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

- **1.1 Product identifier**
  - Trade name: AR-PC 5090 series
  - Article number: AR-PC 5090.02, AR-PC 5091.02

- **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**
  - Intermediate product for the electronics industry. For industrial and commercial use only.

- **1.3 Details of the supplier of the safety data sheet**
  - **Manufacturer/Supplier:**
    - Allresist GmbH
    - Am Biotop 14
    - 15344 Strausberg
    - GERMANY
  - E-Mail: info@allresist.de
  - Tel.: +49 3341 35 93 0
  - **Further information obtainable from:** Sales
  - **1.4 Emergency telephone number:**
    - Poison center of the Charité Berlin:
      +4930 30686700
    - E-Mail: giftnotruf@charite.de

**SECTION 2: Hazards identification**

- **2.1 Classification of the substance or mixture**
  - Classification according to Regulation (EC) No 1272/2008

  - Flam. Liq. 3 H226 Flammable liquid and vapour.
  - 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: AR-PC 5090 series

- **Hazard pictograms**
  - GHS02
  - GHS07

- **Signal word** Warning

- **Hazard statements**
  - H226 Flammable liquid and vapour.
  - H319 Causes serious eye irritation.

- **Precautionary statements**
  - P101 If medical advice is needed, have product container or label at hand.
  - P102 Keep out of reach of children.
  - P103 Read carefully and follow all instructions.
  - P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
  - P241 Use explosion-proof [electrical/ventilating/lighting] equipment.
  - P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.
  - P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or 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.
  - 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 substances listed below with nonhazardous additions.

<table>
<thead>
<tr>
<th>Dangerous components:</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAS: 9005-64-3 Polysorbate 20 Acute Tox. 2, H300</td>
</tr>
</tbody>
</table>

  - **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:** Immediately remove any clothing soiled by the product.
  - **After skin contact:** Immediately rinse with water.
  - **After eye contact:** Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
  - **After swallowing:** If symptoms persist consult doctor.

- **4.2 Most important symptoms and effects, both acute and delayed** No further relevant information available.

(Contd. on page 3)
SECTION 5: Firefighting measures

- 5.1 Extinguishing media
  - Suitable extinguishing agents:
    CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

- 5.2 Special hazards arising from the substance or mixture
  - No further relevant information available.

- 5.3 Advice for firefighters
  - Protective equipment: No special measures required.

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:
  - Dilute with plenty of water.
  - Do not allow to enter sewers/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 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 disposal information.

SECTION 7: Handling and storage

- 7.1 Precautions for safe handling
  - No special precautions are necessary if used correctly.

- 7.2 Conditions for safe storage, including any incompatibilities
  - Storage:
    - Requirements to be met by storerooms and receptacles: No special requirements.
    - Information about storage in one common storage facility: Not required.
    - Further information about storage conditions: Keep container tightly sealed.
    - Recommended storage temperature: 8-12°C
    - Storage class (TRGS): 3

- 7.3 Specific end use(s)
  - No further relevant information available.

SECTION 8: Exposure controls/personal protection

- 8.1 Control parameters
  - Ingredients with limit values that require monitoring at the workplace:
    - 67-63-0 propan-2-ol
      - WEL: Short-term value: 1250 mg/m³, 500 ppm
        - Long-term value: 999 mg/m³, 400 ppm

(Contd. on page 4)
Trade name: AR-PC 5090 series

- **DNELs**

<table>
<thead>
<tr>
<th>67-63-0 propan-2-ol</th>
<th>Oral</th>
<th>DNEL Long-term - oral, systemic effects</th>
<th>26 mg/kg bw/day (rat)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Dermal</td>
<td>DNEL Long-term – dermal, systemic effects</td>
<td>888 mg/kg bw/day (rat)</td>
</tr>
<tr>
<td></td>
<td>Inhalative</td>
<td>DNEL Long-term – inhalation, systemic effects</td>
<td>500 mg/m³/day (rat)</td>
</tr>
</tbody>
</table>

- **PNECs**

<table>
<thead>
<tr>
<th>67-63-0 propan-2-ol</th>
</tr>
</thead>
<tbody>
<tr>
<td>PNEC short term, fresh water</td>
</tr>
<tr>
<td>PNEC short term, sea water</td>
</tr>
<tr>
<td>PNEC short term, sewage plant</td>
</tr>
<tr>
<td>PNEC short term fresh water sediment</td>
</tr>
<tr>
<td>PNEC short term soil</td>
</tr>
<tr>
<td>PNEC short term sea water sediment</td>
</tr>
<tr>
<td>PNEC short term, intermittent releases</td>
</tr>
<tr>
<td>PNEC secondary poisoning</td>
</tr>
</tbody>
</table>

- **Additional information:** The lists valid during the making were used as basis.

