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

1.1 Product identifier

Trade name

Armafinish 99

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

Relevant identified uses of the substance or mixture

Protective coat for insulation material based on synthetic rubber for outside installation and for making purposes for interior use.

Uses advised against

No data available.

1.3 Details of the supplier of the safety data sheet

Address

Armacell GmbH
Robert-Bosch-Straße 10
48153 Münster

Telephone no. +49 (0) 251 - 7603-200
Fax no. +49 (0) 251 - 7603-561

Information provided by / telephone

Dr. Heribert Quante, Tel.: +49 (0) 251 - 7603-227

Advice on Safety Data Sheet

heribert.quante@armacell.com

1.4 Emergency telephone number

For medical advice (in German and English): +49 (0)551 192 40 (Giftinformationszentrum Nord)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification in accordance with Regulation (EC) No 1272/2008 (CLP)

Aquatic Chronic 2; H411
Repr. 2; H361fd

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008 (CLP Regulation)

Hazard pictograms

GHS08
GHS09

Signal word

Warning

Hazardous component(s) to be indicated on label:

tris(methyl/phenyl) phosphate

Hazard statements

H361fd Suspected of damaging fertility. Suspected of damaging the unborn child.
H411 Toxic to aquatic life with long lasting effects.

Hazard statements (EU)

EUH208 Contains 1,2-benzisothiazol-3(2H)-one. May produce an allergic reaction.

Precautionary statements

P201 Obtain special instructions before use.
P273 Avoid release to the environment.
P280 Wear protective gloves/eye protection.
P308+P313 IF exposed or concerned: Get medical advice/attention.
P391 Collect spillage.
P501 Dispose of contents/container to hazardous or special waste collection point.
2.3 Other hazards
   PBT assessment
      No data available.
   vPvB assessment
      No data available.

SECTION 3: Composition/information on ingredients

3.1 Substances
   Not applicable. The product is not a substance.

3.2 Mixtures
   Hazardous ingredients

<table>
<thead>
<tr>
<th>No</th>
<th>Substance name</th>
<th>CAS / EC / Index / REACH no</th>
<th>Classification (EC) 1272/2008 (CLP)</th>
<th>Concentration %</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>tris(methylphenyl) phosphate</td>
<td>1330-78-5</td>
<td>Repr. 2; H361fd</td>
<td>&gt; 5.00 - &lt; 10.00</td>
</tr>
<tr>
<td></td>
<td>215-548-8</td>
<td></td>
<td>Aquatic Acute 1; H400</td>
<td></td>
</tr>
<tr>
<td></td>
<td>-</td>
<td></td>
<td>Aquatic Chronic 1; H410</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>1,2-benzisothiazol-3(2H)-one</td>
<td>2634-33-5</td>
<td>Acute Tox. 4*; H302</td>
<td>&lt; 0.05</td>
</tr>
<tr>
<td></td>
<td>220-120-9</td>
<td></td>
<td>Aquatic Acute 1; H400</td>
<td></td>
</tr>
<tr>
<td></td>
<td>613-088-00-6</td>
<td></td>
<td>Eye Dam. 1; H318</td>
<td></td>
</tr>
<tr>
<td></td>
<td>-</td>
<td></td>
<td>Skin Irrit. 2; H315</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Skin Sens. 1; H317</td>
<td></td>
</tr>
</tbody>
</table>

Full Text for all H-phrases and EUH-phrases; pls. see section 16
(*,**,***,***) Detailed explanation pls. refer to CLP regulation No. 1272/2008, annex VI, 1.2

<table>
<thead>
<tr>
<th>No</th>
<th>Note</th>
<th>Specific concentration limits</th>
<th>M-factor (acute)</th>
<th>M-factor (chronic)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>-</td>
<td>Skin Sens. 1; H317: C &gt;= 0.05%</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

SECTION 4: First aid measures

4.1 Description of first aid measures
   General information
      In case of persisting adverse effects, consult a physician. Change contaminated, saturated clothing.
   After inhalation
      When inhaled remove to fresh air and seek medical aid.
   After skin contact
      When in contact with the skin, clean with soap and water.
   After eye contact
      Remove contact lenses, irrigate copiously with clean, fresh water for at least 15 minutes, holding the eyelids apart and seek medical advice.
   After ingestion
      Do not induce vomiting. Call a doctor immediately.

