
  - Met. Corr.1 H290 May be corrosive to metals.

- GHS07
  - Skin Irrit. 2 H315 Causes skin irritation.
  - Eye Irrit. 2 H319 Causes serious eye irritation.

2.2 Label elements

- Labelling according to Regulation (EC) No 1272/2008
  - The product is classified and labelled according to the CLP regulation.

(Contd. on page 2)
Trade name: Uni-Starter

- Hazard pictograms

  GHS05

- Signal word Warning
- Hazard statements
  H290 May be corrosive to metals.
  H315 Causes skin irritation.
  H319 Causes serious eye irritation.
- Precautionary statements
  P280 Wear protective gloves / eye protection.
  P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
  P337+P313 If eye irritation persists: Get medical advice/attention.
  P390 Absorb spillage to prevent material damage.
  P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

- 2.3 Other hazards
  - Results of PBT and vPvB assessment
    - PBT: Not applicable.
    - vPvB: Not applicable.

*SECTION 3: Composition/information on ingredients*

- 3.2 Mixtures
  - Description: Mixture of the substances listed below with harmless additions.
  - Dangerous components:

    | CAS: 64-19-7 | acetic acid | Flam. Liq. 3, H226 |
    | EINECS: 200-580-7 | | Skin Corr. 1A, H314 |
    | Index number: 607-002-00-6 | | Acute Tox. 4, H312 |
    | Reg.nr.: 01-2119475328-30-xxxx | | 10-15% |

  - Additional information For the wording of the listed hazard phrases refer to section 16.

*SECTION 4: First aid measures*

- 4.1 Description of first aid measures
  - General information
    Personal protection for the First Aider.
    Instantly remove any clothing soiled by the product.
  - After inhalation Supply fresh air.
  - After skin contact Instantly wash with water and soap and rinse thoroughly.

(Contd. on page 3)
Trade name: Uni-Starter

· **After eye contact**
  Rinse opened eye for several minutes under running water. If symptoms persist, 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**
  No known symptoms to date.

· **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.
  Use fire fighting measures that suit the environment.
  For safety reasons unsuitable extinguishing agents
  Water with a full water jet.

· **5.2 Special hazards arising from the substance or mixture**
  Formation of toxic gases is possible during heating or in case of fire.

· **5.3 Advice for firefighters**
  Protective equipment:
  Do not inhale explosion gases or combustion gases.
  At formation of toxic gases:
  Put on breathing apparatus.

· **Additional information**
  The product is not flammable

**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**
  Do not allow to enter drainage system, surface or ground water.

· **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.

· **6.4 Reference to other sections**
  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**
  No special precautions necessary if used correctly.

· **Information about protection against explosions and fires**
  No special measures required.
  The product is not flammable
7.2 Conditions for safe storage, including any incompatibilities
   · Storage
   · Requirements to be met by storerooms and containers: No special requirements.
   · Information about storage in one common storage facility:
     Keep away from foodstuffs, beverages and food.
   · Further information about storage conditions:
     Keep container tightly sealed.
     Store in a cool place.
   · Recommended storage temperature: 5-25°C
   · Storage class
     LGK 12
     (German Technical Rule for Hazardous Substance – TRGS 510)
   · 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 section 7.
   · Control parameters
     · Components with limit values that require monitoring at the workplace:
       · Additional information: The lists that were valid during the compilation were used as basis.
   · Exposure controls
     · Personal protective equipment
       · General protective and hygienic measures
         The usual precautionary measures should be adhered to general rules for handling chemicals.
         Keep away from foodstuffs, beverages and food.
         Take off immediately all contaminated clothing.
         Wash contaminated clothing before reuse.
         Do not eat, drink or smoke while working.
         Wash hands during breaks and at the end of the work.
         Avoid contact with the eyes and skin.
       · Breathing equipment: Not required.
       · Protection of hands:
         Protective gloves.
         Only use chemical-protective gloves with CE-labelling of category III.
         The protective gloves to be used must comply with the specifications of the EC directive 89/686/EEC and the resultant standard EN 374.
         This recommendation applies only to the product stated in the Safety Data Sheet and supplied by us as well as to the purpose specified by us.
         Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
       · Material of gloves
         | Thickness | Breakthrough time |
         | (mm)      | (min)            |
         | Nitril rubber | 0,38    | > 480   |
         | Neoprene     | 0,65     | > 240   |
         | Butyl rubber  | 0,36     | > 480   |
Avoid natural rubber gloves.
• **As protection from splashes gloves made of the following materials are suitable:**
  Synthetic gloves
  Value for permeation: Level:
  ≥ 3 (60 min)
• **Eye protection:** Safety glasses
• **Body protection:** Protective work clothing.