- **8.2 Exposure controls**

- **Appropriate engineering controls** No further data; see item 7.
- **Individual protection measures, such as personal protective equipment**
- **General protective and hygienic measures:**
  - Keep away from foodstuffs, beverages and feed.
  - Immediately remove all soiled and contaminated clothing
  - Wash hands before breaks and at the end of work.
  - Avoid contact with the eyes.
  - Avoid contact with the eyes and skin.
- **Respiratory protection:** Not required.
- **Hand protection**

  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**

  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.
SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties
- General Information
  - Physical state: Fluid
  - Colour: Dark brown
  - Odour: Alcohol-like
  - Odour threshold: Not determined.
  - Melting point/freezing point: Undetermined.
  - Boiling point or initial boiling point and boiling range: >100 °C
  - Flammability: Not applicable.
  - Lower and upper explosion limit: Lower: 2 Vol %, Upper: 12 Vol %
  - Flash point: 28 °C
  - Auto-ignition temperature: Product is not selfigniting.
  - Decomposition temperature: Not determined.
  - pH at 20 °C: 4
  - Viscosity: Not determined.
  - Kinematic viscosity: Not determined.
  - Dynamic: Not determined.
  - Solubility:
    - water: Fully miscible.
  - Partition coefficient n-octanol/water (log value): Not determined.
  - Vapour pressure: Not determined.
  - Density and/or relative density:
    - Density at 20 °C: 0.96 g/cm³
    - Relative density: Not determined.
    - Vapour density: Not determined.

9.2 Other information
- Appearance: Fluid
- Important information on protection of health and environment, and on safety:
  - Ignition temperature: 425 °C
  - Explosive properties: Product is not explosive. However, formation of explosive air/vapour mixtures are possible.
- Solvent content:
  - Organic solvents: 9.8-19.5 %
  - Water: 78-87.5 %
  - VOC (EC): 9.75-19.5 %
- Change in condition
  - Evaporation rate: Not determined.
- Information with regard to physical hazard classes
  - Explosives: Void
  - Flammable gases: Void
Trade name: AR-PC 5090 series

**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** 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 hazard classes as defined in Regulation (EC) No 1272/2008**
- **Acute toxicity**
  - **LD/LC50 values relevant for classification:**
    - **ATE (Acute Toxicity Estimates)**
      - **Oral** LD50 6,673 mg/kg
      - **67-63-0 propan-2-ol**
        - **Oral** LD50 5,045 mg/kg (rat)
      - **Dermal** LD50 12,800 mg/kg (rabbit)
      - **9005-64-5 Polysorbate 20**
        - **Oral** LD50 36.7 mg/kg (rat)
- **Serious eye damage/irritation** Causes serious eye irritation.
- **11.2 Information on other hazards**
- **Endocrine disrupting properties**
  - None of the ingredients is listed.
Trade name: AR-PC 5090 series

SECTION 12: Ecological information

12.1 Toxicity

Aquatic toxicity:

<table>
<thead>
<tr>
<th>Propan-2-ol 67-63-0</th>
<th>LC50 4h (mg/l) (rat)</th>
<th>30 mg/l</th>
<th>LC50 96h (mg/ltr) (Fish)</th>
<th>9.640 mg/ltr</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inhale</td>
<td>LC50 48h (mg/ltr) (Fish, minnows)</td>
<td>&gt;100 mg/ltr</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>EC50 48h (mg/l) (Daphnia magna)</td>
<td>&gt;100 mg/l</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>EC50 72h (mg/l) (algae)</td>
<td>&gt;100 mg/l (algae)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

12.2 Persistence and degradability

67-63-0 propan-2-ol 95%

12.3 Bioaccumulative potential No further relevant information available.

12.4 Mobility in soil No further relevant information available.

12.5 Results of PBT and vPvB assessment

PBT: Not applicable.

vPvB: Not applicable.

12.6 Endocrine disrupting properties

The product does not contain substances with endocrine disrupting properties.