4.2 Most important symptoms and effects, both acute and delayed
   No data available.

4.3 Indication of any immediate medical attention and special treatment needed
   No data available.

SECTION 5: Firefighting measures

5.1 Extinguishing media
   Suitable extinguishing media
      Water spray jet; Carbon dioxide; Dry chemical extinguisher; Foam
   Unsuitable extinguishing media
      High power water jet

5.2 Special hazards arising from the substance or mixture
   In the event of fire, the following can be released: Carbon monoxide (CO); Carbon dioxide (CO2); Phosphorus oxides
5.3 **Advice for firefighters**

Use self-contained breathing apparatus. Wear protective clothing. Fire residues and contaminated firefighting water must be disposed of in accordance with the local regulations.

---

### SECTION 6: Accidental release measures

6.1 **Personal precautions, protective equipment and emergency procedures**

**For non-emergency personnel**
Avoid contact with skin, eyes and clothing. Refer to protective measures listed in sections 7 and 8.

**For emergency responders**
No data available. Personal protective equipment (PPE) - see Section 8.

6.2 **Environmental precautions**

Do not discharge into the drains/surface waters/groundwater. Do not discharge into the subsoil/soil. In case of entry into waterways, soil or drains, inform the responsible authorities.

6.3 **Methods and material for containment and cleaning up**

Pick up rest with absorbent material (e.g. sand, sawdust, general-purpose binder, kieselguhr). When picked up, treat material as prescribed under heading "Disposal considerations".

6.4 **Reference to other sections**

No data available.

---

### SECTION 7: Handling and storage

7.1 **Precautions for safe handling**

**Advice on safe handling**
No special measures necessary if stored and handled as prescribed. Provide good ventilation of working area (local exhaust ventilation, if necessary).

**General protective and hygiene measures**
Do not eat, drink or smoke during work time. Keep away from foodstuffs and beverages. Wash hands before breaks and after work.

**Advice on protection against fire and explosion**
No special measures necessary.

7.2 **Conditions for safe storage, including any incompatibilities**

**Technical measures and storage conditions**
Keep container tightly closed in a cool, well-ventilated place. Protect from heat and direct sunlight.

**Requirements for storage rooms and vessels**
Containers which are opened must be carefully closed and kept upright to prevent leakage.

**Advice on storage assembly**
Do not store together with: Oxidizing agents.

7.3 **Specific end use(s)**

No data available.

---

### SECTION 8: Exposure controls/personal protection

8.1 **Control parameters**

**DNEL and PNEC values**

<table>
<thead>
<tr>
<th>No</th>
<th>Substance name</th>
<th>Route of exposure</th>
<th>Exposure time</th>
<th>Effect</th>
<th>CAS / EC no</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>tris(methylphenyl) phosphate</td>
<td></td>
<td></td>
<td></td>
<td>1330-78-5</td>
<td>3.33 mg/kg/day</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>215-548-8</td>
<td></td>
</tr>
<tr>
<td></td>
<td>dermal</td>
<td>Long term (chronic)</td>
<td>systemic</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Short term (acut)</td>
<td>systemic</td>
<td>74</td>
<td>mg/kg/day</td>
<td></td>
</tr>
<tr>
<td></td>
<td>dermal</td>
<td>Short term (acut)</td>
<td>local</td>
<td>16</td>
<td>mg/cm²</td>
<td></td>
</tr>
<tr>
<td></td>
<td>inhalative</td>
<td>Long term (chronic)</td>
<td>systemic</td>
<td>0.47</td>
<td>mg/m³</td>
<td></td>
</tr>
<tr>
<td></td>
<td>inhalative</td>
<td>Short term (acut)</td>
<td>systemic</td>
<td>1.11</td>
<td>mg/m³</td>
<td></td>
</tr>
</tbody>
</table>
DNEL value (consumer)