### SECTION 9: Physical and chemical properties

<table>
<thead>
<tr>
<th>9.1 Information on basic physical and chemical properties</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>General Information</td>
<td></td>
</tr>
<tr>
<td><strong>Appearance:</strong></td>
<td></td>
</tr>
<tr>
<td>Form:</td>
<td>Fluid</td>
</tr>
<tr>
<td>Colour:</td>
<td>Colourless</td>
</tr>
<tr>
<td>Odour:</td>
<td>Acidic</td>
</tr>
<tr>
<td><strong>pH-value at 25 °C:</strong></td>
<td>1.95</td>
</tr>
<tr>
<td><strong>Change in condition</strong></td>
<td></td>
</tr>
<tr>
<td>Melting point/freezing point:</td>
<td>Not determined</td>
</tr>
<tr>
<td>Initial boiling point and boiling range:</td>
<td>&gt; 100 °C</td>
</tr>
<tr>
<td><strong>Flash point:</strong></td>
<td>Not applicable</td>
</tr>
<tr>
<td><strong>Ignition temperature:</strong></td>
<td>485 °C</td>
</tr>
<tr>
<td><strong>Self-inflammability:</strong></td>
<td>Product is not selfigniting.</td>
</tr>
<tr>
<td><strong>Explosive properties:</strong></td>
<td>Product is not explosive.</td>
</tr>
<tr>
<td><strong>Critical values for explosion:</strong></td>
<td></td>
</tr>
<tr>
<td>Lower:</td>
<td>4.0 Vol %</td>
</tr>
<tr>
<td>Upper:</td>
<td>17.0 Vol %</td>
</tr>
<tr>
<td><strong>Vapour pressure at 20 °C:</strong></td>
<td>23 hPa</td>
</tr>
<tr>
<td><strong>Density at 20 °C:</strong></td>
<td>1.125 g/cm³</td>
</tr>
<tr>
<td><strong>Solubility in / Miscibility with Water:</strong></td>
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</tr>
<tr>
<td><strong>Viscosity:</strong></td>
<td></td>
</tr>
<tr>
<td>dynamic:</td>
<td>Not determined</td>
</tr>
<tr>
<td>kinematic:</td>
<td>Not determined</td>
</tr>
<tr>
<td><strong>Solvent content:</strong></td>
<td></td>
</tr>
<tr>
<td>Organic solvents:</td>
<td>-</td>
</tr>
</tbody>
</table>

| 9.2 Other information | No further relevant information available. |

(Contd. on page 6)
SECTION 10: Stability and reactivity

- 10.1 Reactivity: No further relevant information available.
- 10.2 Chemical stability
  - Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
- 10.3 Possibility of hazardous reactions: Reacts with strong acids and alkali
- 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: Based on available data, the classification criteria are not met.

<table>
<thead>
<tr>
<th>64-19-7 acetic acid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral LD50 3310 mg/kg (rat)</td>
</tr>
<tr>
<td>Dermal LD50 1060 mg/kg (rabbit)</td>
</tr>
</tbody>
</table>

- Primary irritant effect:
  - Skin corrosion/irritation: Causes skin irritation.
  - Serious eye damage/irritation: Causes serious eye irritation.
- Respiratory or skin sensitisation: Based on available data, the classification criteria are not met.
- Subacute to chronic toxicity: No known symptoms to date.
- Additional toxicological information:
  - This statement was deduced from the properties of the single components.
  - CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)
    - Germ cell mutagenicity: Based on available data, the classification criteria are not met.
    - Carcinogenicity: Based on available data, the classification criteria are not met.
  - Reproductive toxicity: Based on available data, the classification criteria are not met.
  - STOT-single exposure: Based on available data, the classification criteria are not met.
  - STOT-repeated exposure: Based on available data, the classification criteria are not met.
  - Aspiration hazard: Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

- 12.1 Toxicity
  - Aquatic toxicity:
    - 64-19-7 acetic acid
      - LC50/96 h 75 mg/l (Lepomis macrochirus)

- 12.2 Persistence and degradability: Not determined
12.3 Bioaccumulative potential Not determined

12.4 Mobility in soil No further relevant information available.

Ecotoxic effects: No further relevant information available.