12.7 Other adverse effects No further relevant information available.

Additional ecological information:

General notes:

Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Recommendation

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

Uncleaned packaging:

Recommendation: Disposal must be made according to official regulations.

Recommended cleansing agents: Water, if necessary together with cleansing agents.

SECTION 14: Transport information

14.1 UN number or ID number

ADR, IMDG, IATA

UN1993

14.2 UN proper shipping name

ADR

1993 FLAMMABLE LIQUID, N.O.S. (ISOPROPA NOL (ISOPROPYL ALCOHOL))

IMDG, IATA

FLAMMABLE LIQUID, N.O.S. (ISOPROPANOL (ISOPROPYL ALCOHOL))
Trade name: AR-PC 5090 series

- **14.3 Transport hazard class(es)**
  - **ADR, IMDG, IATA**
    - **Class** 3 Flammable liquids.
    - **Label** 3

- **14.4 Packing group**
  - **ADR, IMDG, IATA** III

- **14.5 Environmental hazards:** Not applicable.

- **14.6 Special precautions for user**
  - **Hazard identification number (Kemler code):** Warning: Flammable liquids. 30
  - **EMS Number:** F-E,S-D
  - **Stowage Category** A

- **14.7 Maritime transport in bulk according to IMO instruments** Not applicable.

- **Transport/Additional information:**
  - **ADR**
    - **Limited quantities (LQ)** 5L
    - **Excepted quantities (EQ)** Code: E1
      - Maximum net quantity per inner packaging: 30 ml
      - Maximum net quantity per outer packaging: 1000 ml
  - **Transport category** 3
  - **Tunnel restriction code** D/E
  
  - **IMDG**
    - **Limited quantities (LQ)** 5L
    - **Excepted quantities (EQ)** Code: E1
      - Maximum net quantity per inner packaging: 30 ml
      - Maximum net quantity per outer packaging: 1000 ml

- **UN "Model Regulation":** UN 1993 FLAMMABLE LIQUID, N. O. S. (ISOPROPANOL (ISOPROPYL ALCOHOL)), 3, III

**SECTION 15: Regulatory information**

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture:** (Substances not listed)
  - None of the ingredients is listed.

- **Directive 2012/18/EU**
- **Named dangerous substances - ANNEX I** None of the ingredients is listed.
- **Seveso category P5c FLAMMABLE LIQUIDS**
- **Qualifying quantity (tonnes) for the application of lower-tier requirements** 5,000 t
- **Qualifying quantity (tonnes) for the application of upper-tier requirements** 50,000 t

- **National regulations:**
  - **VOC (EU)** 372.6-1,170 g/l
**SECTION 16: Other information**

- **Disclaimer**
  
  This safety data sheet contains only safety relevant information. The information is based on the state of our knowledge at the time of revision, however, it does not constitute a guarantee of product properties, product information or product specifications and does not establish a contractual legal relationship. This document is only valid in its unchanged form. In the event of changes by third parties, the exhibitor accepts no responsibility for form and content or for any damages or claims arising from such changes. The information is not transferable to other products. If the product named in this safety data sheet is mixed, blended or processed with other materials or is subjected to processing, the information in this safety data sheet cannot be transferred to the new material produced in this way, unless expressly stated otherwise. The data sheet does not release the user from the obligation to ensure that he acts in accordance with all regulations in connection with his activity.

- **Relevant phrases**
  
  H225 Highly flammable liquid and vapour.
  H300 Fatal if swallowed.
  H319 Causes serious eye irritation.
  H336 May cause drowsiness or dizziness.

- **Department issuing SDS:** Quality Management department

- **Contact:** MSDS authorized Person

- **Abbreviations and acronyms:**
  
  ADR: Accord relatif au transport international 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)
  VOC: Volatile Organic Compounds (USA, EU)
  DNEL: Derived No-Effect Level (REACH)
  PNEC: Predicted No-Effect Concentration (REACH)
  LC50: Lethal concentration, 50 percent
  LD50: Lethal dose, 50 percent
  PBT: Persistent, Bioaccumulative and Toxic
  vPvB: very Persistent and very Bioaccumulative
  Flam. Liq. 2: Flammable liquids – Category 2
  Flam. Liq. 3: Flammable liquids – Category 3
  Acute Tox. 2: Acute toxicity – Category 2
  Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
  STOT SE 3: Specific target organ toxicity (single exposure) – Category 3