<table>
<thead>
<tr>
<th>No</th>
<th>Substance name</th>
<th>CAS / EC no</th>
<th>Route of exposure</th>
<th>Exposure time</th>
<th>Effect</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>tris(methylphenyl) phosphate</td>
<td>1330-78-5, 215-548-8</td>
<td>oral</td>
<td>Long term (chronic)</td>
<td>systemic</td>
<td>0.03</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>oral</td>
<td>Short term (acut)</td>
<td>systemic</td>
<td>157.5</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>dermal</td>
<td>Long term (chronic)</td>
<td>systemic</td>
<td>1.67</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>dermal</td>
<td>Short term (acut)</td>
<td>systemic</td>
<td>37</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>dermal</td>
<td>Short term (acut)</td>
<td>local</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>inhalative</td>
<td></td>
<td></td>
<td></td>
<td>systemic</td>
<td>0.28</td>
</tr>
</tbody>
</table>

PNEC values

<table>
<thead>
<tr>
<th>No</th>
<th>Substance name</th>
<th>CAS / EC no</th>
<th>ecological compartment</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>tris(methylphenyl) phosphate</td>
<td>1330-78-5, 215-548-8</td>
<td>water</td>
<td>fresh water</td>
<td>0.000102</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>water</td>
<td>fresh water sediment</td>
<td>0.0404</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>water</td>
<td>marine water</td>
<td>0.0000102</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>water</td>
<td>marine water sediment</td>
<td>0.000404</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>water</td>
<td>Aqua intermittent</td>
<td>0.000102</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>soil</td>
<td></td>
<td>0.1</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>sewage treatment plant</td>
<td></td>
<td>100</td>
</tr>
</tbody>
</table>

8.2 Exposure controls

Appropriate engineering controls
No data available.

Personal protective equipment

Respiratory protection
If workplace exposure limits are exceeded, a respiration protection approved for this particular job must be worn. In case of aerosol and mist formation, take appropriate measures for breathing protection in the event workplace threshold values are not specified.

Eye / face protection
Safety glasses with side protection shield (EN 166)

Hand protection
Sufficient protection is given wearing suitable protective gloves checked according to i.e. EN 374, in the event of risk of skin contact with the product. Before use, the protective gloves should be tested in any case for its specific work-station suitability (i.e. mechanical resistance, product compatibility and antistatic properties). Adhere to the manufacturer’s instructions and information relating to the use, storage, care and replacement of protective gloves. Protective gloves shall be replaced immediately when physically damaged or worn. Design operations thus to avoid permanent use of protective gloves. In case of short-term contact / splash protection:

Appropriate Material
- nitrile rubber
Material thickness
- 0.4 mm
Breakthrough time
- < 30 min.
Inappropriate material
- viton
Material thickness
- 0.4 mm
Breakthrough time
- > 30 min.

Other
Normal chemical work clothing.

Environmental exposure controls
No data available.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Form/Colour</th>
</tr>
</thead>
<tbody>
<tr>
<td>liquid</td>
</tr>
<tr>
<td>white, grey</td>
</tr>
</tbody>
</table>