Behaviour in sewage processing plants: Not determined

Additional ecological information:

General notes:
At present there are no ecotoxicological assessments.
This statement was deduced from the properties of the single components.
Water hazard class 1 (German Regulation) (Self-assessment): Weakly water-endangering.

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
Must not be disposed of together with household garbage. Do not allow product to reach sewage system. Must be specially treated under adherence to official regulations.

European waste catalogue
09 01 01* water-based developer and activator solutions

Uncleaned packagings:

Recommendation:
Non contaminated packagings can be used for recycling. Empty contaminated packagings thoroughly. They can be recycled after thorough and proper cleaning. Packagings that cannot be cleaned are to be disposed of in the same manner as the product. EAK-No. 15 01 10

Recommended cleaning agent: Water, if necessary with cleaning agent.

SECTION 14: Transport information

14.1 UN-Number
ADR/RID, IMDG, IATA UN 2790

14.2 UN proper shipping name
ADR/RID ACETIC ACID SOLUTION mixture
IMDG, IATA ACETIC ACID SOLUTION

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Trade name: Uni-Starter

14.3 Transport hazard class(es)
- ADR/RID, IMDG, IATA

Class: 8
Label: Corrosive substances.

14.4 Packing group
- ADR/RID, IMDG, IATA
- Class: 8
- Label: Corrosive substances.
- Packing group: III

14.5 Environmental hazards:
- Marine pollutant: No

14.6 Special precautions for user
- Warning: Corrosive substances.
- Kemler Number: 80
- EMS Number: F-A,S-B
- Segregation groups: 1 - Acids

14.7 Transport in bulk according to Annex II of Marpol and the IBC Code
- Not applicable.

Transport/Additional information:

- ADR/RID
  - Limited quantities (LQ): 5 l
  - Transport category: 3
  - Tunnel restriction code: (E)
  - Remarks: "Limited quantity" according to chapter 3.4 ADR, if carried in combination packagings with not more than 5 litres per inner packaging and not more than 30 kg per package.

- IMDG
  - Limited quantities (LQ): 5 l
  - Remarks: "Limited quantity" according to chapter 3.4 IMDG, if carried in combination packagings with not more than 5 litres per inner packaging and not more than 30 kg per package.

- IATA
  - Remarks: Packing Instruction PAX 852, CAO 856

- UN "Model Regulation": UN 2790 ACETIC ACID SOLUTION MIXTURE, 8, III
SECTION 15: Regulatory information

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

- Directive 2012/18/EU
- Named dangerous substances - ANNEX I None of the ingredients is listed.
- REGULATION (EC) No 1907/2006 ANNEX XVII Conditions of restriction: 3

- National regulations

<table>
<thead>
<tr>
<th>Class</th>
<th>Share in %</th>
</tr>
</thead>
<tbody>
<tr>
<td>II</td>
<td>13.0</td>
</tr>
</tbody>
</table>


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
  H226 Flammable liquid and vapour.
  H312 Harmful in contact with skin.
  H314 Causes severe skin burns and eye damage.

- Recommended restriction of use No public product, only for commercial use

- Department issuing data specification sheet:
  Laboratory
  Tel.: +49 (0)39291 425-15

- 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)
  ICAO: International Civil Aviation Organisation
  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)
  LD50: Lethal dose, 50 percent
  LC50: Lethal concentration, 50 percent
  PBT: Persistent, Bioaccumulative and Toxic
  vPvB: very Persistent and very Bioaccumulative
  Flam. Liq. 3: Flammable liquids – Category 3
  Met. Corr. 1: Corrosive to metals – Category 1
  Acute Tox. 4: Acute toxicity – Category 4
  Skin Corr. 1A: Skin corrosion/irritation – Category 1A
  Skin Irrit. 2: Skin corrosion/irritation – Category 2
  Eye Irrit. 2: Serious eye damage/eye irritation – Category 2

(Contd. of page 8)
Trade name: Uni-Starter

- **Sources**
  - applicable EEC directives:
    - 1907/2006
    - 1272/2008
  - Internal physical tests, MSDS of the ingredients,
  - Information system on hazardous substances of the German Social Accident Insurance

- * Data compared to the previous version altered.