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

1.1. **Product identifier**
31P Calibration/Sample

Further trade names
H144325

REACH Registration Number: 01-2119488166-29-
CAS No: 7722-76-1
EC No: 231-764-5

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

Use of the substance/mixture
Test/reference sample for NMR.

1.3. **Details of the supplier of the safety data sheet**

Company name: Bruker BioSpin GmbH
Street: Silberstreifen 4
Place: D-76287 Rheinstetten
Telephone: +49 721 51 61 0
Telefax: +49 721 51 61 6297
Internet: www.bruker.com
Responsible Department: Responsible for the safety data sheet: sds@gbk-ingelheim.de
(001) 352 323 3500 - Transport, EMTEL ID: 94135

1.4. **Emergency telephone number**

Emergency telephone: +49 (0) 6132 / 84463 (GBK GmbH, Ingelheim)
Giftnotruf Berlin (24 h): Telefon +49 (0) 30 / 19240

**SECTION 2: Hazards identification**

2.1. **Classification of the substance or mixture according to 1272/2008/EC**

This substance is not classified as hazardous according to Regulation (EC) No. 1272/2008.

2.2. **Label elements**

Additional advice on labelling
The product does not require a hazard warning label in accordance with EC directives.

2.3. **Other hazards**

According to Regulation (EC) No 1907/2006 (REACH), this product is regarded to be neither PBT nor vPvB.

**SECTION 3: Composition/information on ingredients**

3.1. **Substances**

Chemical characterization
Ammonium dihydrogenorthophosphate, CAS-No. 7722-76-1, 100%

Sum formula: H6NO4P
Molecular weight: 115,03 g/mol

**SECTION 4: First aid measures**

4.1. **Description of first aid measures**

General information
No specific precautions required.

After inhalation
No specific precautions required.

After contact with skin
No specific precautions required.

After contact with eyes
No specific precautions required.
After ingestion
No specific precautions required.

4.2. Most important symptoms and effects, both acute and delayed
Health injuries are not known or expected under normal use.

4.3. Indication of any immediate medical attention and special treatment needed
Treat symptoms.

SECTION 5: Firefighting measures

5.1. Extinguishing media
Suitable extinguishing media
Product does not burn, fire-extinguishing activities according to surrounding.

5.2. Special hazards arising from the substance or mixture
Fire may produce: Nitrogen gases (NOx), Ammonia, Phosphorus oxides (PxOx).
Risk of explosion on contact with the following materials: Sodium hypochlorite.

5.3. Advice for firefighters
Cool containers at risk with water spray jet. Use breathing apparatus with independent air supply. Wear full protective suit. Suppress escaping gasses/vapours with directed water spray jet.

Additional information
Collect contaminated fire-fighting water, avoid any release into the sewerage. 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
In case of vapour formation use respirator. Ensure adequate ventilation. Avoid contact with eyes, skin or mucous membrane. Use personal protective clothing.

6.2. Environmental precautions
Do not discharge into the drains/surface waters/ground water.

6.3. Methods and material for containment and cleaning up
Pick up mechanically, avoiding dust, and provide disposal in suitable recipients.

6.4. Reference to other sections
Information for disposal see section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling
Advice on safe handling
Use only in thoroughly ventilated areas. Avoid contact with eyes, skin or mucous membrane. Care for thoroughly room ventilation, if necessary suck off at workplace.

Advice on protection against fire and explosion
The product is not combustible. No specific fire preventions necessary.

Further information on handling
In case of insufficient ventilation, especially in confined areas.

7.2. Conditions for safe storage, including any incompatibilities
Requirements for storage rooms and vessels
Store only in original container at cool and aired place.

Advice on storage compatibility
Keep away from food, drink and animal feeding stuffs.

Further information on storage conditions
Keep container tightly closed.

7.3. Specific end use(s)
Test/reference sample for NMR.

SECTION 8: Exposure controls/personal protection
8.1. Control parameters

Additional advice on limit values
Please ensure that the exposure of the product into the environment stays below the occupational and biological exposure limits of your country. If available, refer to local regulations.

8.2. Exposure controls

Appropriate engineering controls
Ensure adequate ventilation, especially in confined areas. Usage of closed or dust protected aggregates is recommended.

Protective and hygiene measures
Wash hands before breaks and immediately after handling the product. When using do not eat, drink or smoke. Avoid contact with skin, eyes and clothing. Take off immediately all contaminated clothing.

Eye/face protection
Tightly fitting goggles (EN 166). Eye wash bottle with pure water (EN 15154).

Hand protection
Chemical-resistant gloves (EN 374). Recommended material [type, thickness, permeation time]: butyl rubber, 0,7 mm, protective index 6, corresponding to 480 minutes of permeation time according to EN 374. Follow the recommendations of the glove manufacturer for breakthrough properties especially for workplace conditions involving mechanical stress and contact duration.

Skin protection
Long sleeved clothing (EN 368).