Odour
mild
**Odour threshold**
No data available

**pH value**
No data available

**Boiling point / boiling range**
No data available

**Melting point / melting range**
No data available

**Decomposition point / decomposition range**
No data available

**Flash point**
| Value | > 101 °C |

**Auto-ignition temperature**
No data available

**Oxidising properties**
No data available

**Explosive properties**
No data available

**Flammability (solid, gas)**
No data available

**Lower flammability or explosive limits**
No data available

**Upper flammability or explosive limits**
No data available

**Vapour pressure**
No data available

**Vapour density**
No data available

**Evaporation rate**
No data available

**Relative density**
No data available

**Density**
| Value | appr. 1.33 g/cm³ |
| Reference temperature | 20 °C |

**Solubility in water**
No data available

**Partition coefficient: n-octanol/water**
No data available

**Viscosity**
| Value | > 7 mm²/s |
| Reference temperature | 40 °C |
| Type | kinematic |

### 9.2 Other information
No data available.

### SECTION 10: Stability and reactivity

#### 10.1 Reactivity
Dangerous reactions are not expected if the product is handled according to its intended use.
10.2 Chemical stability
Stable under recommended storage and handling conditions (See section 7).

10.3 Possibility of hazardous reactions
None, if handled according to order.

10.4 Conditions to avoid
None, if handled according to intended use.

10.5 Incompatible materials
Oxidizing agents

10.6 Hazardous decomposition products
None, if handled according to intended use.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

<table>
<thead>
<tr>
<th>Effect</th>
<th>Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute oral toxicity</td>
<td>No data available</td>
</tr>
<tr>
<td>Acute dermal toxicity</td>
<td>No data available</td>
</tr>
<tr>
<td>Acute inhalational toxicity</td>
<td>No data available</td>
</tr>
<tr>
<td>Skin corrosion/irritation</td>
<td>No data available</td>
</tr>
<tr>
<td>Serious eye damage/irritation</td>
<td>No data available</td>
</tr>
<tr>
<td>Respiratory or skin sensitisation</td>
<td>No data available</td>
</tr>
<tr>
<td>Germ cell mutagenicity</td>
<td>No data available</td>
</tr>
<tr>
<td>Reproduction toxicity</td>
<td>No data available</td>
</tr>
<tr>
<td>Carcinogenicity</td>
<td>No data available</td>
</tr>
<tr>
<td>STOT-single exposure</td>
<td>No data available</td>
</tr>
<tr>
<td>STOT-repeated exposure</td>
<td>No data available</td>
</tr>
<tr>
<td>Aspiration hazard</td>
<td>No data available</td>
</tr>
<tr>
<td>Delayed and immediate effects as well as chronic effects from short and long-term exposure</td>
<td>Inhalation of vapours may lead to headache, drowsiness and dizziness.</td>
</tr>
</tbody>
</table>
SECTION 12: Ecological information

12.1 Toxicity

| Toxicity to fish (acute)    | No data available |
| Toxicity to fish (chronic) | No data available |
| Toxicity to Daphnia (acute) | No data available |
| Toxicity to Daphnia (chronic) | No data available |
| Toxicity to algae (acute)  | No data available |
| Toxicity to algae (chronic) | No data available |
| Bacteria toxicity          | No data available |

12.2 Persistence and degradability

No data available.

12.3 Bioaccumulative potential

No data available.

12.4 Mobility in soil

No data available.

12.5 Results of PBT and vPvB assessment

<table>
<thead>
<tr>
<th>Results of PBT and vPvB assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>PBT assessment</td>
</tr>
<tr>
<td>vPvB assessment</td>
</tr>
</tbody>
</table>

12.6 Other adverse effects

No data available.

12.7 Other information

Other information
Do not discharge into the drains or waters and do not store on public depositories.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product
Allocation of a waste code number, according to the European Waste Catalogue, should be carried out in agreement with the regional waste disposal company.

Packaging
Residuals must be removed from packaging and when emptied completely disposed of in accordance with the regulations for waste removal. Incompletely emptied packaging must be disposed of in the form of disposal specified by the regional disposer.

SECTION 14: Transport information

14.1 Transport ADR/RID/ADN

<table>
<thead>
<tr>
<th>Class</th>
<th>9</th>
</tr>
</thead>
<tbody>
<tr>
<td>Classification code</td>
<td>M6</td>
</tr>
<tr>
<td>Packing group</td>
<td>III</td>
</tr>
<tr>
<td>Hazard identification no.</td>
<td>90</td>
</tr>
<tr>
<td>UN number</td>
<td>UN3082</td>
</tr>
<tr>
<td>Technical name</td>
<td>ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.</td>
</tr>
<tr>
<td>Danger releasing substance</td>
<td>tris(methylphenyl) phosphate</td>
</tr>
<tr>
<td>Tunnel restriction code</td>
<td>E</td>
</tr>
<tr>
<td>Label</td>
<td>9</td>
</tr>
<tr>
<td>Environmentally hazardous substance mark</td>
<td>Symbol &quot;fish and tree&quot;</td>
</tr>
</tbody>
</table>
14.2 **Transport IMDG**

- **Class**: 9
- **Packing group**: III
- **UN number**: UN3082
- **Proper shipping name**: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
- **Danger releasing substance**: tris(methylphenyl) phosphate
- **EmS**: F-A+S-F
- **Label**: 9
- **Marine pollutant mark**: Symbol "fish and tree"

14.3 **Transport ICAO-TI / IATA**

- **Class**: 9
- **Packing group**: III
- **UN number**: UN3082
- **Proper shipping name**: Environmentally hazardous substance, liquid, n.o.s.
- **Danger releasing substance**: tris(methylphenyl) phosphate
- **Label**: 9
- **Environmentally hazardous substance mark**: Symbol "fish and tree"

14.4 **Other information**

No data available.

14.5 **Environmental hazards**

Information on environmental hazards, if relevant, please see 14.1 - 14.3.

14.6 **Special precautions for user**

No data available.

14.7 **Transport in bulk according to Annex II of Marpol and the IBC Code**

Not relevant

### SECTION 15: Regulatory information

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

**EU regulations**

  
  According to the data available and/or specifications supplied by upstream suppliers, this product does not contain any substances considered as substances requiring authorisation as listed on Annex XIV of the REACH regulation (EC) 1907/2006.

- **REACH candidate list of substances of very high concern (SVHC) for authorisation**

  According to available data and the information provided by preliminary suppliers, the product does not contain substances that are considered substances meeting the criteria for inclusion in annex XIV (List of Substances Subject to Authorisation) as laid down in Article 57 and article 59 of REACH (EC) 1907/2006.


  The product is considered being subject to REACH regulation (EC) 1907/2006 annexe XVII.

- **Directive 2012/18/EU on the control of major-accident hazards involving dangerous substances**

  This product is subject to Part I of Annex I, risk category: E2


  VOC content | 2.11 %

- **Other regulations**

  Observe employment restrictions for child bearing mothers and nursing mothers.

  Observe employment restrictions for young people.

15.2 **Chemical safety assessment**

For this mixture a chemical safety assessment has not been carried out.
SECTION 16: Other information

Further information
Authors responsible for the compilation of the material safety data sheet: UMCO Umwelt Consult GmbH - D-21107 Hamburg, Georg-Wilhelm-Strasse 183, Tel.: +49(40)79 02 36 300, Fax: +49(40)79 02 36 357, e-mail: umco@umco.de.
The information is based on our current knowledge however it does not represent a guarantee of product properties nor does it create any legal obligation.

Sources of key data used to compile the data sheet:
National Threshold Limit Values of the corresponding countries as amended in each case.
Transport regulations according to ADR, RID, IMDG, IATA as amended in each case.
The data sources used to determine physical, toxic and ecotoxic data, are indicated directly in the corresponding chapter.

Full text of the H- and EUH-phrases drawn up in sections 2 and 3 (provided not already drawn up in these sections)
H302    Harmful if swallowed.
H315    Causes skin irritation.
H317    May cause an allergic skin reaction.
H318    Causes serious eye damage.
H400    Very toxic to aquatic life.
H410    Very toxic to aquatic life with long lasting effects.

Alterations/supplements:
Alterations to the previous edition are marked in the left-hand margin.

Document protected by copyright. Alterations or reproductions require the express written permission of UMCO Umwelt Consult GmbH.