Respiratory protection
No personal respiratory protective equipment normally required. Breathing apparatus in the event of aerosol or mist formation.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Physical state:</th>
<th>Powder</th>
</tr>
</thead>
<tbody>
<tr>
<td>Colour:</td>
<td>White</td>
</tr>
<tr>
<td>Odour:</td>
<td>Odourless</td>
</tr>
</tbody>
</table>

pH-Value (at 20 °C): 3,8 - 4,4 (50g/l) *)

Changes in the physical state

Melting point: 190 °C *)
Initial boiling point and boiling range: *)
Flash point: Not determined *)
Explosive properties The product is not explosive.
Ignition temperature: Not determined *)
Decomposition temperature: 200 °C *
Oxidizing properties Non oxidizing.
Vapour pressure: *
(at 795 °C)
Density (at 20 °C): 1,80 g/cm³ *)
Bulk density: 800 - 1100 kg/m³ *
Water solubility: 368 g/L *
(at 20 °C)
Partition coefficient: -3,21 *
Viscosity / dynamic: Not determined *)
Viscosity / kinematic: Not determined *)

9.2. Other information

*) Literary value

Flammable solid matter

SECTION 10: Stability and reactivity
10.1. Reactivity
No data available.

10.2. Chemical stability
Stable under normal conditions.

10.3. Possibility of hazardous reactions
Risk of explosion on contact with the following materials: Sodium hypochlorite.

10.4. Conditions to avoid
No decomposition if used as directed. To avoid thermal decomposition, do not overheat.

10.5. Incompatible materials
Sodium hypochlorite

10.6. Hazardous decomposition products
Nitrogen gases (NOx).
Ammonia, Phosphorus oxides (PxOx).

SECTION 11: Toxicological information

11.1. Information on toxicological effects
Acute toxicity
Based on available data, the classification criteria are not met.
Based on the data available the classification criteria are not met.

Irritation and corrosivity
Based on available data, the classification criteria are not met.
Based on the data available the classification criteria are not met.

Sensitising effects
Based on available data, the classification criteria are not met.
Based on the data available the classification criteria are not met.

STOT-single exposure
Based on available data, the classification criteria are not met.
Based on the data available the classification criteria are not met.

Severe effects after repeated or prolonged exposure
Based on available data, the classification criteria are not met.
Based on the data available the classification criteria are not met.

Carcinogenic/mutagenic/toxic effects for reproduction
Based on available data, the classification criteria are not met.
Based on the data available the classification criteria are not met.

Aspiration hazard
Based on available data, the classification criteria are not met.
Based on the data available the classification criteria are not met.

SECTION 12: Ecological information

12.1. 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
Not determined.

12.6. Other adverse effects
Not determined.

Further information
Do not release undiluted or in higher quantities into the groundwater, sewerage or waters.
SECTION 13: Disposal considerations

13.1. Waste treatment methods

Advice on disposal
The product and its container should be disposed of as hazardous waste. Waste disposal is regulated differently according to country and community, so contact your local authority regarding the correct method of disposal.

Waste disposal number of waste from residues/unused products
160509 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and discarded chemicals; discarded chemicals other than those mentioned in 16 05 06, 16 05 07 or 16 05 08

Waste disposal number of contaminated packaging
150107 WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED; packaging (including separately collected municipal packaging waste); glass packaging

SECTION 14: Transport information

Land transport (ADR/RID); Marine transport (IMDG); Air transport (ICAO); Inland waterways transport (ADN):

14.1. UN number:
Not applicable. No hazardous material as defined by the transport regulations.

14.2. UN proper shipping name:
Not applicable. No hazardous material as defined by the transport regulations.

14.3. Transport hazard class(es):
Not applicable. No hazardous material as defined by the transport regulations.

14.4. Packing group:
Not applicable. No hazardous material as defined by the transport regulations.

14.5. Environmental hazards
Not applicable. No hazardous material as defined by the transport regulations.

14.6. Special precautions for user
Not applicable. No hazardous material as defined by the transport regulations.

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code
Not applicable. No hazardous material as defined by the transport regulations.

SECTION 15: Regulatory information

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

EU regulatory information

Additional information
The product is labeled in accordance with Regulation (EC) no. 1272/2008 (GHS).

National regulatory information
Water contaminating class (D): 1 - slightly water contaminating

15.2. Chemical safety assessment
Chemical safety assessments for substances in this mixture were not carried out.

SECTION 16: Other information

Abbreviations and acronyms
ADR = Accord européen relatif au transport international des marchandises Dangereuses par Route
RID = Règlement concernant le transport international ferroviaire de marchandises dangereuses
ADN = Accord européen relatif au transport international des marchandises dangereuses par voie de navigation intérieure
IMDG = International Maritime Code for Dangerous Goods
IATA/ICAO = International Air Transport Association / International Civil Aviation Organization
MARPOL = International Convention for the Prevention of Pollution from Ships
IBC-Code = International Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk
Further Information

Data of items 4 to 8, as well as 10 to 12, do partly not refer to the use and the regular employing of the product (in this sense consult information on use and on product), but to liberation of major amounts in case of accidents and irregularities. The information describes exclusively the safety requirements for the product(s) and is based on the present level of our knowledge.

The delivery specifications are contained in the corresponding product sheet.

This data does not constitute a guarantee for the characteristics of the product(s) as defined by the legal warranty regulations.

(n.a. = not applicable; n.d. = not determined)